Peelii Larval Structure - Sites and Years

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## Loading required package: knitr

## Loading project configuration

## Autoloading helper functions

## Running helper script: funRel.R

## Autoloading cache

## Autoloading data

## Loading data set: DARTallIdentifiers

## Loading data set: qslAllLarvaInfo

## Loading data set: qslMetaLarvAndAdultsUnion

## Loading data set: qslMPeeliiForRelated

## Loading data set: Report.DMac15.1861

## Munging data

## Running preprocessing script: 01MungeGeneticsDatacontaminationfix.R

## Loading required package: dplyr

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':  
##   
## filter, lag

## The following objects are masked from 'package:base':  
##   
## intersect, setdiff, setequal, union

## Running preprocessing script: 02MungeLarvaSnpsByYears.R

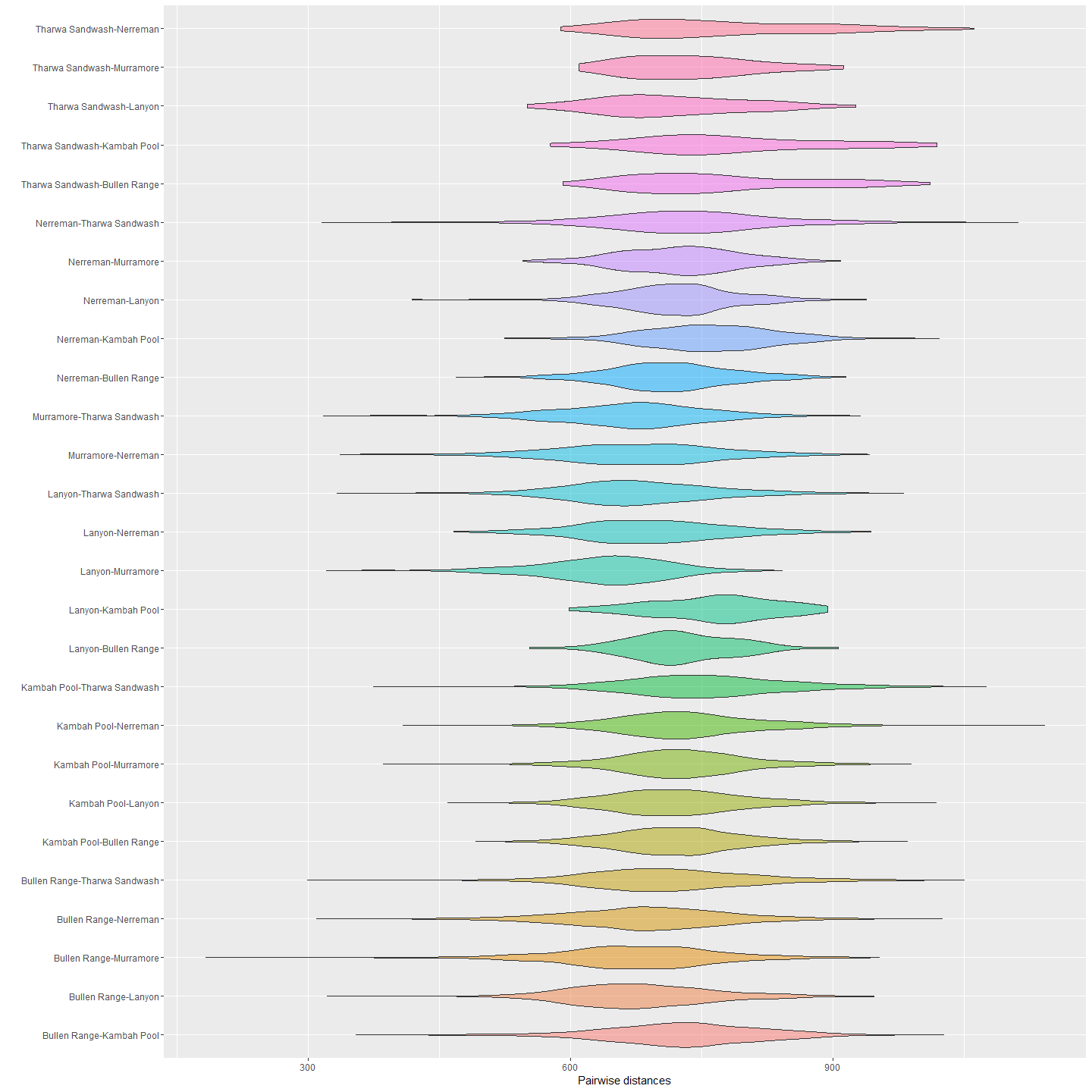
## Running preprocessing script: 03MungeLarvaSnpsByYearCombos.R

a<-suppressPackageStartupMessages({  
library(plyr)  
library(dplyr)  
library(ggplot2)  
library(dart)  
library(tsne)  
library(adegenet)   
library(pegas)  
library(hierfstat)  
library(ade4)  
library(mmod)  
library(poppr)  
})  
  
ptm <- proc.time()

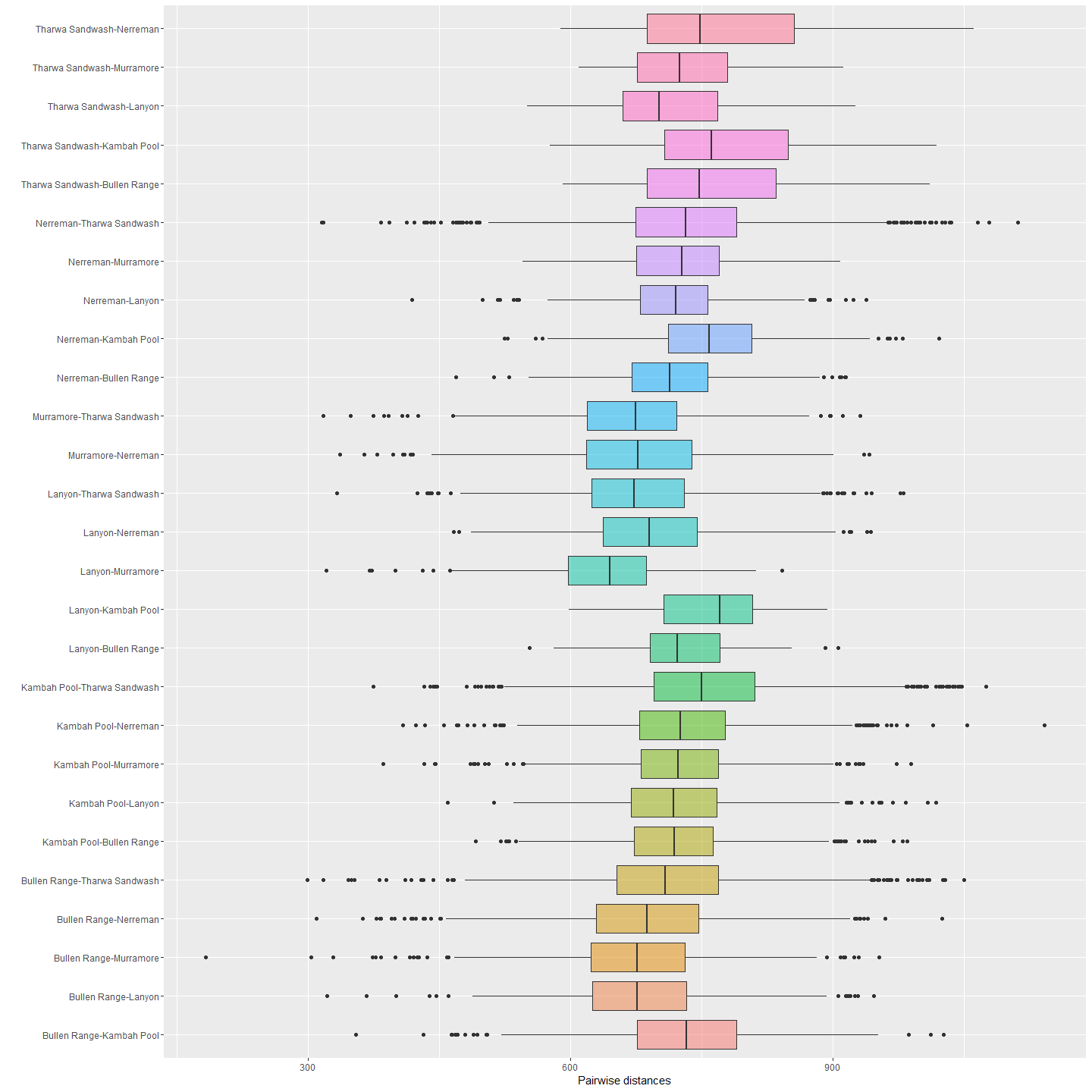
### Basic PopGen

pairDistPlot(gi, gi$pop, within=FALSE, sep="-", data=FALSE,violin=TRUE, boxplot=TRUE, jitter=TRUE)

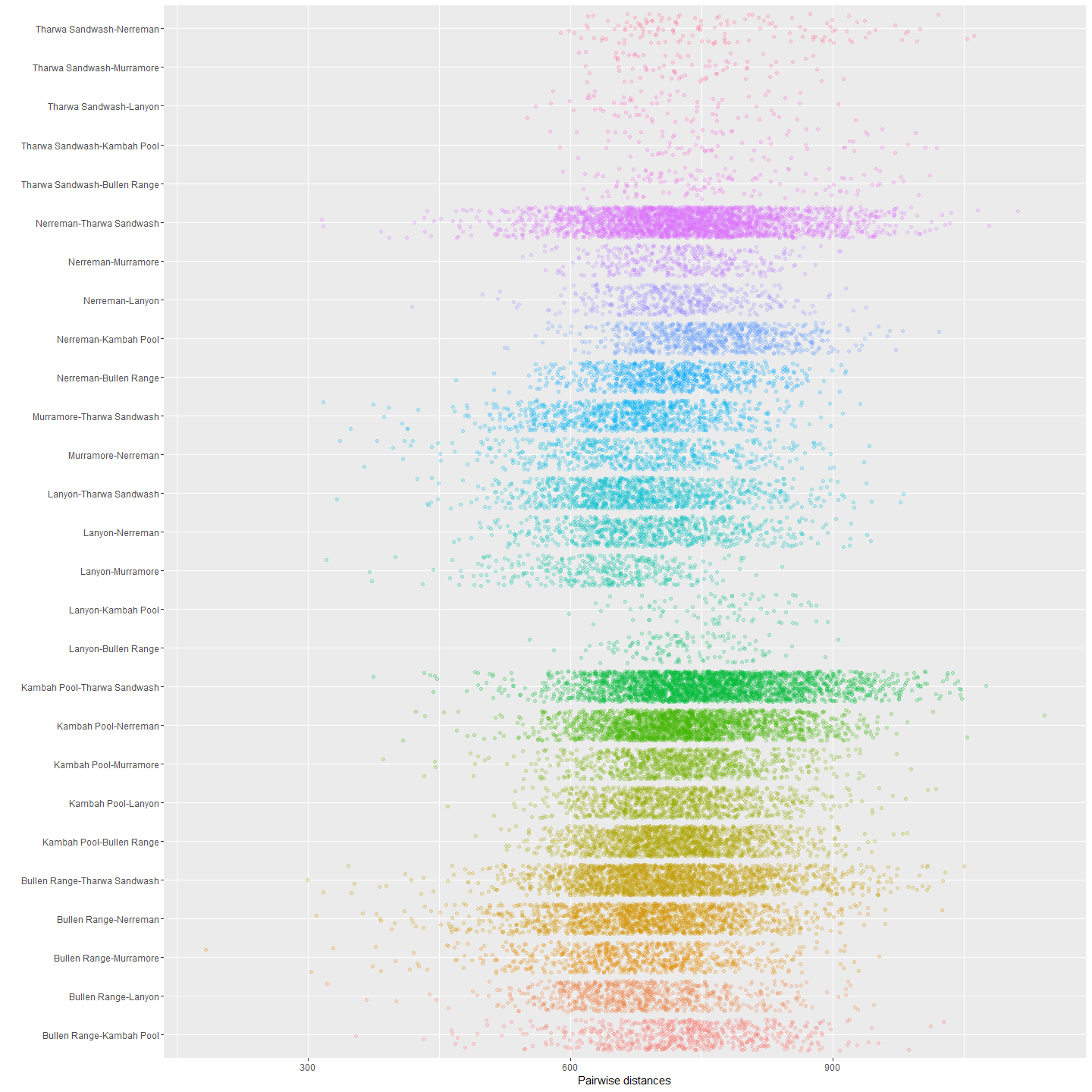
## $violin



##   
## $boxplot



##   
## $jitter



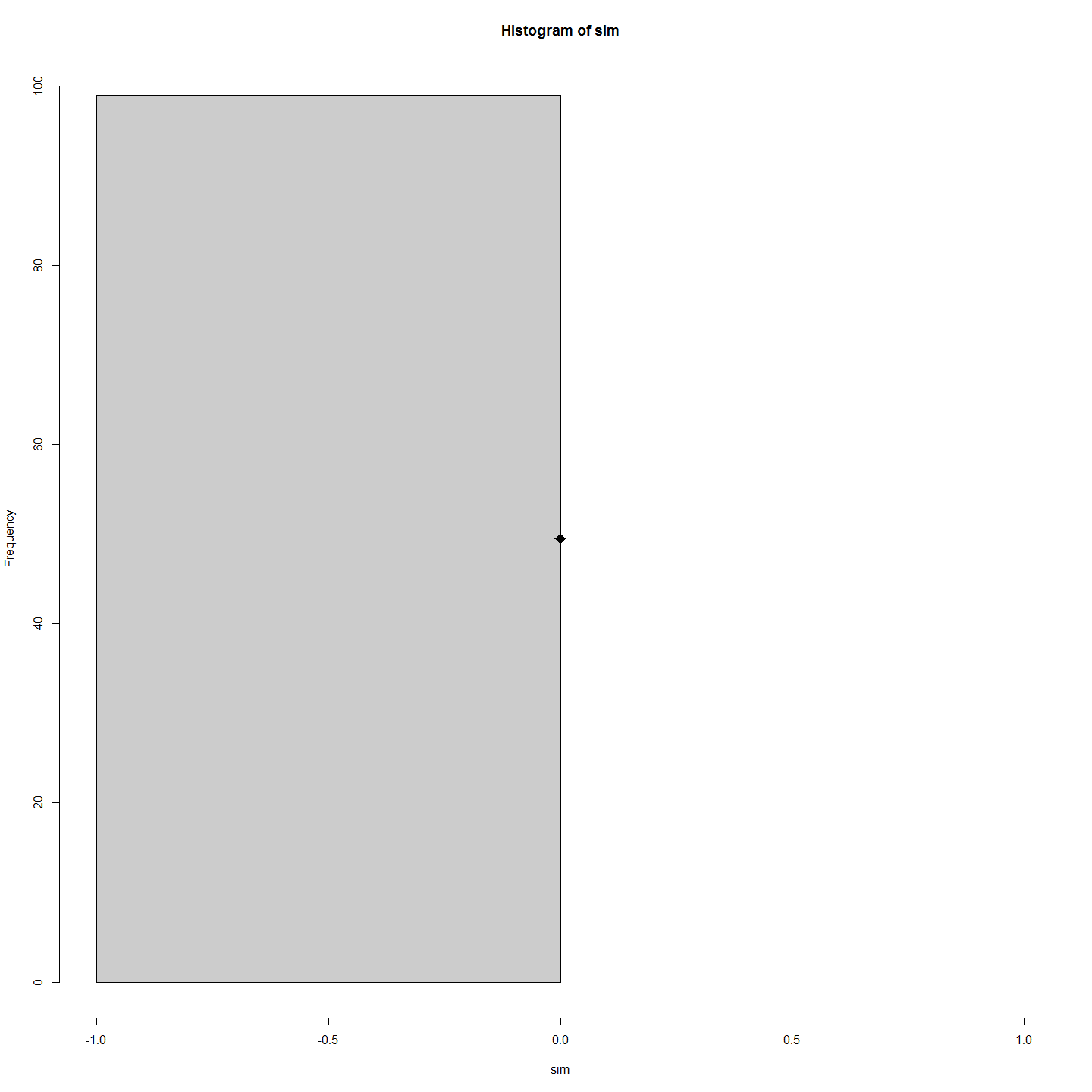
fstat(gi)

## pop Ind  
## Total 0.01827464 -0.1371021  
## pop 0.00000000 -0.1582691

#Is the structure between populations significant?  
popStrSig<- gstat.randtest(gi, nsim = 99)  
popStrSig

## Monte-Carlo test  
## Call: gstat.randtest(x = gi, nsim = 99)  
##   
## Observation: 0   
##   
## Based on 99 replicates  
## Simulated p-value: 1   
## Alternative hypothesis: greater   
##   
## Std.Obs Expectation Variance   
## NaN 0 0

plot(popStrSig)



giHs <- genind2hierfstat(gi)  
#head(giHs)  
varglob<-varcomp.glob(giHs$pop, giHs[, -1])  
varglob$overall

## Pop Ind Error   
## 3.93667 -33.47080 244.95118

varglob$F

## Pop Ind  
## Total 0.01827464 -0.1371021  
## Pop 0.00000000 -0.1582691

#Pairwise Fst (populations)  
matFst <- pairwise.fst(gi[1:50, treatOther = FALSE])  
matFst

## 1 2 3  
## 2 -0.3540884   
## 3 -0.6989234 -0.1901033   
## 4 -0.9214085 -0.4227752 -0.5910064

#Thus there is no significant difference between populations.  
is.euclid(matFst)

## [1] FALSE

#gi  
div <- summary(gi)

##   
## # Total number of genotypes: 243   
##   
## # Population sample sizes:   
## Bullen Range Kambah Pool Lanyon Murramore Nerreman Tharwa Sandwash   
## 42 54 21 18 55 53   
##   
## # Number of alleles per locus:   
## 6661549|60-C/T 6650588|15-C/T 6661794|21-A/G 6664081|63-G/A 6653885|30-A/G 6661177|64-C/T 6661457|52-C/T 6653401|39-G/A 6657572|30-T/A 6661566|34-A/G 6663962|65-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6665217|18-A/G 6661207|60-A/C 6661398|51-C/T 6651899|27-T/A 6653020|28-A/C 6653704|64-T/G 6650504|59-T/C 6652003|38-G/C 6661105|11-G/T 6661432|29-C/A 6652162|44-A/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6653798|57-C/T 6653191|40-A/G 6664876|31-G/A 6661163|31-T/C 6652675|16-G/T 6652288|45-C/T 6650933|66-G/A 6653948|58-T/C 6663083|49-G/A 6662726|45-A/G 6664756|9-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661688|18-A/G 6666128|43-C/G 6652433|13-A/G 6652352|5-T/C 6664270|14-C/A 6651416|17-C/T 6664751|11-T/A 6657734|47-A/G 6663081|18-A/G 6651148|64-A/T 6656916|22-T/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6653573|49-T/C 6661198|22-T/G 6665027|17-A/T 6664900|6-C/T 6650826|66-G/A 6653766|40-A/C 6665588|8-C/T 6652573|8-C/A 6652700|14-C/G 6664334|9-A/G 6651772|17-A/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6651828|36-G/A 6650476|13-A/C 6651474|15-T/C 6652836|30-C/T 6653346|25-C/A 6658563|22-C/T 6661870|10-G/T 6657169|37-T/C 6661569|7-A/G 6652342|46-G/A 6656937|18-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661537|56-G/A 6664008|14-G/A 6651473|53-G/A 6661884|29-T/A 6662691|24-C/T 6661181|61-C/T 6651798|39-C/A 6661610|46-T/C 6653512|60-C/G 6651413|19-C/A 6651436|18-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6663093|22-C/A 6652854|20-T/C 6657907|22-C/T 6664719|5-A/G 6651857|34-G/T 6658182|11-G/A 6661203|33-G/T 100066381|65-T/C 6661291|28-A/C 6651404|67-A/G 6661583|6-T/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6653019|13-C/T 6661633|39-G/T 6653539|14-G/C 6652507|49-A/G 6662661|7-T/C 6661859|57-A/G 6661395|60-C/T 6661690|43-G/A 6653303|26-C/T 6650697|6-C/A 6661748|26-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661276|34-A/G 6651590|59-C/G 6661435|48-G/A 6664012|53-A/G 6651071|8-C/T 6661174|27-G/A 6657901|34-G/A 6661288|56-T/C 6664895|15-G/A 6665065|54-A/G 6653483|52-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6652822|57-G/A 100065688|55-A/G 6661405|37-G/T 6661817|33-A/G 6651443|47-G/T 6651921|15-T/A 6654090|16-G/A 6653899|53-A/G 6661211|62-G/A 6652984|32-G/A 6661495|42-T/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6650679|43-C/T 6661246|33-G/A 6653043|54-C/G 6651254|12-A/T 6653789|32-G/T 6650988|24-G/A 6650862|68-C/A 6653541|8-A/G 6662900|30-G/A 6653618|37-G/A 6664721|14-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6652395|48-C/T 6661842|33-T/A 6661739|54-G/A 6652644|26-G/A 6652332|20-T/C 6651976|25-G/A 6661113|14-C/T 6661301|20-G/A 6662986|27-C/T 6653529|7-G/A 6651972|24-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6652901|58-C/T 6653167|32-C/T 6652763|59-G/A 6651610|56-G/C 6661486|27-C/T 6664344|37-A/G 6661743|17-G/A 6651212|18-A/G 6651054|64-T/A 6653313|42-A/G 6652640|45-C/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6653127|48-G/A 6652179|62-G/A 6664422|18-A/G 6661732|8-C/T 6658587|26-G/A 6661161|53-A/C 6657089|25-C/T 6650998|9-A/T 6652379|23-G/C 6652823|50-C/A 6653209|28-G/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6664750|24-C/T 6666098|18-G/A 6664416|28-A/G 6661208|26-A/T 100017494|26-T/C 6657426|10-G/T 6650467|17-T/C 6661591|23-T/C 6661615|53-A/G 6651689|52-C/T 100093282|6-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6651044|31-C/T 6663926|8-G/A 6661122|39-C/T 6653015|45-G/T 6651960|46-A/G 6658395|10-A/G 6664288|7-C/G 6651937|12-G/T 6661119|32-T/C 6653567|68-C/T 6657105|21-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6653958|12-C/T 6664417|17-G/A 6653929|22-G/A 6653560|40-C/T 6651307|58-C/T 6651918|7-T/C 6652335|27-T/C 6652403|61-A/C 6661676|25-C/T 6657686|15-A/G 6661180|15-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6664065|56-A/T 6662654|14-C/T 6661258|19-T/G 6661326|21-G/T 6661503|51-G/A 6665677|54-T/C 6651345|67-A/G 6653158|39-C/T 6661434|33-C/T 6650700|61-G/A 6665573|50-G/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100103686|15-C/T 6661407|28-A/T 6662956|24-T/G 6653198|44-C/T 100119886|12-A/G 6653976|22-T/C 6661123|44-T/C 6661423|44-C/T 6661694|9-T/C 6653208|48-G/A 6661587|35-T/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6653932|10-C/T 6657861|14-G/A 6664287|35-C/T 6653108|33-A/G 6650863|33-C/T 6653166|35-T/C 6652001|24-A/G 6657913|25-C/G 100109898|15-G/A 6661240|65-T/A 6661268|13-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6653580|43-G/T 6657145|22-C/A 6661660|20-C/T 6652645|41-C/T 6651100|28-C/T 6661548|20-A/G 6657725|32-C/T 6652908|9-A/T 6661838|60-T/G 6652562|28-G/A 6654077|33-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661761|38-G/A 6658102|52-C/T 6657350|31-T/A 6651178|33-C/T 6661253|38-T/C 100104030|16-C/A 6664895|24-C/A 6653522|21-A/G 6661899|11-A/G 6650883|48-C/T 6661607|53-C/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6654004|30-T/A 6653722|5-T/G 6654003|26-C/A 6652045|5-C/T 6658305|27-T/C 6657714|46-T/C 6661603|40-G/C 6650949|5-A/T 6664725|29-A/G 6657697|38-A/G 6661471|62-C/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661765|40-G/A 6661481|66-A/C 6653282|53-T/C 6652110|26-C/T 6652196|51-C/T 6652944|56-G/A 6658191|17-C/G 6661286|15-G/A 6653684|7-T/C 6653203|66-A/G 6661751|44-T/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661711|66-G/A 6650674|36-C/T 6653554|14-G/A 6651804|55-G/C 6664076|29-C/A 6663980|50-G/A 100102214|5-C/T 6653379|50-A/G 6651865|33-T/G 6661260|22-A/T 6651954|62-T/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6656942|42-G/A 6652635|57-G/A 6661149|41-C/T 6650632|65-G/A 6650568|31-G/C 6650938|6-C/T 6658511|21-A/C 6654094|65-T/C 6653106|31-C/T 6661381|44-A/G 6652779|66-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6650898|47-G/A 6657805|7-A/G 6661727|46-C/T 6662592|9-C/T 6661085|13-C/T 6661239|45-A/G 6665990|9-G/C 6650977|39-G/A 6652000|22-C/T 6658391|30-C/T 6661184|41-C/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6651519|67-C/G 6652011|54-C/T 6661376|29-C/T 6650669|9-A/G 100073501|45-A/G 6651742|50-G/A 6653416|29-C/T 6661643|49-G/A 6650635|62-G/A 6651529|9-C/T 6652878|58-G/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6665222|67-C/A 6661481|18-C/T 6665990|48-C/G 6661216|67-C/T 6663955|62-T/C 6652246|10-G/A 6661167|12-T/A 6661710|53-G/A 6664085|17-G/T 6661652|62-A/C 6657045|15-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661805|6-C/G 6652339|26-G/T 6661277|47-G/A 6661335|49-T/G 6652597|28-C/T 6661737|51-G/T 6664079|62-A/T 6661334|49-G/T 6661187|52-C/T 6653800|24-G/A 6665242|22-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6651247|35-C/G 6653693|39-C/A 6661436|12-T/C 6650629|61-C/A 6653328|49-C/T 6650603|26-A/G 6651494|48-G/A 6652060|23-C/T 6657933|10-C/T 6651038|40-T/C 6664362|28-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6651571|67-C/T 6664050|15-A/G 6652084|30-C/T 6661846|32-C/T 6653638|33-A/C 6657305|12-A/C 6663909|36-C/T 6661305|58-A/G 6657606|35-G/A 6661206|19-A/C 6657339|6-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6657292|22-T/A 6661485|59-A/G 6650475|43-C/T 6652083|41-G/A 6663998|25-T/C 6661115|22-T/G 100102214|35-G/A 6651822|26-T/C 6653698|49-A/T 6651072|34-A/C 6661221|40-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6664084|45-C/T 6664046|47-A/G 6664412|13-G/A 6652764|38-C/T 6652859|41-C/T 6662842|43-C/T 6653459|28-T/C 6652467|20-G/T 6658444|32-T/G 6663948|54-G/A 6661848|65-T/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661692|19-C/T 6661666|47-C/A 6657189|5-T/A 6663931|25-C/T 6661747|23-A/G 6664777|21-T/G 6657196|41-G/A 6662626|20-G/C 6661431|59-G/A 6651183|67-C/T 100020564|19-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6658409|20-A/C 6661097|28-C/T 6657230|7-A/G 6661119|56-G/A 6661554|36-A/G 6650618|9-G/C 6653999|19-C/T 6663991|5-C/T 6652381|42-A/T 6651915|13-C/T 6662884|19-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6664330|6-A/G 6658057|21-T/G 6664271|29-T/G 6658345|31-A/G 6664281|18-T/A 6651466|33-G/A 6651085|26-C/T 6653605|24-T/C 100044679|44-A/G 100115090|8-A/G 6661464|30-G/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6650884|45-C/T 6661861|5-T/C 6651870|51-T/C 6650549|15-C/T 6662909|15-A/C 6661345|10-T/C 100096951|40-T/A 6651934|39-C/A 6653561|20-A/G 6663982|40-G/A 6661677|22-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661705|29-C/G 6661413|63-C/T 100065757|18-C/G 6661266|30-A/G 6661310|64-T/C 6661349|63-A/G 100116458|50-G/A 6665749|7-G/A 6652731|67-C/G 6653078|31-C/T 6653889|13-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6650390|62-T/A 6665512|36-G/A 6653694|33-C/T 6661130|57-A/C 6650397|43-A/G 6652725|65-G/A 6664898|31-T/A 6664740|45-G/A 6661717|60-G/A 6661866|27-T/C 6661803|57-G/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6653812|35-T/C 6653634|39-G/A 6653421|13-A/G 6653117|34-C/G 6652078|22-T/A 6663918|8-C/G 6651738|38-G/C 100073717|6-G/A 6662614|36-C/T 6663009|7-C/T 6665630|52-T/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661118|33-G/A 6651890|7-G/A 6650967|42-C/A 6661605|18-C/T 6651286|19-T/A 6653631|43-C/T 6661436|18-C/T 6661386|46-C/T 6656991|15-A/G 6658489|9-C/T 100018527|6-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6663957|56-G/A 6653138|31-G/A 6653361|55-G/A 6662597|30-A/G 6653013|37-T/C 6664770|35-T/G 100018912|62-G/T 6650463|42-T/A 6664775|59-A/G 6651694|29-A/T 6664064|49-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6652918|18-G/A 6651840|35-G/A 6651055|13-G/A 6653477|22-A/T 6661719|26-T/A 6661828|67-T/A 6654030|47-G/A 6665066|58-G/C 6653260|47-G/T 6650860|49-G/A 6654039|20-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6665336|52-C/T 6650985|20-G/A 6665243|28-G/C 6662888|44-A/C 6665236|63-T/C 6663983|17-C/T 100066027|14-A/T 6653607|5-T/C 6661170|39-C/T 6661781|60-G/A 100073694|44-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6663947|55-T/C 6661831|54-T/C 6652266|47-T/C 6663080|20-G/A 6665672|66-T/A 6658491|28-C/A 6661680|19-G/T 6662595|39-C/T 6665990|6-A/T 6657377|47-C/T 6661828|68-T/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6651958|27-A/G 6653919|17-C/T 100021874|46-A/G 100016068|62-T/A 6665489|31-C/T 100082278|57-C/T 6651291|51-G/T 6653890|21-C/T 6663954|56-C/A 100021943|40-T/C 6652214|62-T/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100022950|33-A/C 6651253|68-C/T 6650643|36-C/A 6652860|42-G/A 6664014|62-G/A 6661808|48-C/T 6658138|27-A/C 100017513|60-C/T 6661261|32-C/T 6652821|67-C/T 6666304|10-A/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6665455|61-G/T 100082682|51-T/C 6653384|6-A/G 100023325|25-A/G 100101067|36-C/T 6651685|49-T/A 6653586|60-T/C 6666177|13-A/T 6652540|8-G/T 6651209|49-A/G 100066244|11-A/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6652377|20-G/A 6661200|23-T/G 100064741|45-G/C 6658040|18-T/A 6653702|48-T/C 6652310|50-C/T 100080867|16-C/T 6665067|64-C/A 6653076|28-C/T 6653648|6-G/A 6651991|67-A/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661634|15-T/G 6664050|24-G/C 6652868|58-A/G 6661564|13-A/G 6650547|43-C/G 100064827|8-G/C 6650552|61-G/A 6661602|25-T/C 6661456|61-G/A 6651197|66-T/A 6652994|27-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661887|13-A/T 6661310|58-T/C 6650745|19-T/G 100017712|8-T/A 6651911|52-G/A 6650417|11-A/C 6652308|53-T/G 6661174|36-C/T 6651243|32-G/A 6662595|43-G/A 6661238|17-G/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6653091|46-C/G 6651733|50-G/A 6661209|58-G/A 6662998|47-T/C 6650989|12-C/T 6661260|32-A/C 6664754|18-T/C 6653705|22-C/A 6651897|14-A/G 6661468|27-G/A 6662877|32-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6652769|52-G/A 6657468|35-T/C 6664040|37-G/T 6654036|20-C/G 6652581|49-T/C 6663926|28-C/T 6650558|18-A/C 6650767|11-C/T 6650470|54-G/A 6652008|64-T/A 100066158|21-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6661900|39-T/C 100022191|13-A/T 6665045|39-A/T 6652766|56-A/G 6652767|24-T/A 6651271|49-G/A 6661314|26-G/A 6653619|65-T/C 100116986|5-T/C 100116987|6-T/G 6653081|42-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6664720|40-A/G 6652605|24-T/C 6661530|52-T/G 6653380|28-A/G 6661534|38-G/A 100100705|17-C/A 6661784|26-C/G 6653485|62-T/C 6658269|15-G/A 6657310|18-C/G 6653319|56-C/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6662895|13-G/A 6650569|12-C/A 100018011|33-A/T 6653025|64-G/A 100020592|58-C/G 6651157|23-G/A 6652995|7-T/C 6664385|5-T/G 100080823|15-G/A 100098565|15-A/G 6662594|6-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6662608|14-T/C 100111015|17-T/A 6651630|13-G/A 100015677|15-G/A 100021199|37-T/C 6651723|7-T/C 6651946|25-T/C 6652107|59-C/T 6662703|23-A/G 6656926|24-G/A 6662639|8-G/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6644134|13-A/C 100015999|30-C/T 6651264|67-C/T 100082192|45-T/C 6658187|20-A/G 6658030|16-T/G 6664447|43-A/G 6657081|38-A/G 6657519|27-C/A 6657646|21-G/A 6658294|22-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6663106|39-T/C 6665877|8-T/C 6657134|12-C/T 6662930|5-G/T 100073664|24-C/A 100093267|33-A/T 6665045|33-A/T 6653064|39-T/C 6652028|11-T/C 6652053|54-A/G 6661327|40-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100020810|55-A/G 6661141|23-C/T 100018274|35-A/G 100020489|64-T/C 100021048|30-T/C 100021494|48-T/C 100015195|36-C/T 6652099|5-C/T 100019298|65-T/C 100020731|53-A/G 100065190|44-T/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6651997|59-A/G 6658436|20-C/T 6650975|51-G/A 6657565|7-G/A 6658077|34-T/C 6652620|41-C/T 6657312|42-G/A 6657368|39-G/A 6657412|9-T/G 6657526|48-C/T 6658588|11-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6662668|7-A/T 6662868|15-G/A 6663029|17-G/A 6664446|24-T/C 100086116|7-C/A 100093344|14-G/C 100098451|30-G/T 100104877|27-G/A 6656935|13-T/G 6657240|11-C/T 6657387|17-A/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6658126|24-C/G 6662893|11-C/G 100098564|20-T/C 100108662|16-G/A 100090375|13-A/C 6654111|67-T/C 100018022|29-C/T 100018793|30-G/A 100019919|22-G/A 100020224|39-A/G 100021950|26-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100065898|33-G/A 100016342|65-A/G 6653141|47-T/A 100020182|5-A/G 100017739|16-A/G 100019425|22-T/C 100019993|60-T/C 100020111|24-T/C 100022090|7-C/A 100020509|41-C/T 100019969|57-T/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100021750|68-T/G 6650682|7-C/T 100073640|6-A/G 6658242|13-G/A 6661085|49-C/T 6650645|14-C/G 100022464|43-T/A 100065437|41-T/C 6652497|42-C/A 6653265|58-G/C 6653475|24-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100021941|30-C/T 6658496|17-G/A 6661755|16-A/C 6661423|60-C/T 100015613|67-G/A 6652888|64-A/G 6657111|13-T/C 6658119|34-T/A 6661367|26-G/T 100111976|26-A/G 100016385|11-T/C   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100073644|37-C/T 6650454|46-A/G 6650627|13-T/C 6651042|67-C/T 6652424|44-T/C 6653438|30-C/T 6653954|43-A/G 6657314|43-G/A 6657355|38-G/A 6657359|15-A/G 6657460|29-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6657482|8-A/G 6657781|17-C/A 6661090|62-A/T 6661394|35-A/G 6662671|17-A/G 6662872|17-G/T 6663077|27-G/T 100080773|11-T/C 6650529|9-A/G 6651847|21-G/A 6652313|42-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6656897|6-A/T 6657147|18-G/A 6657176|29-T/G 6657326|12-G/A 6657353|6-A/G 6657411|13-G/A 6657545|31-T/C 6657603|29-G/A 6657689|26-G/A 6657743|8-C/G 6657998|8-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6658208|29-C/T 6658287|13-A/G 6658348|17-A/T 6658475|20-C/A 6658498|16-G/A 6658580|46-G/C 6661448|44-G/T 6661799|23-C/T 6662617|41-T/G 6662633|33-G/C 6662813|9-G/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6662843|9-A/G 6662968|7-T/C 6662976|12-A/C 6664360|25-T/C 6664442|16-C/T 6664875|15-A/G 100021224|39-C/T 100073899|13-T/C 100098800|29-G/T 100100663|9-T/A 6650431|37-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6656974|5-A/T 6657112|32-C/T 6657945|33-T/A 6658433|38-T/A 6664304|20-G/T 6664309|9-T/C 100116189|14-C/A 100045177|15-A/G 100073820|20-A/G 100086048|24-A/T 100098455|12-T/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100098486|16-T/A 100098772|34-A/T 100112391|7-C/G 6651055|18-T/C 100086270|5-G/C 100112446|22-G/C 6661857|31-C/T 6658676|11-C/G 100016220|5-A/G 100021127|7-A/G 6665873|25-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6654134|52-T/A 100016595|6-G/A 100021410|63-C/T 100023315|21-T/C 6653760|49-C/A 100021585|32-T/G 100023219|12-A/G 6658683|43-C/T 100064732|20-A/G 100016355|33-T/C 100019393|16-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100020119|15-A/G 100022894|28-G/A 100082537|56-C/T 100016273|19-A/G 100023327|12-C/T 100015858|19-C/T 100022410|6-G/A 100017258|51-G/T 100019095|48-C/T 100020063|20-G/A 100015954|31-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100021964|13-G/C 100085852|36-T/C 6651226|18-G/C 100021819|62-A/C 100022277|8-T/G 100064827|60-G/T 100018209|24-G/C 100022569|31-G/A 6653298|40-A/G 100015576|20-G/A 100016155|45-A/G   
## 2 2 2 2 2 2 2 2 2 2 2   
## 100018361|5-C/T 100018644|13-A/G 100065285|54-G/A 100066085|48-C/G 100066350|63-A/G 100082653|31-C/G 100019242|15-T/C 100065918|65-C/T 100082574|16-T/C 100112503|22-T/C 6651116|23-G/A   
## 2 2 2 2 2 1 2 1 2 2 1   
## 6664424|11-C/T 100017539|66-C/A 100019104|53-C/T 100020067|42-A/C 100020868|41-A/G 100064882|50-T/C 6658317|12-A/T 6661605|7-T/C 6664288|12-C/T 100016786|17-G/A 100020956|6-T/C   
## 2 2 2 2 2 2 2 1 2 2 1   
## 100016197|32-C/T 100017640|9-C/G 100018738|55-G/T 6651375|43-G/A 6651394|40-A/T 6657692|30-G/C 6661438|21-G/A 100015230|14-A/T 100015429|54-A/G 100016348|67-T/C 100022665|32-G/A   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6650646|12-A/G 6651058|8-C/T 6652871|25-G/T 6653284|49-A/G 100020780|47-T/C 100082291|18-C/T 6657270|16-C/A 6658306|32-A/G 6663971|20-C/T 100018785|45-G/A 100019578|24-A/G   
## 1 2 2 2 2 2 2 2 2 2 2   
## 100021429|16-A/G 6651301|13-T/C 6653801|25-T/C 6662791|9-T/C 6665675|15-G/A 6665677|34-G/A 6651053|25-C/T 6651062|23-G/C 6657266|49-A/G 6661781|11-G/A 6662884|20-G/A   
## 2 2 1 2 2 2 2 2 2 1 2   
## 6661633|24-T/C 100064957|57-C/G 6650480|42-G/T 6651168|20-T/C 6651202|6-G/T 6651669|51-A/T 6651901|52-A/G 6652133|6-G/A 6652277|34-G/T 6652429|23-C/A 6652852|41-C/T   
## 1 2 2 2 2 2 2 2 2 1 2   
## 6653859|66-G/C 6657107|30-C/T 6657341|14-T/G 6657827|41-T/C 6657863|36-T/C 6657972|11-T/G 6658332|28-G/A 6661576|17-T/C 6662852|8-G/C 6665753|18-G/A 6665974|16-T/A   
## 1 2 1 2 2 2 2 1 1 2 2   
## 6665974|39-G/C 100022319|61-G/T 100066473|44-C/T 6650457|59-C/T 6650512|39-G/A 6650541|48-T/C 6650816|44-C/T 6651070|58-A/C 6651408|58-C/G 6651681|14-C/T 6651690|41-A/G   
## 2 2 2 2 2 1 2 1 2 1 1   
## 6651751|52-A/G 6651951|29-T/C 6652480|24-G/A 6652536|25-A/G 6653136|38-A/G 6653193|66-G/C 6653366|47-T/C 6653406|51-T/C 6653654|13-A/G 6653743|54-T/C 6653795|65-G/T   
## 2 2 2 2 2 2 2 2 1 2 2   
## 6656968|20-T/C 6657138|49-C/T 6657141|6-G/A 6657590|27-T/C 6657970|16-C/G 6658518|17-G/A 6658664|15-C/A 6661383|36-A/G 6661406|53-T/C 6661709|47-A/C 6661820|30-C/T   
## 2 2 2 2 1 2 2 2 1 2 2   
## 6661892|24-C/T 6662654|9-C/A 6662663|5-A/T 6663104|29-A/G 6664717|21-A/G 6665800|40-A/C 6665804|30-T/C 100018586|15-A/G 100045576|29-G/A 100064632|55-G/A 100124805|23-T/C   
## 2 2 1 2 2 1 2 2 2 2 1   
## 6650420|21-G/A 6650787|62-C/A 6650795|22-T/C 6651016|52-G/A 6651805|15-A/G 6652208|23-C/T 6652257|65-G/T 6652383|57-G/C 6652388|11-A/G 6652788|54-A/G 6652943|57-G/A   
## 2 1 2 2 1 2 2 1 1 1 1   
## 6653199|35-A/C 6653447|32-A/G 6653467|25-G/A 6653565|10-G/C 6653569|24-A/T 6654084|42-A/G 6656901|37-A/C 6656919|48-T/A 6656965|28-C/T 6657179|25-G/A 6657434|21-C/A   
## 2 2 2 1 2 2 1 2 2 2 2   
## 6657454|17-T/C 6657477|8-A/G 6657523|10-C/T 6657578|8-C/T 6657628|10-A/G 6657698|41-A/G 6657753|24-G/A 6657784|15-C/G 6657818|27-A/G 6657821|26-T/C 6657854|14-G/A   
## 1 2 2 2 2 2 1 2 2 2 2   
## 6657918|33-T/A 6657923|13-T/C 6657975|18-C/G 6658063|26-T/C 6658152|11-T/C 6658175|49-T/C 6658353|18-G/T 6658417|35-C/A 6658431|14-A/G 6658485|8-A/G 6658531|35-G/A   
## 2 2 2 2 2 2 2 2 2 1 2   
## 6661099|20-G/A 6661250|41-T/C 6661252|5-A/G 6661823|31-T/C 6661826|50-T/A 6661853|33-G/A 6662682|18-G/C 6662708|45-C/A 6662717|10-T/A 6662720|17-G/A 6663956|7-C/T   
## 2 2 2 2 2 2 2 2 2 2 2   
## 6664324|31-T/C 6664897|36-T/G 6664904|21-A/G 6665135|35-C/T 6665977|58-C/T 100062054|9-T/G 100066053|65-C/G 100073867|18-T/C 100098449|11-T/C 100102329|39-G/C 100104849|27-A/C   
## 1 2 2 2 2 1 1 2 2 2 2   
## 100118311|8-T/G 6651728|12-T/C 6651869|31-G/A 6651992|39-T/C 6652070|15-A/G 6652698|58-A/G 6653498|29-C/G 6656984|39-A/T 6656988|16-A/T 6657054|5-A/G 6657255|43-C/T   
## 1 2 1 1 2 2 2 2 2 2 2   
## 6657257|18-T/G 6657264|21-A/C 6657486|25-A/G 6657731|27-T/C 6657762|30-T/G 6658275|5-T/C 6658351|8-T/A 6658356|40-T/A 6662713|37-C/T 6662735|7-T/C 6662802|35-T/C   
## 2 2 2 2 2 2 2 1 2 2 1   
## 6664285|14-G/T 6664286|5-A/G 6664411|22-G/A 100116189|12-G/A 100020566|50-G/A 100073416|9-G/C 100073555|13-T/C 100073946|24-C/A 100082262|34-C/T 100082279|42-T/G 100093533|7-G/T   
## 2 2 2 2 2 2 1 2 2 1 2   
## 100093556|10-T/A 100093571|9-A/T 100093658|5-T/C 100102354|38-T/G 100102368|8-T/C 100108745|39-G/C 100124806|24-A/G 6652013|36-G/A 100019613|42-A/G 6653942|18-C/G 100021748|48-G/A   
## 2 2 2 2 2 2 1 2 2 1 2   
## 100022307|64-C/T 6661279|61-A/G 100016043|65-A/G 100021551|26-C/G 6651509|9-T/C 100015681|31-G/A 100022444|19-C/T 100065978|51-A/C 100015971|32-G/A 100018341|11-C/T 100018791|30-T/A   
## 2 2 2 1 1 2 2 1 2 2 2   
## 100021444|27-G/T 6651402|31-T/C 6652371|36-A/G 100016955|21-T/C 100017267|60-T/C 100017271|28-T/A 100017633|14-G/T 100018216|18-C/T 100018585|65-G/A 100018930|7-A/G 100019458|6-T/C   
## 2 2 1 2 1 2 2 2 1 2 2   
## 100020508|64-T/C 100021998|13-T/C 100065288|30-C/T 6657675|5-C/T 100018006|38-A/G 100018907|18-T/C 100018908|67-C/T 100019522|42-C/T 100021552|23-G/T 100021990|59-T/C 100066166|11-T/A   
## 2 2 1 2 2 2 2 2 2 2 2   
## 6651977|40-G/C 6661494|35-T/C 6661600|20-T/C 100023675|41-A/G 100064707|39-C/T 100066332|9-G/A 100111975|14-G/C 100015765|23-G/A 100017875|29-A/G 100019456|25-T/C 100019962|30-A/G   
## 1 1 1 2 2 2 2 2 2 2 2   
## 100020185|57-C/A 100020870|33-C/G 100021266|13-G/A 6651172|33-A/G 100015703|20-A/G 6653988|60-A/T 100018373|30-C/T 100020483|16-G/A 100022388|34-C/T 100022854|43-G/T 100023104|56-C/T   
## 2 2 2 2 2 2 2 2 2 2 1   
## 100023409|22-T/C 100086339|36-T/G 6651925|23-G/C 100120327|18-G/A 100120327|6-G/A 100016290|59-A/C 100020594|60-T/A 100022242|47-G/T 100022320|10-T/C 100022502|23-T/A 6651745|39-T/C   
## 2 2 1 1 2 2 2 1 2 2 2   
## 6661848|25-T/G 100016236|36-G/T 100016349|39-A/G 100016910|15-T/A 100020122|19-C/G 100021092|17-T/C 100022165|12-A/G 100023470|59-G/A 6661692|56-G/A 100016458|65-C/G 100018964|48-T/G   
## 2 2 2 2 2 2 2 2 1 1 1   
## 100021554|25-A/G 100023185|19-T/G 6650701|18-A/G 6652394|37-T/C 6653506|13-T/A 6664058|35-C/T 100016479|45-A/T 100017508|19-C/G 100018962|16-T/C 100022682|11-A/T 100066335|57-A/T   
## 2 1 2 1 1 1 1 1 2 1 1   
## 100082668|8-A/T 6658494|15-A/G 100015625|54-A/G 100016249|62-A/C 100016393|18-A/T 100016660|55-C/T 100017075|58-G/A 100017124|8-A/G 100017541|11-T/A 100018026|11-T/C 100019630|31-T/C   
## 2 2 1 2 2 2 2 2 2 2 1   
## 100019855|44-T/C 100019873|44-G/A 100019915|44-G/T 100022465|65-C/G 100022648|51-G/A 100044512|21-C/T 6650696|57-G/A 6653452|20-G/A 100015340|55-T/G 100017500|23-A/C 100020588|47-C/A   
## 2 1 1 1 2 2 2 1 2 2 1   
## 100022422|51-G/T 100022425|5-T/C 100023388|34-C/A 100023484|57-G/A 100023525|29-A/G 100064648|32-T/C 100065646|5-C/A 100073396|12-C/T 100073814|33-T/C 6650655|58-G/A 6651105|51-A/C   
## 1 2 1 2 2 2 2 1 2 1 1   
## 6651192|9-A/G 6652274|53-T/C 6652608|18-G/C 6652649|33-C/G 6653266|5-T/A 6661462|57-A/G 100016352|41-C/T 100016515|37-T/A 100016629|18-T/C 100017186|6-T/C 100018441|46-A/T   
## 1 1 2 1 1 1 1 1 2 2 2   
## 100019819|59-T/G 100021768|16-G/T 100022658|14-G/A 100022749|22-C/T 100023505|21-C/G 100064613|60-T/C 6650443|20-C/T 6650647|27-A/C 6650672|16-T/C 6650875|47-G/A 6652044|30-A/G   
## 2 2 2 1 2 2 1 1 2 2 1   
## 6652814|39-C/T 6653050|59-G/T 6653245|23-A/G 6653382|37-T/C 100015237|28-T/A 100016165|7-G/A 100017157|49-G/A 100017486|22-T/G 100019175|10-C/G 100019665|26-G/A 100020841|64-T/C   
## 1 1 2 1 1 2 2 2 1 2 2   
## 100120329|23-A/G 6650705|36-C/T 6651136|7-G/C 6651295|17-C/T 6651888|7-A/G 6652092|41-A/G 6652390|29-T/C 6653344|40-A/G 100017290|62-G/T 100017981|57-C/T 100018180|55-T/C   
## 2 1 1 1 1 2 1 1 1 1 2   
## 100018460|39-T/G 100018667|65-G/A 100019573|61-A/C 100020403|29-G/T 100023540|56-T/G 100065318|8-A/G 100066600|5-T/C 100066622|14-T/C 100086014|36-T/C 100098840|27-G/A 6650711|25-C/A   
## 2 2 1 2 1 1 1 2 2 2 1   
## 6651249|51-G/C 6653001|20-G/A 6653114|14-T/A 6653811|17-T/C 6661187|29-A/C 100015694|44-A/T 100016554|8-A/G 100017386|12-G/A 100017844|43-G/A 100020562|42-C/G 100021051|67-G/T   
## 1 1 2 1 1 2 2 2 2 1 2   
## 100065266|5-T/C 6650693|44-C/T 6651276|7-A/G 6651724|68-A/G 6652175|66-T/C 6652356|17-A/G 6653008|30-C/G 6653473|47-C/T 6653869|47-T/G 6654016|14-A/G 6664729|22-C/T   
## 1 1 2 1 2 2 1 1 1 1 2   
## 6661750|65-G/A 100016089|30-C/T 100017364|16-A/G 100017568|38-A/G 100017636|20-G/A 100018230|62-T/C 100020647|25-G/A 100023048|6-T/C 100023313|65-G/T 100023842|66-T/C 6650662|57-T/A   
## 1 1 1 2 2 1 2 2 2 2 1   
## 6650857|56-T/C 6650871|15-T/G 6652354|41-T/G 6652712|18-A/G 6652897|32-G/A 6653119|17-A/G 6653277|45-G/C 6653413|34-C/T 6653686|19-A/G 6653906|8-T/C 6656936|12-G/A   
## 1 1 2 1 2 2 1 1 1 1 2   
## 6658216|16-T/C 6661637|61-A/T 6664071|59-C/T 6652420|13-T/G 100017654|43-G/C 100021742|38-C/A 100044665|10-T/G 100064985|48-C/T 100065246|12-A/G 100066557|28-C/T 100082397|38-C/A   
## 1 1 1 1 2 1 2 1 2 1 1   
## 6650620|8-A/G 6650692|56-G/A 6650978|6-G/A 6651221|15-T/C 6651235|33-A/G 6651703|33-T/C 6651891|44-T/C 6652170|11-A/G 6652463|46-A/C 6652496|43-C/T 6653226|65-A/G   
## 1 2 2 1 1 1 1 2 2 1 1   
## 6653778|39-T/A 6654074|20-G/T 6658572|16-A/G 6661139|49-C/A 6661309|12-G/A 6661345|40-C/G 6662659|12-A/C 100120331|53-T/G 100020242|53-A/G 100021807|31-T/C 100065925|36-C/T   
## 2 1 2 1 1 2 2 2 1 1 2   
## 100066073|6-T/C 100102122|31-C/A 6650428|57-G/T 6652370|62-G/A 6653373|60-G/T 6653417|48-C/G 6653777|46-G/T 6653792|53-C/A 6654058|18-T/C 6661147|26-G/C 6661226|53-C/T   
## 2 2 1 1 1 2 1 2 2 1 2   
## 6661658|19-C/T 6661670|43-T/C 6663906|23-C/T 6664040|9-G/T 100017806|36-A/G 100019553|65-G/A 100020150|48-T/C 100022824|15-T/C 100045255|15-T/C 100064683|52-A/G 100065044|38-G/T   
## 1 1 1 2 2 2 1 2 1 2 1   
## 100065331|11-A/G 100082376|10-G/T 100114017|32-T/C 6650513|52-C/T 6650793|26-A/C 6650805|11-A/G 6650968|18-A/T 6651099|28-A/G 6651150|45-T/C 6651383|67-T/G 6651541|66-T/C   
## 1 1 1 2 1 1 1 1 1 1 2   
## 6651588|49-C/T 6651711|11-A/G 6651715|59-C/G 6651731|68-G/T 6652027|41-G/A 6652109|27-A/G 6652130|35-T/C 6652152|19-T/G 6652278|43-G/C 6652658|29-A/T 6652840|16-G/A   
## 2 1 1 1 2 2 1 1 2 1 2   
## 6652867|64-C/T 6652883|26-G/C 6653149|58-C/T 6653187|24-G/T 6653229|41-A/G 6653591|11-G/C 6653796|8-T/C 6653829|21-C/A 6653872|47-G/T 6653967|40-G/A 6657086|36-C/A   
## 1 1 2 1 1 1 2 1 1 1 1   
## 6657671|40-C/T 6657902|21-T/C 6661102|10-A/G 6661477|67-A/G 6661483|14-G/C 6661530|26-C/G 6661560|54-A/G 6661564|45-T/A 6662672|28-C/A 6664046|51-T/C 6664055|23-C/T   
## 1 1 1 1 2 2 1 1 1 2 1   
## 100120332|58-C/A 100120330|33-G/T 100015220|59-C/A 100016151|11-T/C 100016562|12-G/A 100016798|34-C/T 100021467|36-G/A 100065538|21-A/T 100065912|28-G/A 100098480|21-A/C 6650742|33-G/A   
## 2 2 1 2 2 1 1 2 2 1 2   
## 6650889|38-G/T 6651263|53-A/C 6651318|7-C/T 6651340|27-C/T 6651392|24-C/T 6651403|11-C/A 6651475|6-A/G 6651645|50-G/A 6651662|13-T/A 6651726|49-G/A 6651740|27-G/A   
## 1 1 2 1 2 1 1 1 1 1 1   
## 6651858|23-A/G 6651880|60-C/T 6651889|58-T/C 6651919|45-G/T 6652026|29-G/T 6652151|12-T/C 6652259|45-G/T 6652382|40-G/A 6652492|21-C/T 6652504|25-A/G 6652541|50-A/G   
## 2 1 1 1 1 1 2 2 1 1 1   
## 6652568|29-G/T 6652593|5-G/T 6652667|36-T/C 6652794|64-C/T 6652856|20-T/A 6653235|13-T/G 6653395|26-G/A 6653420|50-G/A 6653458|58-C/T 6653463|23-A/G 6653479|25-T/C   
## 1 1 1 1 1 1 2 1 2 2 1   
## 6653599|33-C/T 6653745|15-T/C 6653871|33-G/A 6653881|45-G/A 6657644|31-G/T 6657994|16-G/A 6658139|28-G/A 6658379|30-A/G 6658529|38-A/G 6658559|22-T/G 6658652|28-T/C   
## 1 2 1 1 1 2 1 2 2 1 2   
## 6658660|28-C/G 6661093|40-C/A 6661130|16-T/C 6661369|40-T/C 6661393|35-C/A 6661665|50-T/C 6661672|7-G/A 6661712|36-C/T 6663057|27-A/C 6663982|51-T/G 6665517|21-A/T   
## 1 1 1 1 2 1 1 2 2 1 2   
## 6665665|51-T/C 6665807|65-G/A 100104824|10-C/A 100020394|66-C/G 100020441|43-A/C 100021095|9-T/C 100021324|61-A/G 100044982|27-T/C 6633176|7-T/C 6650394|45-T/C 6650524|64-C/A   
## 2 1 2 2 2 1 1 1 1 1 1   
## 6650526|41-A/C 6650616|12-C/T 6650617|39-T/G 6650695|29-G/A 6650768|33-C/T 6650776|41-A/G 6650824|6-C/G 6650856|61-G/C 6650931|6-C/T 6650932|50-A/G 6650935|64-T/C   
## 1 1 1 1 2 1 1 2 1 2 1   
## 6650950|61-A/C 6650971|13-G/A 6651076|54-T/C 6651094|7-C/T 6651112|44-A/C 6651140|51-A/G 6651141|28-C/T 6651166|8-G/A 6651232|36-T/A 6651234|42-A/T 6651248|33-A/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651256|30-A/G 6651296|34-G/A 6651362|29-A/G 6651505|25-A/G 6651536|18-C/T 6651549|18-T/C 6651584|29-A/G 6651585|28-G/A 6651603|27-G/A 6651650|53-C/T 6651682|41-G/A   
## 2 1 1 2 1 1 1 2 2 2 1   
## 6651722|21-T/C 6651790|34-A/C 6651836|41-C/A 6651920|32-T/A 6651945|47-T/C 6651948|51-G/A 6651949|50-A/C 6651978|13-T/C 6651988|28-A/T 6651995|36-G/C 6651996|46-A/G   
## 1 1 1 1 1 1 2 1 1 1 1   
## 6652021|23-A/T 6652050|59-T/C 6652102|5-C/T 6652139|9-C/G 6652157|32-T/A 6652164|29-T/C 6652198|12-T/A 6652209|23-C/G 6652232|10-G/A 6652236|58-T/C 6652248|19-T/C   
## 1 2 1 1 1 2 2 1 1 1 1   
## 6652256|38-A/G 6652399|58-G/T 6652408|36-G/T 6652455|7-A/G 6652563|7-G/C 6652666|14-C/T 6652708|30-T/C 6652718|43-C/A 6652723|11-A/G 6652744|49-T/G 6652761|57-T/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652809|41-A/G 6652820|37-G/T 6652865|19-C/G 6653005|35-T/C 6653010|64-G/C 6653038|53-G/C 6653130|47-A/T 6653175|37-A/G 6653237|34-C/T 6653376|49-A/C 6653396|18-A/G   
## 2 1 1 1 1 1 1 1 2 1 1   
## 6653462|51-G/A 6653499|18-A/G 6653523|14-A/C 6653530|62-T/C 6653604|19-T/A 6653643|33-G/C 6653655|16-T/C 6653725|23-C/A 6653838|44-C/T 6653994|51-G/A 6656884|31-A/G   
## 1 1 1 1 1 1 2 2 1 1 2   
## 6656889|19-A/G 6657085|18-T/G 6657130|23-G/T 6657217|6-G/T 6657267|27-G/T 6657331|17-A/G 6657391|26-A/G 6657478|16-A/C 6657485|17-C/T 6657548|20-A/G 6657600|33-G/A   
## 2 2 2 1 2 1 2 1 2 1 2   
## 6657637|34-A/C 6657667|22-A/G 6657873|49-G/A 6658002|34-T/C 6658172|30-C/A 6658300|7-T/A 6658375|19-C/G 6658441|13-C/T 6658569|13-G/A 6661094|36-A/G 6661297|9-T/G   
## 1 1 1 2 2 1 2 2 2 1 1   
## 6661311|33-T/C 6661392|20-A/G 6661396|55-T/C 6661401|35-G/A 6661459|27-G/A 6661496|33-C/G 6661598|62-A/G 6661609|59-A/C 6661636|18-T/A 6661653|9-G/A 6661756|25-G/A   
## 1 1 2 2 2 1 2 2 2 1 1   
## 6661788|59-G/T 6661804|5-T/A 6661860|33-C/T 6662701|6-A/G 6662705|5-C/G 6662826|20-C/T 6663036|30-T/G 6663052|30-A/G 6663927|13-G/A 6664053|24-C/T 6664315|17-A/G   
## 1 1 1 2 1 1 1 2 1 2 2   
## 6664393|35-G/A 100101004|14-G/C 6664748|30-C/A 6665122|15-A/T 6665280|39-G/A 6665349|39-T/A 100109477|21-T/C 6665749|9-T/C 6665804|12-G/A 6665805|15-G/A 6665809|11-A/G   
## 2 1 1 1 1 1 1 2 1 1 1   
## 6665975|52-G/A 6666169|13-T/A 6666355|23-A/G 100123948|55-T/C 100022390|44-G/A 100023236|15-G/A 100073694|7-G/A 100082381|22-C/A 100098535|7-C/G 100098787|33-A/G 100123797|15-G/T   
## 2 2 1 1 2 1 2 1 1 1 2   
## 6632181|18-G/A 6650384|58-A/G 6650392|28-C/A 6650405|15-T/C 6650425|36-A/T 6650440|25-T/C 6650441|46-C/T 6650503|7-C/T 6650511|35-A/T 6650582|52-A/C 6650601|22-C/T   
## 2 2 1 1 2 1 1 1 1 1 1   
## 6650694|13-A/C 6650707|5-A/G 6650750|63-G/A 6650751|7-T/G 6650881|41-T/C 6650887|8-T/G 6650895|17-A/G 6650942|29-A/G 6651068|27-G/A 6651106|54-A/T 6651126|7-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651199|46-C/G 6651277|12-C/T 6651309|58-A/G 6651440|6-A/G 6651559|24-C/T 6651568|46-G/C 6651596|5-C/T 6651608|37-G/A 6651626|23-G/C 6651670|12-A/G 6651678|31-T/G   
## 1 1 1 1 1 1 1 1 1 1 2   
## 6651702|11-C/T 6651729|48-A/G 6651775|9-A/G 6651799|50-C/G 6651833|60-C/T 6651834|42-T/G 6651856|61-G/A 6651902|48-A/T 6651916|32-C/T 6651940|40-C/T 6651955|38-C/A   
## 1 2 1 1 2 1 1 1 1 1 2   
## 6652103|6-G/A 6652221|13-A/G 6652233|30-C/T 6652271|50-T/C 6652312|29-A/G 6652323|41-T/C 6652348|30-G/A 6652387|29-A/C 6652570|42-C/A 6652579|68-G/T 6652611|59-C/A   
## 1 1 1 2 1 1 1 1 2 1 1   
## 6652679|46-G/C 6652770|46-T/C 6652916|41-A/G 6652924|5-G/T 6653139|25-C/T 6653290|15-T/C 6653405|19-T/G 6653547|59-T/C 6653608|25-C/G 6653635|5-T/C 6653678|35-A/G   
## 1 1 1 1 1 1 1 2 1 1 1   
## 6653689|26-T/A 6653786|26-A/G 6653788|50-G/A 6653837|14-C/T 6653866|26-A/T 6653923|19-A/T 6653998|66-G/A 6654062|37-C/T 6654076|43-A/C 6656943|6-A/T 6656950|8-C/G   
## 2 1 2 2 1 2 1 2 1 1 1   
## 6657301|15-A/G 6657373|32-C/A 6657396|21-C/T 6657408|41-T/C 6657466|14-C/G 6657470|5-C/T 6657514|43-G/A 6657532|34-T/C 6657551|9-T/C 6657596|44-G/A 6657604|9-T/G   
## 1 2 2 2 2 2 1 2 2 2 1   
## 6657613|10-A/C 6657630|52-C/T 6657681|17-C/T 6657715|15-C/T 6657723|9-A/T 6657726|41-A/G 6657729|7-G/A 6657752|22-T/A 6657881|18-C/G 6658064|41-T/A 6658065|28-A/C   
## 2 1 2 2 2 1 2 2 1 1 1   
## 6658111|29-A/T 6658148|11-T/C 6658186|19-A/G 6658226|42-C/T 6658296|10-A/T 6658347|20-C/G 6658374|29-C/T 6658438|42-C/G 6658501|21-A/C 6658566|40-C/T 6661096|38-A/G   
## 1 1 1 2 2 2 1 2 2 2 1   
## 6661098|8-C/T 6661155|52-A/G 6661165|8-T/C 6661251|38-A/G 6661269|21-G/A 6661341|8-C/T 6661391|21-C/A 6661466|12-C/T 6661555|18-G/C 6661659|40-C/T 6661684|52-G/A   
## 1 2 2 2 2 2 1 2 1 1 1   
## 6661698|59-T/A 6661775|7-A/G 6661797|49-G/A 6662590|20-A/G 6662615|6-C/T 6662790|12-G/C 6662818|19-G/A 6662832|11-A/G 6662835|7-G/C 6662944|22-G/C 6662946|24-G/A   
## 2 1 1 2 1 2 2 1 2 2 1   
## 6662996|36-G/A 6663047|41-G/A 6663054|17-C/T 6663939|28-A/T 6663975|44-T/C 6663987|39-C/G 6664296|7-C/G 6664312|54-A/T 6664428|37-G/A 100082074|52-T/C 6664722|41-T/G   
## 2 2 2 1 1 1 1 1 2 2 1   
## 6665235|64-T/C 6665278|5-A/G 6665282|36-G/A 6665346|17-A/G 6665662|22-T/C 6665663|28-T/A 6665849|25-C/T 6665877|33-T/C 6665879|38-A/T 6666358|65-C/T 100016475|46-G/A   
## 1 1 2 2 2 2 2 2 2 1 1   
## 100016905|48-C/A 100018192|15-C/A 100018375|55-C/G 100021981|25-T/A 100045028|11-A/G 100065468|15-G/A 100065569|37-C/A 100073412|16-T/C 100073701|13-G/T 100074011|18-G/C 100082459|38-C/A   
## 2 1 2 1 2 1 1 2 2 2 2   
## 100086150|10-G/T 100086229|17-T/C 100086237|9-C/A 100091190|32-A/G 100091207|45-C/G 100091251|13-T/C 100096444|12-A/C 100098472|22-C/G 100103647|6-C/A 100107103|17-C/T 6650387|53-A/G   
## 2 1 1 1 1 2 2 2 2 1 2   
## 6650481|61-G/A 6650788|22-T/C 6651332|37-A/C 6651818|50-T/C 6651863|32-C/T 6652372|10-T/C 6652511|31-G/A 6652754|21-A/G 6652755|9-G/A 6653571|19-A/G 6653574|37-T/C   
## 1 1 1 1 1 2 1 1 1 1 2   
## 6653585|24-C/T 6657101|27-G/A 6657124|22-T/C 6657595|21-A/G 6657640|37-T/G 6657747|20-T/A 6657809|8-A/C 6657847|15-A/G 6657859|39-G/C 6657980|25-A/G 6658003|48-T/C   
## 1 2 2 2 1 2 2 1 2 2 1   
## 6658141|5-G/C 6658173|38-T/C 6658437|16-G/A 6658509|5-T/C 6658625|7-G/C 6661101|21-T/C 6661509|18-T/G 6661745|36-G/A 6661802|6-G/A 6661814|14-T/G 6662656|29-A/G   
## 1 2 1 1 1 2 1 1 1 1 1   
## 6662837|7-T/A 6662873|7-G/C 6662947|5-G/A 6663032|15-G/A 6664269|17-T/G 6664285|27-A/C 6664757|14-T/C 6664912|6-T/C 6665124|27-C/T 6665664|30-A/C 6665874|13-A/G   
## 1 1 2 2 2 1 2 2 2 2 2   
## 6665876|47-A/G 6666225|7-A/G 100065638|51-G/C 100065980|45-T/C 100073421|25-T/C 100073630|15-C/G 100073757|34-G/C 100073948|30-G/A 100074014|19-T/A 100074068|17-A/G 100082248|28-G/A   
## 2 1 1 1 1 1 1 2 2 2 1   
## 100086042|5-C/T 100093665|8-T/G 100098602|36-T/A 100098836|24-A/C 100102147|13-C/T 100121015|18-T/C 100066223|13-G/A 100106210|14-T/G 6665285|9-C/T 6661710|31-T/C 6653668|61-T/A   
## 2 2 2 2 2 2 1 2 2 1 1   
## 100024870|39-A/C 6663929|41-A/C 100019092|30-T/A 6661298|58-T/C 100016534|66-G/A 100023056|37-G/A 100082643|25-G/C 100064775|20-G/A 100023265|24-C/A 6651137|52-T/C 6652727|6-C/A   
## 2 1 1 2 1 2 2 1 1 1 1   
## 100021017|32-G/T 100073776|11-G/A 100015600|63-A/T 6665051|27-A/T 100019246|34-T/A 6651056|34-C/T 6661829|9-C/T 6665126|22-A/C 100016268|6-T/C 100020350|21-A/G 100023328|20-T/C   
## 2 1 1 2 1 2 1 2 2 2 2   
## 100066210|28-C/T 6661110|21-T/A 100018023|63-A/G 100020236|59-G/A 100021188|32-G/C 100021960|39-C/T 100023459|46-A/G 100017280|64-T/G 100018247|39-T/A 100021898|39-C/T 100022093|45-A/T   
## 1 2 1 2 1 2 2 2 2 2 2   
## 100023129|9-T/A 100023441|20-A/G 100065302|16-G/A 100066548|17-C/T 6650550|11-T/G 100016077|58-A/G 100018469|20-T/G 100019543|16-G/T 100020860|10-A/C 100022172|17-T/G 100045257|30-G/T   
## 2 2 1 1 1 2 1 1 1 1 2   
## 6650546|47-C/A 6653399|26-T/A 100015390|53-T/G 100017298|53-C/T 100017444|58-C/T 100017989|5-T/C 100018126|55-A/G 100018257|27-G/T 100018350|18-A/T 100020244|19-T/A 100021605|34-G/T   
## 1 1 2 2 1 1 1 1 2 1 2   
## 100023076|20-A/T 100023357|49-A/T 6653628|59-A/G 6661821|17-T/A 100015255|25-C/T 100015707|14-A/T 100015710|46-C/T 100016017|19-C/T 100017899|6-A/G 100019473|54-C/T 100020145|63-C/G   
## 1 1 1 2 1 2 2 2 2 2 2   
## 100021743|44-C/T 100022776|55-C/A 100023242|39-G/C 100082188|29-T/C 100015628|14-G/A 100020893|36-A/G 100021540|61-G/A 100021665|36-G/A 100022938|66-G/C 100023291|60-T/A 6661242|40-T/A   
## 1 1 2 1 1 1 1 2 1 1 1   
## 6661353|60-C/T 100016201|10-C/T 100016537|37-T/G 100016842|18-C/T 100016876|65-C/T 100016987|65-G/A 100017504|59-C/A 100019821|57-T/A 100020901|34-T/C 100021671|8-G/A 100021969|10-T/C   
## 1 2 1 2 1 1 2 1 1 2 2   
## 100022199|66-G/A 100022545|35-T/C 100022573|13-G/C 100022831|52-G/A 100066558|7-C/T 100016263|30-C/G 100016306|10-A/T 100017198|10-T/A 100017275|13-A/G 100017509|15-C/G 100018032|68-T/C   
## 1 1 1 2 1 1 1 1 1 1 2   
## 100018336|6-C/T 100018672|56-G/T 100019100|44-G/T 100019286|14-C/G 100019912|15-C/T 100020907|14-C/T 100021161|47-T/A 100021810|7-T/C 100023367|18-C/T 100064740|15-A/T 6653264|41-A/G   
## 1 1 1 1 1 2 1 1 1 1 1   
## 6663072|37-T/A 100016098|7-T/C 100016143|59-T/C 100016740|12-A/C 100016777|38-T/C 100018407|47-C/A 100018609|48-C/T 100019034|62-G/A 100019293|6-G/T 100019468|41-G/A 100019644|45-T/C   
## 2 1 1 1 1 1 1 1 1 1 2   
## 100019745|64-C/T 100021138|40-C/T 100022777|45-C/T 100066874|50-C/A 100091157|27-T/G 6652941|42-T/C 6653902|40-C/T 6664728|12-C/T 100015633|60-A/G 100016193|8-T/A 100017485|19-T/C   
## 2 1 1 1 1 2 2 2 1 1 1   
## 100018162|27-C/T 100019061|21-G/C 100019334|15-C/T 100019756|22-T/C 100020056|55-G/T 100020924|20-C/T 100022009|9-G/A 100022323|36-A/G 100022703|5-T/C 100023049|42-G/A 100023218|64-G/T   
## 1 1 1 1 2 1 1 1 1 1 2   
## 100023269|66-A/G 100024832|25-T/C 100044738|8-C/T 100065081|38-C/T 100065706|32-G/A 100096952|53-C/A 6651239|56-C/A 6651495|32-A/G 6652638|14-C/A 6653296|13-A/C 6661158|36-C/T   
## 2 1 2 1 2 1 1 1 1 1 2   
## 100015381|11-T/A 100015413|40-A/T 100015882|61-G/T 100017512|41-A/C 100018395|5-T/C 100019423|68-C/G 100019434|60-G/T 100019704|32-C/G 100019785|27-T/C 100021066|30-G/A 100021425|47-C/A   
## 1 1 2 1 2 2 1 1 2 1 1   
## 100021475|63-A/T 100021915|65-G/A 100022373|12-A/G 100022606|28-T/C 100022910|49-A/G 100025041|57-G/A 100044554|19-G/A 100064948|49-T/A 100065362|20-C/T 6650752|20-T/A 6652176|15-T/C   
## 1 2 1 1 1 1 1 1 1 1 1   
## 6653696|11-C/T 6662909|25-T/C 100015291|39-T/G 100016129|26-G/A 100017225|65-T/C 100017536|38-A/T 100017676|8-G/A 100019216|7-C/G 100019420|52-C/G 100019494|63-G/T 100020318|21-C/T   
## 1 1 1 1 1 1 1 1 1 2 1   
## 100020532|11-T/G 100020604|29-A/G 100020745|51-A/C 100021499|21-G/C 100021838|13-T/A 100021978|37-T/C 100022031|7-T/A 100022223|45-A/G 100023499|68-G/T 100023507|21-G/A 6634782|49-G/A   
## 1 1 2 1 1 1 1 1 2 1 2   
## 6650656|12-T/G 6652475|14-A/T 6661333|17-C/T 100015448|67-A/T 100015469|19-T/A 100015537|12-C/T 100015992|7-C/A 100016029|18-C/T 100016274|21-C/T 100016854|18-G/T 100017144|48-G/A   
## 1 2 1 2 1 1 1 1 1 1 2   
## 100017489|57-G/A 100017909|16-T/C 100018611|43-C/A 100018927|63-G/C 100019035|27-T/A 100019236|16-C/T 100020671|26-T/C 100021001|60-T/A 100021318|46-C/G 100021549|61-A/C 100021863|20-C/T   
## 1 2 2 1 1 2 2 2 1 1 2   
## 100023205|16-G/T 100044711|34-G/A 100064599|63-A/C 100065680|37-G/A 100118396|21-A/G 6651534|52-G/A 6651570|59-C/T 6652200|26-G/A 6652872|49-G/A 6654031|17-C/T 6661376|52-G/A   
## 1 2 1 1 2 1 1 1 1 2 2   
## 6662917|14-G/T 6666226|12-T/G 100015950|5-A/G 100016109|31-A/T 100016805|54-A/G 100016861|15-T/C 100017893|45-T/C 100018244|41-A/T 100018636|16-G/A 100018890|25-T/C 100018982|31-A/G   
## 1 1 1 1 1 2 1 1 1 1 1   
## 100019094|40-C/T 100019137|21-G/C 100019699|26-G/C 100020118|29-C/T 100020890|29-C/T 100021219|23-C/T 100021521|57-T/G 100022288|6-G/C 100022337|30-A/G 100022554|22-T/C 100023064|19-G/A   
## 1 1 1 1 2 1 1 1 1 1 2   
## 100045690|24-G/A 6650514|37-T/A 6651982|15-T/A 6653247|28-A/C 6653292|47-C/G 6653430|58-A/G 6653481|64-T/C 6653533|6-C/A 6653865|59-A/C 6661831|60-G/A 100015200|15-A/C   
## 2 1 2 1 1 1 1 1 1 1 1   
## 100015297|26-C/T 100015382|10-T/A 100017834|8-C/T 100020258|46-C/T 100021617|53-T/C 100021932|18-G/T 100022038|23-C/A 100022622|15-A/G 100022667|15-C/T 100022800|24-C/A 100022903|55-C/T   
## 2 1 1 1 1 1 2 1 1 1 1   
## 100023130|51-G/C 100023154|5-T/C 100023531|17-A/G 100045599|24-A/G 100065227|31-T/C 100065691|24-C/T 100066039|22-G/A 100066092|14-C/T 100074069|38-T/C 100106301|19-A/G 6650690|47-A/G   
## 1 1 1 1 1 1 1 2 1 1 2   
## 6651361|32-G/A 6652061|58-G/A 6652327|54-A/T 6653204|40-A/G 6653393|35-C/A 6653673|65-A/G 6653746|33-C/A 6661305|25-C/G 6664067|16-C/A 6664716|12-T/C 100015645|28-C/T   
## 2 1 1 1 1 1 1 1 1 1 1   
## 100016045|44-C/T 100016331|42-T/C 100017699|11-G/A 100018593|39-G/A 100018814|46-A/G 100019003|20-A/T 100019081|63-A/T 100019377|57-G/A 100019413|55-T/G 100019588|52-G/A 100021006|21-C/T   
## 1 1 2 1 2 1 1 1 2 1 1   
## 100021094|7-C/G 100022208|18-A/C 100022310|31-G/A 100022384|48-G/A 100022899|42-C/G 100108128|12-A/T 6650846|64-A/G 6650911|65-G/A 6651088|5-A/C 6651399|12-C/A 6652520|9-A/G   
## 1 1 2 2 1 2 1 1 1 1 2   
## 6653133|15-G/A 6653564|53-G/A 6653709|31-G/A 6653720|68-C/A 6653797|40-A/T 6653874|10-G/T 6653907|59-A/G 6653965|43-A/G 100065805|29-G/T 6661880|32-C/T 100015400|35-T/C   
## 1 1 1 1 1 1 2 1 2 2 2   
## 100016174|6-C/A 100016241|19-C/T 100016653|31-G/A 100017080|12-A/T 100017172|64-G/C 100017659|13-G/A 100017936|42-T/C 100018252|52-A/G 100018331|42-G/A 100019441|49-A/T 100020597|8-T/A   
## 1 1 2 2 1 1 2 2 1 2 1   
## 100020814|67-G/A 100022284|10-G/A 100022341|63-A/G 100023203|29-C/G 100023334|6-G/T 100023527|5-T/A 100082625|32-A/G 6631600|18-G/A 6634219|54-C/T 6650605|38-G/A 6650666|57-T/A   
## 1 1 1 1 1 1 1 2 2 2 2   
## 6650850|54-G/C 6651176|17-T/A 6651223|56-T/G 6651266|67-C/T 6651497|13-G/A 6651500|53-T/A 6652020|49-C/T 6652396|20-C/T 6652765|20-C/T 6653179|35-C/A 6653588|36-G/A   
## 1 1 2 1 2 1 2 1 2 2 1   
## 6653617|17-C/G 6653803|13-C/G 6653921|17-G/A 6654071|34-C/T 6658453|44-C/T 6662623|41-C/T 100015396|38-G/A 100015614|19-G/A 100015961|7-A/G 100016361|49-G/A 100016600|22-G/C   
## 1 1 1 1 2 1 1 1 1 1 1   
## 100017130|57-T/G 100017328|47-G/A 100018645|27-A/G 100018647|11-T/C 100019579|57-A/G 100019755|66-T/A 100020516|10-T/C 100021870|45-T/C 100022119|34-G/A 100022158|40-C/G 100022170|46-A/G   
## 1 1 2 1 2 1 2 1 2 1 1   
## 100022467|38-A/C 100022708|55-T/C 100023428|39-C/A 100064901|22-G/A 100066583|50-G/C 100082198|48-A/G 100082209|53-T/A 100114666|37-A/T 6650551|48-A/C 6650640|8-G/T 6651037|14-A/C   
## 1 2 1 1 1 2 2 1 1 1 1   
## 6651123|16-G/T 6651198|35-C/T 6651548|20-C/G 6652349|48-A/C 6652912|31-C/T 6652960|9-G/T 6653047|24-C/T 6653111|54-G/C 6653182|48-A/G 6653306|31-C/A 6653329|47-T/C   
## 1 2 2 1 1 1 1 1 1 2 1   
## 6653695|53-T/C 6657908|24-T/C 6658488|17-G/A 6661172|54-T/C 6661256|38-C/G 6665238|10-A/T 100016051|64-C/A 100016065|42-C/A 100016173|67-C/G 100016227|33-T/G 100016734|15-A/G   
## 2 2 1 1 2 1 1 1 1 1 1   
## 100017686|33-G/C 100017703|8-T/C 100017977|13-T/C 100018439|16-T/C 100020203|19-G/A 100021102|63-A/C 100021231|28-T/G 100021723|29-T/G 100022522|40-C/T 100022709|6-G/A 100045624|6-C/G   
## 1 1 1 1 2 1 1 2 1 1 1   
## 6650668|41-T/C 6650746|17-T/C 6650807|17-C/T 6650886|31-G/A 6650934|11-G/A 6651435|37-C/T 6651778|31-G/A 6651783|65-C/T 6652191|59-C/T 6652464|36-A/G 6652873|35-C/G   
## 1 1 1 1 2 1 1 1 2 1 1   
## 6653077|56-T/C 6653537|32-A/G 6653577|27-G/A 6653747|15-A/G 6661083|6-C/T 6661240|52-C/A 6661424|62-T/C 6661830|19-T/C 6665513|19-G/C 6661486|13-G/C 100015240|23-G/A   
## 1 2 1 1 1 2 1 1 1 1 2   
## 100016947|13-A/G 100018671|65-G/A 100019864|8-C/G 100019949|8-C/T 100020694|31-T/C 100022684|13-T/A 100022926|58-G/T 100023200|68-C/T 100044609|42-A/G 100065342|51-C/T 100066803|48-A/G   
## 1 1 1 1 1 2 1 1 1 1 1   
## 100085950|35-A/G 100108060|20-G/C 6630419|14-G/A 6650581|35-C/G 6650628|40-T/C 6650650|35-G/T 6650684|65-A/T 6650719|47-G/A 6650735|38-G/C 6650879|60-C/T 6651049|16-C/G   
## 1 1 2 1 1 1 1 1 2 1 1   
## 6651124|38-C/T 6651144|62-T/C 6651167|41-A/G 6651516|36-T/G 6651679|24-G/A 6651984|7-T/A 6652023|10-G/A 6652091|50-T/A 6652242|32-G/A 6652409|10-T/C 6653236|64-T/C   
## 1 1 1 2 1 1 1 2 1 2 1   
## 6653348|13-G/A 6653637|32-G/T 6653657|58-T/C 6653943|15-G/T 6653959|63-A/G 6654028|68-A/G 6654050|51-G/T 6654072|32-C/A 6657061|32-A/G 6661522|65-A/G 6665120|10-A/G   
## 1 1 1 1 2 1 1 1 1 1 1   
## 100120328|20-T/C 100120333|61-G/A 100065668|5-T/C 100015835|6-C/T 100016061|39-G/C 100016656|14-T/C 100017602|16-G/A 100019319|48-T/C 100019777|21-G/C 100021190|47-T/C 100022177|66-A/G   
## 1 2 1 1 2 1 1 2 1 2 1   
## 100023241|6-T/C 100044452|9-C/G 100065422|7-G/A 100066442|52-G/A 6650473|26-A/G 6650482|38-T/C 6650496|24-C/T 6650610|24-T/A 6650644|49-A/G 6650834|54-C/A 6650842|16-G/T   
## 1 1 1 2 2 1 1 1 1 1 1   
## 6651138|26-A/T 6651261|54-G/A 6651453|19-A/C 6651597|59-A/G 6651744|34-A/T 6651756|62-G/A 6651812|33-C/T 6651980|42-A/G 6652201|21-C/A 6652243|14-C/G 6652864|38-C/T   
## 1 1 1 1 1 2 1 1 1 1 1   
## 6653219|11-G/C 6653248|20-T/C 6653427|25-A/G 6653971|28-A/T 6657006|6-C/A 6657540|27-G/A 6661088|54-C/T 100082471|46-T/C 6661706|26-T/C 6664071|6-G/A 100016295|41-G/T   
## 1 1 1 1 1 1 1 2 1 1 1   
## 100018466|44-G/A 100020140|32-T/C 100020690|9-T/G 100020765|38-G/C 100021275|46-C/T 100045738|12-T/A 100082496|60-G/T 6650712|28-A/C 6650913|49-A/G 6650972|30-C/T 6651222|59-G/A   
## 2 2 1 1 1 1 1 1 1 1 2   
## 6651438|51-T/C 6651492|20-G/A 6651654|52-A/G 6651829|48-G/A 6651860|44-T/G 6651877|63-C/T 6651935|33-C/T 6651974|35-C/T 6651986|27-T/C 6652262|36-T/C 6652560|9-A/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652688|16-G/A 6652875|8-C/G 6653021|18-A/G 6653263|25-G/C 6653294|9-G/A 6653410|59-G/C 6653536|55-G/A 6653603|22-T/C 6653802|50-G/C 6653830|13-C/T 6653963|35-C/T   
## 1 1 1 1 1 1 1 2 1 1 2   
## 6654043|16-A/G 6658028|40-G/C 6661349|14-C/A 6661568|63-A/T 6661747|28-T/C 6663960|60-T/C 6663980|14-A/G 100019622|48-T/A 100019802|12-C/T 100020020|13-G/A 100021576|15-T/C   
## 2 1 1 1 1 2 1 1 2 1 1   
## 100022394|27-C/T 100023389|57-T/G 100023502|39-T/A 100073839|28-C/G 6635439|23-T/C 6650563|22-C/T 6650688|61-A/G 6650747|16-A/C 6650772|42-C/A 6650861|34-T/A 6651030|62-A/T   
## 1 1 2 2 2 1 1 1 1 1 1   
## 6651225|58-T/C 6651322|19-G/A 6651329|44-C/A 6651331|12-T/A 6651353|65-C/A 6651374|45-A/G 6651589|18-T/A 6651687|45-A/G 6651748|42-G/T 6651933|62-A/G 6652449|21-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652527|63-C/A 6652542|24-G/C 6652684|46-A/G 6652730|63-C/G 6652782|44-C/T 6652925|43-T/C 6653316|17-T/A 6653365|26-A/G 6653370|22-C/T 6653474|66-G/A 6653556|52-A/C   
## 1 1 1 1 2 2 1 1 2 1 1   
## 6653733|18-G/T 6653741|19-T/C 6653765|48-T/C 6653879|16-T/C 6654049|52-T/A 6657335|32-G/A 6658312|10-A/G 6661127|7-A/C 6661289|11-T/C 6661380|15-T/G 6661529|31-T/C   
## 1 1 1 1 1 1 1 1 1 2 1   
## 6661563|46-C/A 6661785|56-A/G 6661832|23-C/T 6663079|11-G/A 6665675|20-A/G 6666102|6-C/T 100121706|16-C/T 100015265|55-C/A 100015554|25-A/G 100017634|45-C/T 100018229|31-T/A   
## 1 1 2 1 2 1 1 1 1 1 1   
## 100018597|37-C/G 100018998|48-T/C 100019106|32-T/C 100093589|24-T/C 6632259|35-G/A 6632582|5-C/T 6650532|52-G/A 6650756|47-A/G 6650830|17-G/A 6650851|66-A/T 6650928|5-A/C   
## 1 2 1 1 2 1 1 1 2 1 1   
## 6650987|34-A/G 6651080|35-C/T 6651107|37-G/A 6651110|32-G/T 6651196|62-C/A 6651288|46-T/C 6651442|63-C/T 6651613|49-C/A 6651658|42-A/T 6651720|6-A/G 6651765|63-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651802|34-G/T 6651873|50-T/C 6651874|53-T/A 6651906|20-T/A 6651943|26-G/A 6651957|58-G/A 6652104|41-C/G 6652143|61-T/G 6652149|28-A/G 6652158|57-C/T 6652181|32-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652211|12-C/T 6652240|22-G/A 6652269|40-C/T 6652459|65-C/T 6652473|56-G/T 6652516|46-A/G 6652757|25-T/C 6652797|7-G/T 6652811|14-C/T 6652891|17-T/C 6652914|32-A/G   
## 1 1 1 2 1 2 2 1 1 1 1   
## 6652922|32-G/A 6653051|5-G/C 6653071|48-C/T 6653276|22-T/C 6653337|5-T/C 6653343|21-C/G 6653392|28-C/G 6653404|15-T/C 6653456|52-A/G 6653484|18-G/A 6653641|8-G/A   
## 1 1 1 1 1 1 1 1 2 1 1   
## 6653669|32-C/T 6653732|48-A/T 6653735|8-T/G 6653739|44-G/C 6653814|28-G/A 6653826|65-T/G 6653844|35-A/G 6653895|16-A/G 6653898|20-C/A 6653961|15-T/C 6654048|23-G/A   
## 1 1 1 1 1 1 1 1 1 2 1   
## 6657273|10-C/G 6657733|25-C/T 6657825|20-A/C 6658114|32-C/G 6658233|5-T/G 6658363|20-A/C 6661157|31-A/G 6661223|43-A/T 6661238|20-T/G 6661454|19-A/G 6661478|59-G/T   
## 1 1 2 1 1 1 1 1 1 1 1   
## 6661581|31-C/T 6661584|33-A/T 6661734|17-A/G 6662610|35-C/T 6663909|13-G/T 6664051|46-A/C 6665119|8-A/G 6666170|15-A/C 6666170|17-G/A 6666170|6-G/A 100018529|16-G/A   
## 1 1 1 1 1 1 1 1 1 1 2   
## 100019109|54-C/T 100020873|6-C/G 100020968|7-A/G 100021983|42-A/C 100022525|11-T/A 100065722|64-T/C 6650393|5-T/C 6650424|56-T/C 6650439|56-G/A 6650466|32-T/C 6650505|17-A/G   
## 1 1 1 2 1 2 2 1 1 1 2   
## 6650506|45-A/C 6650533|15-G/T 6650557|47-G/T 6650621|36-G/A 6650631|22-C/T 6650685|22-A/T 6650724|18-T/A 6650838|22-C/T 6650866|40-T/C 6650867|54-T/C 6650893|22-G/A   
## 1 1 1 1 1 1 1 1 2 1 1   
## 6650917|35-C/T 6650920|31-G/C 6651018|30-A/C 6651060|22-T/C 6651146|26-G/A 6651378|67-C/T 6651387|24-T/A 6651391|45-G/A 6651444|17-T/C 6651450|54-T/G 6651457|37-T/C   
## 1 1 1 1 1 1 1 2 1 1 2   
## 6651484|65-A/G 6651503|6-A/G 6651510|59-A/G 6651537|19-A/C 6651552|29-C/T 6651562|32-G/C 6651569|33-T/G 6651580|22-T/A 6651606|13-T/C 6651612|31-C/T 6651615|24-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651705|42-A/G 6651737|5-C/T 6651892|35-T/C 6651930|26-G/C 6651938|17-A/C 6652055|48-A/G 6652132|43-T/C 6652144|17-G/A 6652212|22-A/G 6652231|38-C/A 6652386|55-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652398|40-G/A 6652413|28-C/A 6652427|27-T/A 6652438|68-G/A 6652494|24-T/C 6652515|15-A/G 6652518|57-T/C 6652535|53-G/T 6652564|55-A/G 6652619|16-T/C 6652816|67-C/G   
## 1 1 1 1 1 2 1 1 1 1 1   
## 6652945|37-C/A 6653041|46-A/G 6653142|49-C/A 6653144|56-G/T 6653148|46-A/C 6653163|62-T/C 6653369|63-C/T 6653408|40-T/C 6653429|7-A/G 6653439|17-G/C 6653493|47-C/T   
## 1 1 2 1 1 1 1 1 1 2 1   
## 6653501|7-C/T 6653502|28-G/C 6653504|7-C/G 6653563|7-T/A 6653593|19-T/C 6653740|20-C/T 6653755|14-T/C 6653790|16-T/G 6653834|11-T/C 6653851|28-A/C 6653936|33-A/C   
## 1 1 1 2 1 1 1 1 2 1 1   
## 6653989|22-G/A 6654038|30-G/A 6654047|8-G/A 6654066|45-C/G 6657075|25-A/C 6657215|14-A/T 6657652|33-T/C 6658198|15-T/C 6658380|19-G/A 6658597|10-T/C 6661103|59-T/C   
## 1 1 1 1 2 1 1 1 1 2 2   
## 6661108|53-A/G 6661557|11-G/A 6661627|50-T/C 6661879|7-T/C 6662888|24-C/A 6662892|24-C/T 6664359|17-A/T 6664391|17-A/G 6664780|11-C/T 6665039|22-C/G 6666100|22-C/T   
## 2 2 1 2 1 1 1 1 2 1 1   
## 6666102|30-T/C 6654102|57-C/A 100016395|29-T/C 100020724|58-C/T 100022521|22-C/T 100022955|34-C/A 100045457|17-G/A 100073683|46-G/A 100093512|17-C/G 100102305|42-T/G 100121708|34-C/G   
## 1 1 2 2 1 1 2 2 1 1 1   
## 6650447|47-T/C 6650456|36-A/G 6650499|21-C/T 6650502|55-C/G 6650518|44-C/T 6650566|9-A/G 6650589|18-C/T 6650595|24-C/T 6650602|41-G/A 6650625|38-T/C 6650630|7-C/G   
## 2 1 1 1 2 2 1 2 2 1 1   
## 6650642|21-G/A 6650708|55-C/A 6650731|33-G/A 6650777|15-G/C 6650798|22-T/C 6650874|54-T/G 6650892|52-T/C 6650926|30-T/C 6650951|18-A/G 6650983|20-T/G 6651002|11-G/T   
## 1 1 1 1 1 1 1 1 1 1 2   
## 6651006|19-G/A 6651015|9-T/A 6651028|11-C/T 6651064|34-C/G 6651075|68-C/T 6651082|17-A/G 6651108|57-A/T 6651169|15-T/C 6651211|35-G/A 6651214|29-G/C 6651218|36-A/G   
## 1 1 1 1 1 1 1 1 1 1 2   
## 6651236|9-A/C 6651265|9-G/A 6651293|36-A/T 6651299|48-A/G 6651311|22-C/T 6651316|37-T/G 6651339|7-G/A 6651360|17-C/A 6651411|25-A/G 6651455|40-A/G 6651480|6-A/C   
## 1 1 1 1 2 1 1 2 1 2 1   
## 6651535|17-G/C 6651553|40-C/T 6651633|11-G/C 6651642|43-A/C 6651652|13-T/A 6651653|46-A/T 6651666|39-C/A 6651668|54-T/C 6651692|43-T/C 6651779|57-A/G 6651819|25-G/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651894|54-A/G 6651913|20-A/G 6651928|6-C/T 6651950|10-C/T 6651962|57-C/T 6651979|59-G/T 6652004|68-A/T 6652041|41-T/C 6652076|24-T/G 6652082|47-A/G 6652128|6-G/A   
## 1 1 1 1 2 2 1 1 1 1 1   
## 6652178|42-C/T 6652228|29-C/T 6652229|59-T/C 6652252|11-C/T 6652279|53-A/T 6652302|43-G/A 6652328|42-T/G 6652402|15-A/G 6652405|52-T/C 6652430|41-A/T 6652442|59-A/G   
## 2 1 2 1 1 1 1 1 1 1 1   
## 6652444|19-A/C 6652476|42-G/A 6652478|11-G/T 6652495|5-G/A 6652517|8-A/G 6652531|35-T/C 6652633|57-C/A 6652685|43-G/A 6652711|52-C/T 6652775|11-G/A 6652812|20-T/C   
## 1 1 1 1 1 1 1 1 2 1 2   
## 6652825|12-T/C 6652846|44-A/G 6652876|5-G/A 6652899|47-T/G 6652923|25-T/A 6652938|38-G/A 6652954|34-G/A 6652977|48-A/C 6653056|35-C/G 6653113|5-G/A 6653221|12-A/T   
## 1 1 1 1 2 1 1 1 1 1 1   
## 6653285|45-G/C 6653299|45-T/C 6653300|45-T/C 6653301|16-C/T 6653302|10-C/T 6653314|19-C/A 6653350|22-C/T 6653402|19-G/T 6653488|18-C/T 6653495|56-A/T 6653519|51-A/G   
## 1 2 1 2 1 1 1 1 1 2 1   
## 6653534|60-C/T 6653576|42-C/A 6653592|23-G/A 6653671|64-C/A 6653680|17-G/A 6653685|30-G/A 6653711|10-T/A 6653718|49-A/C 6653737|54-G/A 6653753|52-T/C 6653780|36-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653880|38-A/G 6653900|13-T/A 6653944|44-G/A 6653977|55-A/G 6653997|67-G/A 6654006|12-T/C 6654014|37-G/A 6654041|11-A/G 6654055|10-A/G 6654086|14-G/A 6654088|35-T/A   
## 1 1 1 1 1 1 1 1 1 2 1   
## 6656956|22-A/G 6657047|46-C/T 6657188|43-C/G 6657327|42-G/C 6657536|7-A/G 6657721|47-G/C 6657808|17-T/A 6657912|46-T/G 6658001|44-A/T 6658011|9-C/A 6658107|14-C/G   
## 1 1 1 2 2 1 1 1 2 1 2   
## 6658156|5-G/T 6658199|15-T/C 6658229|33-G/T 6658234|5-T/G 6658254|27-T/C 6658284|37-G/A 6658292|22-T/C 6658327|20-A/G 6658407|20-G/A 6658414|11-G/A 6658562|19-G/T   
## 1 1 2 1 1 1 1 1 1 1 1   
## 6658586|32-A/C 6658643|11-C/T 6658671|14-C/T 6661089|25-T/C 6661118|54-A/G 6661135|53-G/A 6661189|30-T/C 6661215|39-T/G 6661222|65-T/A 6661248|53-C/G 6661249|13-A/G   
## 1 1 2 1 1 1 1 1 1 1 1   
## 6661292|48-T/C 6661362|55-T/C 6661374|18-A/G 6661410|32-G/T 6661422|22-C/T 6661440|5-C/T 6661444|36-A/G 6661467|8-T/G 6661491|67-G/C 6661502|37-A/T 6661590|51-A/C   
## 1 1 2 1 2 1 1 1 1 1 1   
## 6661599|28-A/G 6661630|50-G/A 6661635|15-T/C 6661640|37-T/A 6661680|9-C/G 6661723|32-C/T 6661736|14-G/C 6661758|19-G/A 6661804|60-A/G 6661810|40-A/C 6661811|44-T/A   
## 2 1 1 1 1 1 1 1 1 2 1   
## 6661811|67-G/A 6661833|57-C/T 6661841|11-G/A 6661855|40-T/C 6661864|19-T/A 6661882|41-A/G 6661883|8-G/A 6661885|20-A/T 6662600|6-A/G 6662722|30-G/C 6662742|10-A/C   
## 1 1 1 1 1 2 1 1 1 1 1   
## 6662844|10-A/C 6662885|9-G/T 6662886|27-C/T 6662910|18-C/G 6662926|18-T/C 6663096|18-A/T 6663907|45-A/G 6663910|8-C/T 6663965|32-C/T 6663983|49-G/C 6663986|51-T/A   
## 2 1 1 1 1 1 2 1 1 1 1   
## 6664025|20-C/T 6664038|20-G/A 6664063|32-G/A 6664295|6-G/A 6664431|31-A/G 6664713|15-G/A 6665122|10-A/C 6665220|17-C/T 6665221|28-T/C 100109498|18-A/G 100109477|15-C/T   
## 1 1 1 2 2 1 1 1 1 1 1   
## 100109477|9-A/C 6665568|14-T/C 6665571|10-T/C 6665805|26-C/G 6666099|20-C/T 6666516|59-G/A 100124929|12-A/G 100016665|5-A/G 100016860|40-G/A 100019055|15-C/A 100019486|67-T/C   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100020835|48-C/G 100044994|33-G/A 100064828|9-G/T 100064931|32-G/A 100065941|26-T/C 100073522|28-A/G 100081694|12-C/T 100093694|8-T/G 100114698|38-A/T 100121709|38-A/G 6631771|63-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6643511|8-T/C 6650389|25-A/G 6650408|50-C/T 6650436|33-G/A 6650531|50-G/A 6650573|57-G/A 6650637|15-T/C 6650654|52-A/C 6650710|46-T/G 6650720|22-A/T 6650779|16-C/T   
## 2 2 1 1 1 1 1 1 1 2 1   
## 6650822|27-G/A 6650832|27-T/C 6650901|27-G/A 6650902|39-G/T 6650937|10-A/G 6650960|65-A/G 6651019|62-A/G 6651142|65-T/C 6651204|9-G/A 6651227|47-C/T 6651280|20-T/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651418|16-G/T 6651508|15-G/T 6651574|38-G/T 6651577|11-A/G 6651598|31-T/C 6651697|15-C/T 6651725|7-T/C 6651760|20-A/T 6651762|50-A/G 6651788|15-A/G 6651792|9-G/A   
## 2 1 1 2 1 1 2 1 1 1 1   
## 6651793|43-T/C 6651862|51-C/T 6651882|23-G/A 6651884|35-A/C 6651903|16-A/G 6651924|35-T/C 6651929|41-G/T 6651993|33-G/A 6651998|13-G/T 6652029|51-G/A 6652043|18-A/G   
## 1 1 1 1 2 1 1 1 1 1 1   
## 6652138|37-A/G 6652167|65-C/G 6652206|59-C/A 6652238|26-C/T 6652289|28-A/T 6652298|67-A/G 6652307|44-C/A 6652334|58-A/T 6652336|15-C/A 6652366|34-C/A 6652425|29-A/T   
## 1 1 1 1 1 1 1 1 2 1 1   
## 6652524|49-C/T 6652588|40-G/T 6652613|43-C/G 6652632|21-A/G 6652778|29-G/A 6652802|13-A/T 6652819|42-A/C 6652826|14-T/C 6653026|52-G/C 6653068|62-G/C 6653116|22-A/G   
## 1 1 1 1 1 1 1 1 2 1 1   
## 6653218|66-C/G 6653354|23-C/A 6653444|44-G/T 6653464|25-A/G 6653494|25-G/A 6653568|59-G/C 6653672|51-G/T 6653690|24-G/C 6653700|47-T/C 6653713|41-T/C 6653736|20-T/A   
## 1 2 1 1 1 1 1 1 1 1 1   
## 6653875|30-C/T 6653968|66-C/G 6653974|33-T/A 6653991|65-G/T 6657021|28-G/A 6657102|16-C/T 6657128|18-G/A 6657132|5-A/C 6657178|34-G/A 6657193|53-C/T 6657201|19-A/G   
## 1 1 1 1 2 1 1 2 2 2 1   
## 6657204|30-A/C 6657318|9-G/A 6657354|8-C/T 6657383|35-G/T 6657458|5-C/G 6657566|43-G/A 6657607|43-G/A 6657631|9-G/A 6657655|8-T/C 6657745|21-C/A 6657813|21-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6657950|26-T/C 6658016|18-C/G 6658025|28-G/A 6658074|26-C/A 6658086|13-T/C 6658116|19-T/G 6658140|8-T/C 6658176|39-C/T 6658256|13-G/C 6658270|50-G/T 6658309|15-G/T   
## 2 1 1 1 1 1 1 2 1 1 1   
## 6658382|35-G/A 6658386|9-G/T 6658396|48-A/T 6658416|19-T/C 6658448|12-A/G 6658539|20-A/G 6658593|6-T/C 6658605|5-T/A 6658616|40-G/T 6658646|18-C/A 6661133|7-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661179|34-A/T 6661195|26-A/G 6661294|16-G/T 6661342|14-G/C 6661347|62-A/G 6661359|29-T/C 6661360|12-T/C 6661375|25-G/A 6661390|29-G/A 6661411|10-A/T 6661415|7-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661429|43-A/G 6661461|24-A/G 6661525|21-A/G 6661561|6-A/G 6661611|46-A/C 6661622|45-G/T 100097038|21-G/A 6661741|18-C/T 6661767|9-T/C 6661768|5-T/C 6661780|15-A/T   
## 1 1 1 1 2 1 2 1 1 1 1   
## 6661784|18-A/G 6661801|15-C/T 6662572|23-G/A 6662577|20-C/A 6662598|13-T/G 6662619|18-C/T 6662621|6-C/T 6662686|27-C/T 6662729|33-C/T 6662743|22-C/T 6662903|44-T/C   
## 2 2 1 1 1 2 1 2 2 1 1   
## 6664062|57-T/C 6664077|54-G/T 6664087|35-A/T 6664282|11-G/A 6664352|17-T/G 6664715|34-G/A 6665049|6-C/T 6665121|17-A/G 6665508|35-A/G 6665515|61-A/G 6665540|8-G/A   
## 2 1 1 2 1 1 1 1 1 2 2   
## 6665849|33-C/T 6666095|7-A/G 6666174|7-C/T 6666520|31-G/A 100015941|21-T/C 100016251|35-G/A 100016732|29-G/A 100045346|24-C/T 100045582|33-G/A 100045632|7-G/A 100064767|54-T/C   
## 1 1 1 1 1 1 1 2 1 2 1   
## 100064928|53-G/A 100065927|39-C/T 100074119|31-T/C 100082416|45-C/A 100085968|36-G/A 100091287|38-A/T 100093420|8-G/A 100104859|48-T/C 100121707|24-C/G 6650478|7-C/T 6650577|59-A/G   
## 1 1 1 1 2 1 1 1 1 1 1   
## 6650765|26-G/A 6651007|49-A/G 6651119|61-A/G 6651133|33-C/T 6651237|16-C/T 6651693|21-C/T 6651704|49-G/T 6651952|32-C/T 6652155|42-G/C 6652275|21-C/T 6652283|16-C/T   
## 1 1 2 1 1 1 1 1 1 1 1   
## 6652292|40-G/A 6652303|27-C/T 6652553|13-A/G 6652626|33-A/G 6652630|7-G/C 6652656|7-T/C 6652758|10-G/A 6653200|23-C/A 6653877|30-A/G 6653984|20-G/T 6656875|8-A/T   
## 1 1 1 1 1 1 1 2 1 2 1   
## 6656924|30-G/C 6656996|5-A/T 6657117|41-C/T 6657154|6-G/A 6657156|29-A/C 6657483|18-T/G 6657561|6-C/T 6657735|31-T/A 6657741|7-G/A 6657814|9-A/G 6657850|12-C/G   
## 1 1 1 2 1 1 1 1 2 2 1   
## 6657942|13-C/G 6657997|45-C/T 6658062|30-T/G 6658550|29-A/G 6658582|12-C/G 6658632|5-T/C 6661273|54-T/A 6661308|52-T/C 6661408|14-C/T 6661538|9-G/A 6661791|66-G/C   
## 1 1 1 1 1 1 1 2 1 1 1   
## 6661818|22-G/A 6662638|5-A/G 6662824|38-C/T 6662887|8-G/C 6663037|41-C/G 6664882|7-A/C 6665050|32-A/T 6665295|5-T/C 100019888|47-T/C 100045453|46-G/A 100045704|9-A/G   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100064586|17-G/C 100066059|7-C/T 100074054|47-T/A 100082120|8-T/C 100086057|9-A/G 100086096|24-G/T 100093333|41-G/C 100098548|28-A/G 100104693|28-T/A 100104890|20-C/A 100106918|8-T/C   
## 1 1 2 1 2 2 1 1 1 1 1   
## 100086278|15-A/T 100098561|7-T/A 100112393|13-T/C 6665409|19-C/A 100106209|11-T/A 6652014|36-G/A 100016895|29-G/A 6661843|44-G/A 6652389|64-T/C 6661649|50-A/C 6657666|21-A/T   
## 1 1 2 1 2 1 1 1 1 1 2   
## 6661268|63-T/G 100023082|28-G/T 100017188|42-C/G 6661288|45-T/C 100021319|48-T/G 100045470|27-C/T 6661435|57-G/T 100065514|5-T/C 6630387|13-C/T 100065726|10-C/T 6653782|5-C/T   
## 1 1 2 1 1 1 1 1 1 2 2   
## 100021899|36-A/T 100066454|16-G/T 100065272|30-T/C 100066129|22-G/A 6653374|61-T/C 6664733|54-T/A 100022349|67-T/A 100015942|46-A/C 100016792|52-G/C 100018206|33-G/A 100064825|31-G/T   
## 1 1 2 2 1 2 1 1 2 1 1   
## 100066202|30-T/C 100073401|49-C/A 6633382|47-T/C 100021640|61-G/C 100022856|29-A/C 100023978|37-A/T 6652591|64-T/C 6661464|50-T/A 100015796|50-T/A 100016769|29-T/C 100019373|29-G/A   
## 1 1 2 1 1 2 2 1 1 1 1   
## 100023055|35-A/T 100097014|5-T/G 6661225|60-T/C 6661548|33-A/T 100017088|61-C/T 100023509|31-T/C 100015492|43-G/A 100018948|22-T/C 100020108|6-G/A 100020234|29-G/C 100021104|60-G/C   
## 1 2 1 1 1 1 1 1 1 2 2   
## 100022438|10-G/T 100065777|27-G/T 6634350|32-G/T 100015248|33-A/G 100016465|17-G/A 100016470|38-G/A 100017055|22-C/A 100020326|38-A/G 100020580|5-T/G 100020916|54-A/T 100022162|26-G/C   
## 2 1 2 1 1 2 1 1 1 1 1   
## 100022968|12-G/A 100023214|50-T/C 100023558|48-A/G 100065527|10-A/G 100108046|10-C/G 6652805|19-C/T 6653649|51-C/A 100016806|34-T/C 100016973|34-G/A 100017185|9-C/T 100019652|10-T/C   
## 1 1 1 1 1 1 1 1 1 2 1   
## 100020977|12-T/C 100021791|20-G/A 100064895|33-A/T 100064988|25-T/C 6653972|28-A/G 6658602|21-G/C 100015510|28-A/T 100016175|6-T/C 100016191|14-G/A 100018397|31-G/T 100019542|48-A/C   
## 2 2 1 2 2 1 1 1 1 1 1   
## 100020295|21-C/T 100020374|38-T/C 100021678|59-A/G 100066638|43-T/G 6653330|11-G/A 100015953|68-T/C 100016139|30-C/T 100016326|61-C/T 100016487|19-G/T 100016577|32-A/G 100016760|26-T/A   
## 2 1 1 2 1 1 1 2 1 2 1   
## 100016954|51-G/A 100017145|65-A/G 100017289|41-G/C 100017927|57-A/G 100019119|41-A/C 100019129|28-A/G 100020392|13-C/T 100021327|23-G/A 100022094|8-A/T 100023476|68-C/T 100065094|17-G/A   
## 1 2 1 2 2 2 1 1 1 2 2   
## 100082310|17-G/A 100091292|53-C/T 6633859|61-C/G 6651602|9-A/G 6653320|67-A/G 100015805|62-G/A 100016005|36-T/C 100017432|35-A/G 100019685|30-C/T 100020281|34-T/C 100020816|17-G/A   
## 1 1 1 1 2 1 2 1 1 2 1   
## 100020920|57-A/G 100021124|31-G/T 100021513|63-A/G 100021836|10-G/A 100022515|43-C/T 100023216|57-G/T 100023496|7-C/T 100023681|60-G/A 100065088|33-A/T 100065666|45-T/C 100066471|53-C/T   
## 1 1 1 1 1 1 1 1 1 2 1   
## 6652033|13-A/C 6661430|6-G/T 6661570|26-C/T 6661730|63-G/C 100016186|12-C/A 100016774|44-T/A 100017111|47-A/G 100017208|21-G/A 100017523|52-T/C 100017874|53-A/G 100018144|64-A/G   
## 1 1 1 1 1 1 1 1 2 2 2   
## 100018225|53-A/G 100018942|41-G/T 100019677|5-A/G 100022269|27-A/T 100066082|15-C/A 100066253|43-C/A 100066444|14-G/A 100114672|22-C/T 6651282|60-A/T 6651428|21-T/C 6652874|33-G/A   
## 1 1 1 2 1 1 1 1 1 1 1   
## 100015264|22-A/T 100015814|11-C/G 100015850|40-T/C 100016120|45-G/A 100017115|64-C/T 100017958|17-G/A 100018308|19-A/G 100018683|52-C/T 100019218|10-T/C 100019222|23-G/C 100020050|41-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100020331|13-C/T 100020335|6-A/C 100021226|41-T/G 100021502|29-G/A 100021862|6-G/A 100021994|17-A/G 100022357|61-G/A 100022781|47-C/T 100023182|23-A/G 100023311|52-A/T 100023534|68-C/G   
## 1 1 1 1 1 1 1 2 2 1 1   
## 6653500|12-A/G 6661123|54-G/C 6665401|24-G/T 100015499|31-G/A 100015907|12-G/C 100016631|34-T/C 100019009|45-G/A 100019123|42-G/A 100019424|28-A/G 100019445|67-A/C 100019654|17-C/T   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100020359|57-A/G 100020876|63-C/T 100022261|20-C/T 100022625|36-A/G 100023251|49-T/A 100090852|5-C/T 6653799|6-G/A 6661647|17-A/C 100015702|42-C/T 100015896|29-T/C 100016097|8-A/G   
## 2 2 1 1 1 2 1 1 2 1 1   
## 100016416|52-T/A 100016914|9-T/G 100017736|15-G/C 100018093|40-G/C 100018383|12-A/G 100018805|31-A/G 100018914|23-G/A 100019000|63-T/G 100019412|18-C/T 100019519|62-G/C 100019671|36-A/G   
## 1 2 1 1 1 2 1 1 1 1 2   
## 100019895|42-T/C 100020000|31-A/G 100020210|64-C/T 100021670|11-G/A 100021761|67-C/T 100022043|14-T/A 100022106|27-G/A 100022213|48-C/T 100022452|60-C/T 100022997|31-G/A 100065791|46-T/C   
## 1 2 1 1 1 1 1 2 1 1 1   
## 100066265|30-T/C 100066487|11-G/A 100101063|5-T/C 6634524|57-T/A 6652255|33-A/G 6661618|12-C/T 100015912|66-G/T 100015914|56-A/G 100016606|50-T/C 100016946|25-C/A 100017520|47-T/G   
## 2 1 1 1 1 1 1 2 2 1 1   
## 100018722|5-C/A 100019526|9-G/A 100019891|44-C/T 100020909|55-A/T 100020985|50-A/G 100021139|33-G/C 100021214|56-G/A 100021255|31-C/T 100021313|59-A/C 100022420|43-T/C 100022458|29-G/T   
## 1 1 1 1 1 1 1 2 1 1 1   
## 100022624|40-G/C 100022691|40-C/T 100023114|8-T/A 100023164|37-T/C 100023165|10-C/T 100023475|55-A/G 100024879|34-A/G 6650963|31-A/G 6650995|35-T/C 100015203|28-T/C 100015415|9-G/T   
## 1 1 2 1 1 1 2 1 1 1 1   
## 100015496|59-G/T 100015847|60-G/C 100015873|28-A/C 100015977|34-A/G 100016012|21-A/C 100016160|65-G/A 100016617|11-C/G 100016919|15-T/A 100016933|17-A/C 100017138|9-G/C 100017592|13-G/T   
## 1 1 1 1 1 2 1 1 2 2 1   
## 100017929|18-A/C 100018201|42-T/G 100018285|15-G/A 100018596|39-G/A 100018944|19-C/A 100019340|48-A/G 100019515|10-G/A 100019761|17-G/A 100019817|32-A/G 100020455|16-G/A 100020993|47-T/C   
## 2 1 1 1 1 1 1 1 2 1 1   
## 100022157|60-A/G 100023102|7-C/T 100045024|30-A/C 100065312|53-G/T 100066063|67-C/T 100066423|46-G/A 6634305|33-C/G 6651275|16-A/C 6652010|36-G/A 6661116|34-A/C 6664719|65-C/G   
## 2 1 1 1 2 1 1 1 1 1 1   
## 100015734|66-G/C 100015877|41-T/C 100016028|28-G/T 100016794|51-C/G 100016930|62-C/T 100016976|17-C/G 100017073|58-C/A 100017352|5-T/A 100017471|13-G/C 100017594|43-T/C 100017596|13-T/C   
## 1 1 1 1 2 1 1 1 1 1 1   
## 100018057|54-A/T 100018384|20-C/A 100018436|8-C/T 100018459|29-C/T 100018601|57-C/A 100018886|5-G/C 100019401|38-C/A 100019538|40-A/G 100019682|13-G/C 100019773|68-G/T 100019884|7-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100020084|63-C/A 100020358|5-G/C 100020410|17-G/T 100020846|22-A/G 100021982|22-G/C 100022352|35-G/C 100023106|5-T/A 100023435|47-T/A 100023548|13-A/T 100064672|55-C/T 100091227|51-T/A   
## 1 1 1 1 1 1 2 1 1 1 1   
## 100121014|17-C/T 6653240|15-A/T 100015605|26-A/G 100015623|29-T/A 100015712|9-A/T 100015915|16-G/C 100016293|25-T/A 100016319|36-T/C 100016723|21-C/T 100017173|15-T/A 100017697|22-G/A   
## 2 1 1 1 1 1 1 2 1 1 2   
## 100018492|22-T/C 100018548|16-C/T 100018796|68-C/T 100018865|11-C/A 100018936|13-C/T 100019019|18-A/G 100019086|21-G/A 100019131|12-T/C 100019765|29-C/T 100019951|22-C/T 100020346|50-T/C   
## 2 1 2 1 1 1 1 1 1 2 1   
## 100021253|53-T/C 100021441|53-T/C 100021634|50-A/C 100021664|5-T/C 100021900|25-G/C 100021918|16-G/C 100021944|59-G/C 100022064|57-C/T 100022439|9-G/A 100022958|60-G/A 100023335|10-T/C   
## 1 2 1 2 1 1 2 1 2 2 1   
## 100066167|17-A/C 6652225|65-T/C 6653132|37-C/T 6653692|35-T/A 6661742|53-G/T 6663972|39-G/A 6664076|30-T/C 100015254|42-A/G 100015421|66-C/T 100017443|50-T/A 100018227|9-A/G   
## 1 2 1 1 1 1 1 2 1 1 1   
## 100018684|33-T/C 100019036|18-A/C 100019346|5-C/T 100019642|57-C/T 100020216|59-T/G 100020462|12-G/T 100020825|41-T/A 100021447|5-C/T 100021487|10-A/G 100022350|27-C/T 100022637|44-C/T   
## 2 1 1 2 1 1 1 1 1 1 1   
## 100022974|38-G/A 100023108|17-G/A 100023245|57-A/T 100023390|19-G/A 100023533|34-T/C 100064760|51-A/T 100064984|7-A/T 6635254|28-C/T 6650882|51-G/T 6651794|65-C/A 6652456|5-G/C   
## 1 1 1 1 2 1 1 1 2 1 1   
## 6652956|28-T/C 6653074|11-G/T 6653246|55-C/T 6653257|11-T/C 6653558|37-T/C 6653841|24-C/G 6661717|50-A/G 100015306|34-G/T 100017026|18-T/C 100017183|63-A/C 100017740|39-T/C   
## 1 2 1 1 1 2 1 1 1 1 1   
## 100018186|14-G/A 100018502|54-A/C 100019407|9-A/G 100019597|22-G/T 100019799|11-C/T 100020064|5-A/G 100020467|61-C/G 100021342|19-T/G 100021726|23-G/T 100021853|38-A/G 100022073|47-G/A   
## 1 1 1 1 2 1 1 1 1 2 1   
## 100022174|61-T/C 100022237|64-T/G 100022450|28-C/T 100023247|11-G/A 100024830|48-A/T 100065475|5-A/C 100065743|19-C/T 6651542|50-G/C 6652006|5-C/A 6652136|34-G/A 6652490|28-C/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653164|33-G/T 6661138|57-G/A 6661286|13-C/T 100015294|55-T/C 100015312|26-G/C 100015717|58-T/C 100016035|58-C/T 100017166|55-C/G 100017336|19-C/T 100017436|6-T/A 100018333|8-T/C   
## 1 2 1 1 1 1 1 2 2 1 1   
## 100018623|26-G/A 100018949|25-G/A 100019179|31-T/A 100019378|46-T/C 100019715|11-C/T 100020007|20-C/A 100020186|42-A/T 100020325|12-G/A 100020984|22-A/T 100021063|19-C/T 100021116|47-G/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100021276|48-T/C 100021323|21-A/G 100023352|36-C/T 100023524|20-T/A 100064607|25-T/A 100064666|61-G/A 100066449|6-A/G 100104023|51-G/T 6651556|12-T/C 6651732|66-T/C 6652161|13-A/G   
## 1 1 1 1 2 1 1 1 1 2 1   
## 6653042|9-A/T 6661220|17-G/T 100015287|46-T/C 100015379|18-A/G 100015449|18-T/C 100016230|18-C/G 100016245|55-T/C 100016437|62-T/C 100017249|15-G/A 100018724|8-T/C 100018729|20-A/C   
## 1 1 1 1 1 1 1 1 2 1 1   
## 100018771|32-C/T 100019308|38-T/C 100019625|33-C/T 100019716|25-C/T 100020654|61-G/A 100021098|19-A/T 100021170|5-G/C 100021240|55-G/C 100021330|41-C/T 100021985|6-G/C 100022470|47-C/T   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100022786|9-C/T 100022992|63-G/C 100023087|65-T/C 100023089|12-A/T 100065113|20-C/T 100065660|34-T/C 100082081|14-T/C 6650676|61-A/G 6650683|35-G/A 6650847|62-G/T 6651376|46-G/A   
## 2 1 1 1 2 1 1 2 1 1 1   
## 6651698|17-A/G 6652341|11-G/A 6652418|6-T/A 6652657|13-T/C 6653549|37-G/A 6653926|47-C/T 6661137|45-A/G 6661795|29-A/G 6664067|38-C/T 100015300|34-C/G 100015553|64-G/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100015662|64-G/A 100015747|67-T/C 100016172|45-C/A 100016321|25-T/C 100016379|15-C/T 100016524|6-T/G 100016678|13-G/A 100017389|39-C/A 100017447|10-T/G 100018638|48-T/C 100019669|13-T/C   
## 1 1 1 2 2 1 1 1 1 2 1   
## 100021395|62-G/A 100021505|40-T/C 100021653|13-T/G 100021672|31-T/C 100022109|34-G/A 100022563|58-C/T 100022828|22-T/C 100023017|29-A/T 100066440|62-C/G 100066652|41-G/A 100096906|18-C/T   
## 1 1 1 1 1 2 1 1 1 2 1   
## 6630114|53-A/C 6650736|10-G/T 6651252|16-C/T 6653034|28-A/G 6653152|22-C/A 6653197|10-T/C 6653543|62-T/A 6653729|12-T/C 6658435|49-C/A 6661280|18-T/C 6661782|19-A/G   
## 1 1 1 1 1 1 1 1 1 2 1   
## 100015470|41-C/T 100016237|28-C/A 100016452|17-G/A 100016620|23-T/C 100016680|26-G/A 100016867|47-C/T 100016970|8-C/T 100018066|41-A/G 100018458|45-C/T 100018598|40-C/T 100019260|10-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100019313|6-T/C 100020459|17-G/C 100022183|15-A/C 100022219|59-T/A 100022324|20-A/T 100022476|18-T/C 100022820|44-T/C 100065830|50-G/A 100073534|35-A/T 100108129|53-C/A 6631518|25-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6650419|25-C/G 6650596|64-G/T 6650922|18-T/C 6650997|7-A/G 6651758|26-G/A 6652094|60-T/C 6652276|10-G/A 6652446|14-G/A 6652850|15-T/C 6652911|22-A/G 6653387|31-C/A   
## 1 1 1 1 1 2 1 1 1 1 1   
## 6653442|7-A/G 6653457|43-C/T 6653666|33-A/G 6653913|54-A/G 6661714|10-A/T 6661819|18-T/C 6665305|19-G/A 100015271|40-A/G 100015651|23-C/T 100016940|6-T/G 100017024|68-G/A   
## 2 1 1 1 1 1 2 1 1 1 1   
## 100018261|61-T/C 100018474|24-G/A 100018954|18-A/G 100019606|34-G/A 100019837|9-G/A 100020506|37-T/A 100020651|11-C/G 100021368|14-C/T 100021399|20-A/C 100021433|22-A/C 100021823|21-T/G   
## 1 1 1 1 1 1 1 2 1 1 1   
## 100022483|30-T/A 100022774|66-T/G 100023022|43-C/T 100023206|43-A/G 100023292|16-A/G 100023396|25-C/T 100024289|11-T/C 100045482|25-C/T 100065022|34-A/G 100065562|43-G/A 100065795|26-G/A   
## 1 1 1 1 1 1 1 1 1 2 1   
## 100066292|25-T/C 100073974|41-A/C 100082647|16-C/A 6650814|43-G/C 6650908|37-A/C 6651113|11-C/G 6651346|28-A/T 6651709|24-A/G 6652049|29-T/C 6652500|45-G/T 6652777|22-A/G   
## 1 1 1 1 1 1 1 1 2 1 1   
## 6653333|13-T/C 6653390|14-T/G 6653414|31-T/C 6653728|20-G/T 6654032|23-T/G 6654037|57-A/G 6657904|10-G/C 6661607|55-C/A 6661700|18-G/A 6662767|16-T/C 6664074|40-T/G   
## 1 1 1 2 1 1 1 1 1 1 1   
## 6664074|44-G/C 6664735|26-T/G 6665238|34-T/C 100124938|57-G/A 100015346|10-T/A 100016456|52-G/C 100016501|31-A/T 100017004|22-C/T 100017283|39-T/G 100017322|41-G/A 100017407|26-G/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100017421|12-A/G 100018243|9-T/C 100018879|32-C/A 100019658|67-A/G 100020347|21-G/C 100021567|15-A/G 100021727|64-T/A 100023434|25-T/C 100066346|64-T/C 100066369|51-A/G 100066626|37-G/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6631525|11-C/T 6650677|49-C/T 6650829|66-C/T 6650865|22-G/T 6651274|64-A/G 6651327|26-G/A 6651363|38-T/A 6651684|66-A/G 6652046|31-A/G 6652267|48-T/C 6652284|17-T/C   
## 1 2 1 1 1 1 1 1 1 1 1   
## 6652529|31-T/C 6652900|9-A/G 6653610|43-G/T 6653665|46-C/T 6653751|12-A/T 6653876|40-A/G 6654005|53-G/A 6654018|46-G/A 6661150|29-C/G 6661536|5-G/A 6664750|33-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100103994|12-C/T 100103994|20-G/A 100104021|9-A/G 100015729|18-T/G 100015952|21-T/A 100016302|16-G/A 100016507|10-G/T 100016962|46-C/T 100017543|65-T/C 100018176|18-T/A 100018259|44-T/C   
## 1 1 1 1 2 1 1 2 1 1 1   
## 100019881|23-C/A 100019923|11-A/T 100020081|6-T/A 100020349|28-G/T 100022424|20-G/A 100023400|43-G/T 100044682|9-A/G 100044750|30-A/G 100065250|9-G/T 100065326|31-T/A 100065589|31-A/G   
## 2 1 1 1 2 1 1 1 1 1 1   
## 100066526|17-G/A 100091166|12-G/A 100091166|42-A/G 6650613|48-C/T 6650687|41-T/G 6650796|6-C/T 6650803|47-G/C 6651101|36-C/G 6651528|20-A/T 6651771|12-T/C 6651853|15-T/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652025|35-C/T 6652815|7-T/G 6652936|53-A/C 6653177|8-T/G 6653241|40-G/T 6653293|49-G/A 6653307|12-A/G 6653389|28-A/G 6653538|48-T/C 6653579|57-T/A 6653832|7-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661683|57-A/G 6661685|63-G/A 6661816|48-A/G 6661824|42-G/C 6661850|36-A/T 6661890|47-A/G 6665337|42-A/G 100015757|13-C/T 100016204|33-T/C 100017468|57-G/T 100017967|62-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100018112|46-A/C 100018165|13-C/T 100018718|21-G/A 100019849|5-G/A 100019859|8-G/A 100022136|24-T/C 100022312|53-T/C 100045521|11-T/G 100065432|12-T/G 100065536|20-G/A 100066606|52-G/T   
## 2 1 1 1 1 2 1 1 1 1 1   
## 100082316|6-G/A 100082368|14-T/G 100097022|6-T/C 100108129|36-G/A 6631225|7-T/C 6631997|14-C/T 6650612|10-C/T 6650648|12-C/G 6651035|6-G/A 6651242|13-G/A 6651289|37-A/G   
## 1 1 2 1 1 1 1 1 1 1 1   
## 6651290|54-T/A 6651373|58-C/T 6651393|29-G/A 6651401|31-A/G 6651427|13-G/A 6651437|43-G/C 6651445|36-G/T 6651476|13-C/T 6651646|25-A/G 6651749|48-G/A 6651841|8-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652088|32-C/T 6652192|52-C/A 6652260|63-T/C 6652326|50-G/A 6652369|31-T/C 6652422|33-T/C 6652547|9-G/T 6652893|32-T/A 6652909|24-T/G 6652955|18-G/C 6653017|55-G/A   
## 1 1 1 1 1 2 1 1 1 1 2   
## 6653103|52-T/G 6653677|36-T/C 6653708|16-C/G 6653903|37-A/G 6653934|25-C/T 6654040|14-T/C 6654091|9-T/C 6657832|39-T/C 6661183|41-T/C 6661274|44-G/C 6661675|22-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6663998|37-C/T 6664011|37-G/C 100016463|53-T/C 100016812|38-G/A 100017567|49-A/C 100017961|50-G/T 100018143|16-G/A 100019099|54-T/G 100019383|33-G/T 100019940|39-C/T 100020427|36-G/A   
## 1 1 1 2 1 1 2 1 2 1 1   
## 100020660|8-T/A 100020677|22-A/G 100021361|48-T/C 100021511|43-C/T 100021828|33-C/A 100022057|11-A/G 100022783|26-C/T 100064616|40-A/G 100065171|45-C/G 100065966|15-C/G 100082527|51-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100082585|40-G/A 100106949|10-G/A 100117044|51-G/C 6650418|9-G/T 6650423|29-A/G 6650818|67-C/T 6651153|49-G/T 6651180|65-A/T 6651287|48-A/C 6651447|19-T/C 6651655|40-A/G   
## 1 2 1 1 1 1 1 1 1 1 1   
## 6651717|7-T/C 6651971|61-A/G 6651981|50-T/G 6652195|35-T/C 6652270|30-C/T 6652411|8-G/A 6652419|17-C/T 6652451|65-G/A 6652920|22-G/A 6653067|56-T/C 6653377|17-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653583|28-T/C 6653636|14-A/G 6653697|13-T/C 6653731|66-C/T 6653767|20-G/C 6653770|20-C/G 6653784|35-T/C 6653810|62-C/A 6653854|42-T/C 6653892|54-G/A 6653910|50-T/C   
## 2 1 1 1 1 1 1 1 1 1 1   
## 6654022|30-A/G 6661470|52-C/A 100066269|13-T/C 6662979|27-T/C 6664013|56-T/C 6664771|32-C/T 6665036|59-T/C 100015387|20-A/C 100016289|59-C/A 100017196|51-G/T 100017527|6-T/A   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100017670|46-C/A 100018265|14-C/T 100018491|67-A/C 100019232|26-T/C 100019318|16-T/A 100019703|50-G/A 100019708|6-A/G 100019897|65-G/A 100020477|33-C/T 100022633|31-A/G 100023423|28-C/T   
## 1 1 1 1 1 2 1 1 1 1 1   
## 100064644|53-C/T 100065127|11-C/T 100082124|16-C/G 6632526|27-G/T 6650445|31-C/T 6650584|38-A/G 6650848|20-G/A 6651173|50-C/A 6651298|24-T/G 6651530|41-T/C 6651782|31-G/A   
## 1 1 1 2 1 1 1 1 1 1 1   
## 6651907|9-T/C 6652024|30-A/G 6652131|34-G/A 6652159|67-C/T 6652177|21-C/T 6652210|27-C/A 6652401|28-T/A 6652416|68-C/G 6652713|26-G/C 6652866|10-G/A 6652983|43-C/A   
## 1 1 2 1 1 1 1 1 1 1 1   
## 6653039|43-G/C 6653044|17-A/G 6653092|18-T/C 6653202|68-T/A 6653253|13-C/G 6653255|39-G/T 6653445|25-C/G 6653487|29-C/T 6653527|21-G/A 6653922|36-T/C 6653930|13-A/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6654013|57-T/G 6657669|38-C/T 6658619|38-A/G 6661144|14-T/C 6661228|61-G/A 6661239|28-A/G 6661757|61-G/A 6661837|5-T/C 6663958|42-G/C 6664017|22-C/T 6665345|60-G/A   
## 1 1 1 2 2 1 1 1 1 1 1   
## 6665563|37-A/C 6665563|41-G/A 6665563|7-C/T 6666102|24-A/G 100015848|14-C/A 100016751|21-G/A 100017832|10-T/C 100017856|21-A/G 100018301|7-A/G 100019450|10-C/A 100019818|16-G/A   
## 1 1 1 1 1 1 1 1 1 1 2   
## 100019983|13-A/G 100020502|50-G/A 100020602|47-A/G 100065169|68-T/C 100066267|15-G/A 100066657|20-C/G 6632946|54-T/A 6650395|54-T/C 6650450|36-T/C 6650539|5-T/C 6650675|13-G/T   
## 2 1 1 2 2 1 1 1 1 1 1   
## 6650760|49-T/G 6650770|63-T/C 6650778|15-A/G 6650888|42-T/A 6650948|22-G/A 6651067|68-T/C 6651104|14-T/C 6651269|64-A/G 6651380|66-C/A 6651460|39-T/A 6651469|31-G/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651565|25-G/T 6651594|47-T/G 6651714|59-A/T 6651809|19-T/C 6651814|64-A/G 6652119|10-C/T 6652183|53-C/T 6652218|58-G/A 6652272|46-C/A 6652443|56-C/T 6652587|38-G/C   
## 1 1 1 1 2 1 1 1 1 1 1   
## 6652614|24-T/A 6652643|8-A/T 6652647|54-C/A 6652695|37-C/T 6652702|52-A/C 6652729|55-C/G 6652886|48-T/A 6653028|14-A/G 6653065|44-C/T 6653124|7-G/C 6653205|17-C/T   
## 1 1 1 1 1 1 1 1 1 1 2   
## 6653210|45-C/A 6653524|37-T/G 6653532|60-C/T 6653787|34-A/G 6653818|55-C/T 6653820|23-G/A 6653825|25-G/A 6653908|59-C/G 6653938|33-G/A 6656975|12-C/G 6658434|32-G/T   
## 1 1 1 1 2 1 1 1 1 1 1   
## 6661131|30-C/A 6661170|60-C/T 6661460|63-C/T 100082330|10-C/T 6661516|30-G/T 6661542|10-A/G 6661650|9-G/A 6661787|54-G/C 6661807|10-G/A 6663931|44-A/G 6663966|33-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6664887|16-T/G 6665234|5-T/A 6666170|37-C/T 100016216|6-C/A 100016431|13-A/G 100016980|14-G/C 100017035|18-A/G 100018089|20-C/A 100018299|18-A/G 100019103|66-G/A 100020260|22-G/C   
## 1 1 1 1 1 1 2 1 1 1 1   
## 100020593|29-A/G 100021233|9-G/T 100022402|38-T/A 100022743|53-G/A 100064690|24-G/C 100065349|19-G/C 100065841|23-T/C 100074065|11-G/A 6650412|48-C/T 6650459|40-G/A 6650487|15-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6650510|49-G/C 6650571|53-C/T 6650575|33-C/T 6650657|31-A/G 6650727|33-T/A 6650764|18-A/G 6650786|30-G/A 6650877|51-A/G 6650982|52-G/T 6650992|26-T/G 6651041|46-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651162|25-G/T 6651244|31-C/A 6651284|8-G/C 6651398|18-G/A 6651485|12-A/G 6651517|35-T/G 6651527|40-C/T 6651546|39-T/C 6651644|49-G/A 6651663|43-G/C 6651671|42-C/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651691|10-G/A 6651700|17-C/A 6651734|47-T/C 6651746|20-C/T 6651800|11-A/G 6651813|5-C/T 6651896|64-A/G 6651912|26-C/G 6651917|68-G/T 6652038|34-C/A 6652059|20-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652081|56-C/G 6652085|6-G/A 6652121|43-A/T 6652134|47-G/C 6652186|30-C/T 6652189|13-A/G 6652281|62-C/G 6652285|54-C/T 6652290|29-T/C 6652304|61-G/T 6652432|55-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652503|20-A/G 6652505|16-A/C 6652521|39-C/T 6652525|37-G/T 6652601|21-T/C 6652602|25-G/C 6652606|48-T/C 6652624|28-T/C 6652668|15-G/C 6652670|16-C/G 6652721|10-T/A   
## 1 2 1 1 1 1 1 1 1 1 1   
## 6652733|37-A/G 6652745|53-A/G 6652752|31-C/T 6652791|49-C/A 6652818|11-T/C 6652862|15-A/G 6652881|22-C/A 6652972|10-T/C 6652998|52-A/T 6652999|57-A/G 6653082|48-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653098|9-A/G 6653162|29-G/A 6653274|28-A/G 6653325|64-G/C 6653332|57-G/A 6653357|42-C/T 6653362|53-G/C 6653412|42-A/G 6653426|18-C/T 6653440|10-T/C 6653465|26-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653468|58-T/C 6653470|47-G/C 6653503|52-C/T 6653589|18-G/A 6653681|55-A/G 6653716|66-G/A 6653721|50-T/C 6653756|39-T/C 6653768|57-T/C 6653772|52-C/T 6653912|41-A/G   
## 2 1 1 1 1 1 1 1 1 1 1   
## 6653970|10-G/T 6654035|9-A/T 6654089|34-G/C 6657074|8-C/T 6657427|36-T/G 6658142|19-G/A 6658487|31-A/T 6658567|11-A/G 6661106|67-C/A 6661340|59-C/T 6661404|52-G/C   
## 2 1 1 1 1 1 1 1 1 1 1   
## 6661465|25-C/G 6661493|15-T/C 6661592|37-C/T 6661602|55-A/G 6661729|38-A/G 6661755|5-T/C 6661849|5-T/A 6662667|9-T/C 6663069|39-G/A 6663912|29-A/G 6663945|17-A/G   
## 1 1 1 1 1 1 1 2 1 1 1   
## 6665239|6-A/G 6665353|11-A/G 6665974|11-A/T 6666103|68-G/A 100016182|32-A/G 100017836|20-G/A 100017869|6-A/G 100018411|68-A/C 100020222|50-C/G 100021008|5-T/G 100021734|34-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100021842|6-T/A 100045232|8-G/C 100065195|59-A/G 100074076|12-A/C 100114674|53-G/A 6650380|13-C/T 6650404|10-C/T 6650422|10-A/C 6650471|64-T/C 6650500|18-G/C 6650515|50-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6650537|13-C/T 6650542|10-G/A 6650554|41-G/A 6650556|9-G/C 6650615|12-C/T 6650633|41-A/C 6650636|55-A/G 6650715|51-A/G 6650784|41-A/G 6650806|54-A/G 6650812|44-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6650885|45-G/T 6650890|7-G/A 6650891|27-C/G 6650939|41-A/G 6651045|37-G/C 6651063|37-A/C 6651127|50-C/G 6651189|65-G/A 6651213|10-C/G 6651259|15-G/A 6651305|62-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651312|67-T/C 6651314|20-C/T 6651471|5-C/A 6651479|37-T/G 6651523|45-A/T 6651524|18-G/A 6651611|23-A/T 6651617|38-A/C 6651627|10-C/A 6651680|16-T/G 6651686|18-G/A   
## 1 1 1 1 1 1 1 1 1 1 2   
## 6651990|27-G/T 6652031|21-T/C 6652068|30-T/C 6652123|48-C/T 6652141|65-C/T 6652156|37-G/T 6652188|11-A/G 6652217|66-T/A 6652220|47-G/A 6652222|50-C/T 6652329|66-G/C   
## 1 1 1 1 1 1 1 1 2 2 1   
## 6652364|41-C/T 6652450|9-A/C 6652454|59-C/T 6652470|43-C/T 6652506|53-A/T 6652539|13-G/A 6652561|39-T/C 6652572|11-T/G 6652637|54-T/C 6652648|60-T/A 6652659|15-A/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652665|12-A/G 6652728|28-T/C 6652751|58-A/G 6652774|48-G/A 6652817|30-A/G 6652845|15-G/A 6652939|61-C/T 6652947|66-T/A 6653004|32-T/G 6653011|14-C/T 6653170|45-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653174|64-A/C 6653291|22-A/G 6653324|46-G/A 6653415|50-C/G 6653489|12-A/C 6653514|8-A/G 6653535|20-A/T 6653594|40-G/A 6653646|49-A/T 6653674|54-T/C 6653683|31-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653750|55-T/C 6653771|10-A/G 6653779|21-T/C 6653822|27-G/A 6653827|15-A/G 6653858|29-G/T 6653928|36-T/A 6653969|26-C/T 6654051|34-T/C 6654056|9-C/T 6654078|12-T/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6657388|11-G/T 6657512|7-T/A 6657941|41-C/T 6658094|46-C/A 6658571|22-C/A 6658640|12-C/T 6661287|22-A/G 6661315|34-C/A 6661316|17-T/A 6661420|51-G/A 6661453|6-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661468|17-G/T 6661489|62-C/T 6661552|5-G/T 6661577|44-A/C 6661601|15-G/A 6661629|40-G/A 6661651|60-G/A 6661703|29-A/G 6661728|35-C/T 6662799|24-G/T 6662820|22-T/G   
## 1 1 1 1 1 1 1 1 2 1 1   
## 6662890|34-A/G 6662898|11-T/C 6662977|22-A/G 6664083|6-T/C 6664294|44-T/A 6664720|7-C/A 6665218|24-G/A 6665351|57-C/G 100109477|37-C/T 6665629|41-C/T 6665821|31-C/T   
## 1 1 1 1 1 1 1 1 2 1 1   
## 100016377|14-C/T 100016728|8-C/G 100017376|68-T/C 100018451|6-C/T 100019918|66-C/T 100022411|61-C/G 100064620|27-T/G 100064811|7-G/A 100065350|20-A/G 100109953|9-A/G 6650460|21-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6650519|57-T/C 6650579|51-T/C 6650580|37-G/A 6650607|66-G/A 6650671|45-C/A 6650689|52-T/A 6650703|19-G/A 6650815|7-A/G 6650944|60-T/A 6650965|12-G/T 6651031|38-C/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651069|41-G/C 6651089|58-C/G 6651139|39-G/A 6651355|22-C/T 6651367|34-G/T 6651487|9-A/G 6651578|26-T/C 6651593|32-G/C 6651619|40-T/C 6651620|38-C/T 6651675|34-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651806|49-A/C 6651821|15-A/G 6651825|51-A/T 6651968|21-G/A 6651983|9-A/T 6652057|5-C/T 6652073|37-A/C 6652074|10-G/A 6652115|60-T/G 6652197|23-A/G 6652244|39-C/T   
## 1 1 1 2 1 1 1 1 1 1 1   
## 6652249|29-C/T 6652338|5-C/T 6652392|7-T/C 6652466|57-C/T 6652514|66-T/C 6652554|50-A/G 6652556|53-T/C 6652589|8-C/A 6652749|25-T/C 6652753|11-T/G 6652776|45-A/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652806|6-C/T 6652834|26-T/C 6652885|65-C/G 6652929|66-T/A 6652935|47-C/T 6653073|5-G/T 6653088|16-G/A 6653093|44-G/A 6653104|55-C/T 6653436|11-T/C 6653497|6-C/T   
## 1 1 2 1 1 1 1 1 1 1 1   
## 6653639|65-G/T 6653645|43-C/G 6653769|16-G/C 6653927|44-C/T 6653953|41-C/T 6653987|61-A/G 6653993|15-A/G 6654009|23-C/T 6656879|21-T/C 6656932|34-C/G 6657077|25-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6657152|47-T/C 6657200|7-T/C 6657228|8-C/T 6657447|9-A/T 6657510|13-A/G 6657518|14-A/C 6657616|11-A/G 6657889|17-C/G 6657989|13-T/G 6657992|32-T/C 6658007|29-T/A   
## 1 1 1 1 1 1 2 1 1 1 1   
## 6658058|7-C/G 6658330|11-C/G 6658349|12-A/C 6658401|16-G/T 6658424|11-A/T 6658451|54-A/G 6658473|36-A/C 6658548|12-C/A 6658667|17-A/G 6661128|54-T/A 6661132|53-C/T   
## 1 2 1 1 1 1 1 1 2 1 1   
## 6661145|48-C/T 6661169|16-A/C 6661418|24-T/G 6661447|57-G/A 6661551|43-A/T 6661606|48-G/C 6661621|22-T/C 6661667|62-A/G 6661716|24-C/T 6661770|21-C/T 6662676|12-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6662737|6-A/T 6662747|22-A/G 6662778|8-A/G 6662831|7-G/C 6662962|22-T/G 6662984|35-A/G 6663913|23-G/A 6663996|47-G/T 6664080|40-C/A 6664712|24-G/A 6665849|24-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6665849|27-A/G 100019306|41-G/C 100023120|53-T/C 100045071|11-G/T 100073787|12-T/C 100073808|38-G/A 100082396|45-C/T 100082676|61-G/A 6650780|18-C/T 6651956|47-C/T 6652018|68-G/A   
## 1 1 1 2 1 1 1 1 2 1 1   
## 6652299|52-G/C 6652898|20-T/A 6653146|40-G/A 6657342|25-G/C 6657451|13-T/C 6657720|20-T/G 6657882|21-C/T 6658021|6-G/C 6658104|7-T/G 6658212|12-A/G 6658246|8-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661212|11-A/C 6661231|65-C/G 6661373|56-C/G 6661472|51-T/C 6662632|29-C/A 6662644|9-A/C 6662718|14-A/G 6662788|5-C/G 6663015|45-C/G 6663056|27-G/A 6663101|48-T/C   
## 1 1 2 1 1 1 1 1 1 1 1   
## 6663942|12-C/G 6663943|19-C/G 6664030|20-T/A 6664734|37-C/T 6665050|6-C/T 6665686|46-A/G 100064830|15-G/C 100073523|7-G/T 100073850|23-A/C 100074130|14-T/C 100085916|27-G/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100085918|17-C/T 100093520|12-T/C 100102104|19-G/T 100104847|9-C/T 100107045|42-G/A 100111102|5-T/C 100118833|7-G/A 100118214|9-G/A 6661395|67-G/A 6661549|61-G/A 6664299|8-G/C   
## 2 1 1 1 1 1 1 1 1 2 1   
## 6661899|30-T/C 100117994|5-C/A 100118292|6-C/T 100120255|8-G/T 100122091|12-G/A 6658340|10-T/A 6662816|5-C/A 6662936|6-T/A 6662936|8-A/G 6662964|8-C/T 6662966|17-G/A   
## 1 1 2 1 1 1 1 1 1 1 2   
## 6664885|14-G/A 6661031|8-G/A 100066612|18-A/G 6652306|13-T/C 100085941|14-G/T 100018734|36-T/A 6661163|12-C/T 100065635|32-C/T 6661774|57-G/A 100082623|35-G/A 100065110|61-C/T   
## 1 1 1 2 1 2 2 2 2 2 1   
## 6661113|35-G/T 100118834|24-T/A 100065734|46-A/C 6663988|26-G/A 6661432|6-G/T 6661894|14-C/T 100025027|41-A/T 100065037|22-A/G 6661398|17-C/G 6661689|5-A/G 6664901|14-T/C   
## 1 2 1 1 1 1 1 1 1 1 1   
## 6661325|52-G/A 100024800|55-T/C 6661569|21-G/T 100015330|20-C/A 100017807|41-C/T 100021430|18-A/C 100021922|61-T/G 100024081|21-C/T 100044596|39-C/T 6651341|31-A/G 6652981|11-C/A   
## 1 2 1 1 1 1 1 1 1 1 1   
## 100065893|67-C/T 100015238|36-T/C 100015491|32-C/T 100015884|7-G/A 100019050|23-G/A 100022813|55-A/C 6653072|57-C/T 100016062|38-A/G 100017135|23-C/G 100021766|9-T/A 100022076|54-G/A   
## 2 1 1 1 1 1 2 2 1 1 1   
## 6661377|53-C/T 100015975|43-A/T 100016187|49-G/C 100024150|52-T/G 100018712|5-A/C 100021390|26-A/G 100045683|24-T/C 6661840|10-C/T 100016255|15-T/A 100020380|45-T/G 100021355|11-G/T   
## 1 1 1 1 1 1 2 1 1 1 1   
## 100021470|64-A/G 100023138|54-G/A 100023921|57-C/T 6650819|43-C/T 6653757|13-T/G 100015309|36-C/A 100015511|36-A/G 100015825|32-G/T 100016469|15-C/A 100019560|67-A/T 100021988|8-A/G   
## 1 1 1 2 1 1 1 1 1 1 1   
## 100022638|31-A/T 100022674|60-A/G 100023456|47-T/C 100023464|21-G/T 100023506|63-G/C 100121198|44-C/T 6664022|46-T/C 100017302|21-A/C 100017884|42-T/C 100020887|11-G/A 100022100|32-C/G   
## 1 1 1 1 1 1 2 1 1 1 1   
## 100022978|31-G/T 100064951|7-C/T 100108048|25-G/C 6653000|22-C/T 6661699|44-C/T 100015643|21-A/G 100016494|59-G/A 100017300|12-G/T 100017465|6-C/A 100019558|59-A/C 100021942|23-G/A   
## 2 1 1 1 1 1 1 1 1 1 1   
## 100022249|52-T/C 100022694|55-C/G 100022788|12-C/T 100101046|61-C/A 6652314|37-T/C 100015332|7-C/A 100015389|56-T/A 100015557|20-C/G 100017329|58-G/T 100018963|60-A/C 100019082|25-A/G   
## 2 1 2 2 1 1 1 1 1 1 1   
## 100019182|47-T/A 100020256|17-T/G 100020398|8-A/C 100021013|48-A/T 100021289|8-A/G 100023421|10-T/G 6653492|18-A/G 6661385|64-G/C 6661806|68-G/A 100017094|36-C/T 100017357|22-T/C   
## 1 1 1 1 1 1 1 1 2 1 1   
## 100018276|13-A/G 100018426|49-A/T 100018952|47-A/T 100021643|42-A/T 100022068|8-T/C 100022755|51-G/A 100066666|24-G/A 6661519|31-A/T 100015745|7-C/T 100018424|55-T/A 100021037|43-A/C   
## 1 1 2 1 1 1 2 1 1 1 1   
## 100021847|31-C/T 100022744|13-G/C 100023381|30-A/G 100023472|27-C/T 100023477|8-T/G 100024933|20-T/G 6651050|34-T/C 6652421|32-C/G 100082161|17-G/C 6661817|22-G/A 6665065|47-C/T   
## 1 1 1 1 1 1 2 1 2 1 1   
## 6666515|7-G/A 100015276|20-C/T 100016849|33-A/G 100018157|49-A/G 100018512|6-C/A 100019166|40-G/A 100019599|68-C/T 100020395|68-C/T 100020496|40-T/C 100022054|30-T/C 100022238|35-T/C   
## 1 1 1 2 1 1 2 2 1 1 1   
## 100022761|21-C/T 100064714|31-A/C 100082512|27-G/T 6635566|26-T/G 6651319|63-C/T 100101042|27-A/G 100015522|21-A/T 100015635|48-A/C 100016324|17-G/C 100017167|42-A/G 100017270|46-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100018878|51-C/T 100019810|41-A/G 100020422|49-T/G 100021781|44-T/A 100022052|36-T/A 100022732|37-A/G 100023771|42-A/T 100064904|9-C/T 100066133|22-A/T 6635226|21-A/G 6661769|64-T/A   
## 2 2 2 1 1 1 1 1 1 1 2   
## 100015503|66-A/T 100015669|26-A/G 100016926|66-A/G 100017163|47-A/G 100017930|44-G/A 100018643|57-G/A 100019627|11-G/A 100019775|26-T/C 100020011|13-C/A 100020180|30-T/A 100020794|35-G/A   
## 1 1 1 1 2 1 1 2 1 1 2   
## 100022441|55-A/G 100065577|55-T/C 100066375|31-C/T 100101063|14-G/A 6634311|8-T/C 6650564|10-C/G 6651449|21-G/A 100015590|56-T/C 100015813|59-T/A 100015865|6-C/T 100015966|35-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100016299|67-G/A 100017046|59-A/G 100017306|20-C/T 100017681|59-G/A 100018541|45-C/T 100019001|52-T/C 100019248|51-C/A 100019357|10-A/C 100020167|8-T/C 100020584|49-G/A 100020830|34-G/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100021518|64-T/G 100023323|17-A/G 100065274|22-T/A 100066055|6-T/C 6652294|28-T/C 6661350|27-G/A 100015979|10-G/A 100016232|12-A/G 100016804|11-G/T 100016918|64-T/A 100017355|38-C/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100018239|64-C/A 100018653|43-T/C 100019075|38-G/C 100020739|29-A/G 100022196|19-G/A 100022506|24-C/G 100022716|15-T/C 100065001|58-T/A 6661682|7-T/C 100016459|9-T/C 100016800|17-T/A   
## 1 1 1 1 1 2 1 1 1 1 1   
## 100016857|32-A/T 100016901|25-G/A 100017304|40-T/G 100018018|24-G/T 100018056|56-G/C 100018188|36-G/T 100018521|14-G/A 100019406|13-G/A 100019617|68-C/A 100020206|45-C/G 100021877|23-T/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100022598|56-C/T 100022715|29-C/T 100022769|37-G/A 100023124|68-T/G 100045390|32-G/A 100064869|18-A/G 100066159|27-C/T 6651348|40-T/G 6651910|25-A/T 6661267|31-G/A 6661407|12-G/C   
## 1 1 1 1 1 1 1 2 1 1 1   
## 6661471|46-G/T 100015328|40-A/C 100015329|5-T/A 100015695|23-C/T 100015994|62-A/T 100016280|42-G/C 100016310|50-G/A 100017976|8-T/G 100018090|15-T/C 100018376|15-G/A 100019811|9-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100019879|32-T/C 100020836|42-T/G 100020897|56-T/C 100020918|25-A/G 100022084|40-A/G 100022253|28-T/C 100022347|11-T/G 100022822|20-C/T 100022863|16-C/G 100064727|32-C/G 100064762|17-A/C   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100065060|19-C/T 100065198|28-C/T 100065497|6-G/A 100066169|37-C/A 100066413|57-T/G 100066518|25-A/C 6650606|12-A/G 6650782|37-G/A 6651161|26-A/T 6651343|64-C/T 6651987|65-G/C   
## 2 2 1 1 1 1 1 1 1 1 1   
## 6652583|9-C/G 6653986|35-G/A 100017405|46-T/C 100018360|48-T/C 100020046|11-T/G 100020184|33-A/T 100020356|17-C/T 100021172|11-C/T 100021739|23-A/G 100022407|43-A/G 100022586|32-A/G   
## 1 1 1 1 1 1 1 2 1 1 1   
## 100023347|40-A/G 6630669|54-A/C 6651087|52-A/G 6653823|53-T/C 6661427|45-A/T 6664050|11-T/C 100015339|30-G/A 100015780|53-A/C 100016477|49-C/T 100016846|6-A/G 100017534|5-A/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100018524|64-G/T 100018715|45-A/C 100019637|34-T/C 100019730|38-A/G 100020004|34-G/C 100020093|64-G/T 100020177|61-C/T 100020736|62-T/C 100021876|36-T/C 100022251|18-A/C 100022479|48-G/A   
## 1 1 1 1 1 1 1 2 1 1 1   
## 100023192|44-C/T 100065374|28-T/A 100065413|68-G/T 100065460|57-T/A 100065786|62-T/C 100065981|32-G/A 100093548|6-T/C 6635925|28-G/A 6651303|15-G/A 6652226|61-A/C 6652595|25-T/C   
## 1 1 1 1 2 1 2 1 1 1 2   
## 6652880|30-G/A 6653288|5-T/C 6661743|26-G/A 100015258|11-G/A 100015334|11-A/C 100015520|48-T/A 100016206|60-T/G 100016803|55-T/A 100016999|24-T/C 100017691|42-G/C 100018254|14-G/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100018691|53-C/T 100018832|49-T/A 100018836|30-T/A 100018972|63-T/C 100018993|58-G/A 100019968|28-T/C 100019971|65-T/G 100020134|53-C/T 100020237|19-C/T 100020353|50-A/G 100021532|8-T/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100022232|46-T/C 100022564|55-G/A 100064590|10-C/G 100064752|47-G/T 100066482|40-C/G 100066499|21-A/C 100082126|5-A/G 100082673|16-C/G 100118390|28-A/G 100118390|5-C/G 6650749|8-A/C   
## 1 1 1 1 1 1 2 1 1 1 1   
## 6650993|48-A/G 6651187|10-A/T 6652437|24-T/C 6652887|56-G/A 6653102|62-A/C 6653358|49-T/A 6661200|10-A/G 6661277|39-G/A 6661479|25-C/A 6665776|10-G/A 100116183|6-G/A   
## 1 1 1 1 2 1 1 1 1 1 2   
## 100065388|52-T/C 100015585|60-A/G 100016513|5-C/A 100016711|48-G/A 100017104|21-C/A 100017773|59-C/T 100017895|25-A/T 100018069|40-A/G 100018279|30-C/A 100018386|10-G/C 100018698|26-G/A   
## 2 1 1 2 1 2 1 1 1 1 1   
## 100021026|29-A/G 100021644|9-C/A 100022215|30-A/G 100023511|29-G/A 100065011|9-G/T 100065481|45-G/C 100065665|18-T/G 100082041|35-T/G 100082540|39-C/T 6635352|11-C/T 6651637|46-A/C   
## 1 1 1 1 1 1 1 2 1 1 1   
## 6652697|44-G/A 6652848|23-G/T 6661188|24-G/C 6661506|68-A/T 6661846|36-C/G 100121512|16-T/C 100015223|24-C/T 100015336|36-G/A 100016018|57-G/C 100016257|18-G/A 100016363|39-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100016533|62-C/T 100017334|62-C/T 100017905|42-A/G 100018782|32-C/A 100018840|12-A/G 100018918|28-G/A 100018973|26-T/G 100019583|32-G/T 100020635|19-T/C 100020952|67-A/G 100021607|12-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100021759|51-G/A 100022391|27-T/C 100022668|57-T/C 100065738|47-G/C 100066164|11-G/A 100066550|5-T/C 6633324|49-T/G 6634529|30-T/C 6651763|8-A/T 6651994|28-A/G 6652616|33-T/C   
## 1 1 1 1 1 2 1 1 1 1 1   
## 6653336|20-T/C 6653857|60-T/A 6661332|57-A/T 6661613|21-G/A 100015558|12-T/G 100016614|13-A/G 100016893|9-G/A 100016974|14-T/C 100017016|14-G/C 100018076|32-A/G 100019206|6-T/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100019217|46-A/T 100019384|38-C/T 100019646|24-T/A 100019874|10-C/G 100019964|12-C/A 100020293|37-A/G 100020842|17-G/A 100021693|26-T/C 100022050|68-A/T 100022979|40-A/G 100023492|66-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100045668|41-G/A 100065160|26-C/T 100066259|47-G/A 6630074|25-T/C 6651026|5-A/G 6651431|37-C/G 6651540|51-T/C 6651708|27-C/T 6652397|25-T/C 6653258|20-A/C 6661295|56-C/A   
## 1 1 1 1 1 1 1 1 2 1 1   
## 100016658|9-C/T 100016823|19-A/C 100017190|25-A/G 100017629|18-T/C 100018573|66-T/A 100019552|33-T/G 100021046|26-A/G 100022548|38-A/C 100065206|29-C/A 100065846|12-T/A 6651279|28-G/C   
## 2 1 1 1 2 1 1 1 1 1 1   
## 6652199|28-G/A 6652400|17-C/T 6652445|11-A/T 6653155|9-C/G 6653256|29-G/A 6661317|35-T/C 6663970|38-G/C 6665305|7-T/C 100015212|40-T/C 100015773|62-T/C 100016229|66-G/T   
## 1 1 1 1 1 1 2 1 1 1 1   
## 100017966|44-G/A 100018540|41-C/G 100019145|8-G/A 100020607|26-G/A 100021569|14-G/A 100023034|23-C/T 100023386|11-T/C 100065690|24-C/G 6650623|27-T/C 6650909|20-C/G 6651336|17-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651419|53-T/C 6652696|7-A/G 6652736|50-T/A 6653280|14-G/T 6653295|57-T/C 6653940|33-C/G 6661206|18-A/G 6661327|42-G/C 6664003|47-C/T 100015464|37-A/T 100015704|41-G/A   
## 1 1 1 1 1 1 1 1 2 1 1   
## 100016862|45-C/T 100019871|11-C/T 100020987|40-T/C 100021296|8-G/A 100065560|20-C/G 100066263|36-C/T 100066672|61-G/C 100082462|27-A/G 6632122|60-C/T 6650958|39-G/T 6651020|25-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651285|11-A/G 6651625|35-A/G 6651661|21-C/A 6651716|31-A/G 6651796|30-T/G 6651885|10-A/T 6652069|22-A/G 6652117|17-A/G 6652234|42-G/A 6653188|36-T/C 6653368|52-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661580|47-C/T 6661803|14-T/C 6661812|53-C/T 6661866|32-G/C 100015736|43-G/A 100016141|36-G/A 100017142|64-C/T 100019476|8-T/C 100022055|56-G/A 100022078|12-T/C 100022886|24-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6631211|9-C/T 6651047|34-T/G 6651407|46-C/T 6651481|28-G/C 6652585|52-T/G 6653252|68-G/A 6653882|52-A/T 6653901|21-A/T 6654029|48-A/G 100015720|28-G/T 100016789|20-G/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100016796|38-G/A 100017412|8-A/G 100017613|42-T/G 100017642|45-C/A 100017690|28-G/T 100018660|67-C/T 100020040|40-T/A 100021191|5-G/C 100023009|12-A/G 100065757|7-G/C 100066245|18-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100074042|5-T/C 100082359|43-C/T 6635615|63-A/T 6650495|22-G/C 6650509|12-C/A 6651034|16-A/T 6651369|18-C/G 6651472|63-T/C 6651525|65-T/G 6651657|19-G/A 6651750|54-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652293|6-T/G 6652474|14-G/A 6653662|55-G/C 6661543|6-A/G 100017915|15-G/A 100020329|6-T/C 100021269|67-C/T 100021647|7-C/G 100065434|44-T/G 100091128|19-C/T 6630649|30-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6631485|63-C/T 6634232|23-C/T 6650379|29-C/T 6650507|19-A/C 6650854|20-G/A 6651417|34-C/T 6651649|55-G/A 6651797|46-C/T 6652137|50-T/C 6652171|14-G/C 6652353|59-C/T   
## 1 2 1 1 1 1 1 1 1 1 1   
## 6652439|17-A/C 6652481|49-A/G 6652592|44-C/T 6652631|8-T/C 6652759|5-G/C 6653033|21-C/A 6653086|60-T/C 6653403|58-C/G 6653441|17-C/A 6653651|15-A/G 6653652|24-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653717|62-T/A 6653911|22-G/C 6657418|43-C/G 6658319|40-G/A 6661213|21-C/T 6661527|23-T/C 6664003|60-C/T 100017332|29-G/A 100018422|17-T/C 100019803|28-C/T 100020227|22-C/T   
## 1 1 1 1 1 1 2 1 1 1 1   
## 100021230|36-G/A 100045732|32-A/G 100065400|55-A/G 100065695|10-T/A 6650641|39-G/C 6650730|37-C/T 6651079|5-A/T 6651096|56-T/C 6651302|27-C/G 6651575|42-A/G 6651609|46-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651712|16-T/C 6651755|6-C/G 6651927|7-C/T 6652423|26-A/G 6653022|23-G/C 6653024|17-C/T 6653143|11-A/G 6653233|66-T/A 6653287|46-C/T 6653308|9-A/G 6653555|27-A/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653600|5-T/C 6653915|45-T/G 6653995|60-T/C 6657836|14-A/G 6661227|16-C/A 6661262|58-G/T 6661434|38-G/T 6661641|45-A/G 6661702|15-A/G 6662581|37-A/T 100114018|47-C/T   
## 1 1 1 1 2 1 1 1 1 1 1   
## 100016369|9-A/G 100017864|12-A/C 100018488|65-A/G 100018874|30-C/T 100022833|43-A/C 100045516|20-A/G 100065233|14-C/G 100065518|13-T/G 100065693|58-C/T 100066101|12-T/C 6633196|52-G/C   
## 1 1 1 1 1 1 1 1 1 1 2   
## 6633443|50-C/G 6650488|44-T/C 6650661|48-G/C 6650800|48-C/T 6650825|39-G/A 6650845|36-C/T 6650876|20-T/G 6651093|21-T/C 6651267|9-G/A 6651306|19-G/A 6651379|44-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651554|67-T/C 6651736|43-T/C 6651932|30-T/C 6651941|51-C/T 6652116|48-C/T 6652661|48-C/T 6652756|60-T/C 6652829|67-A/G 6653016|28-G/A 6653035|59-T/C 6653400|19-A/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653480|48-C/A 6653764|58-T/G 6654093|42-A/G 6661397|22-T/G 6663931|67-C/G 6663957|68-G/A 6663967|43-G/C 6665630|56-C/T 100017995|7-C/G 100020113|15-A/T 100022566|30-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100044990|7-T/C 100065049|7-G/T 100066339|40-A/G 100082461|32-T/A 6632579|11-G/A 6650828|56-C/T 6650907|12-G/C 6650924|57-A/T 6651078|6-G/A 6651186|45-G/A 6651357|21-G/A   
## 1 1 1 1 2 1 1 1 2 1 1   
## 6651533|11-T/C 6651835|18-A/G 6651845|5-C/T 6652615|62-G/A 6652654|38-A/G 6652959|31-C/A 6652967|19-C/T 6653003|36-G/C 6653135|53-G/T 6653227|62-A/G 6653345|29-G/T   
## 1 1 1 2 1 1 1 1 1 1 1   
## 6653424|16-A/C 6653449|26-T/C 6653581|57-G/C 6653676|29-A/G 6653712|15-T/C 6653723|10-C/T 6653956|18-A/G 6654001|23-C/A 6658504|15-C/A 6658614|43-T/G 6661202|35-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661234|44-T/C 6661397|27-C/T 6661731|51-C/A 6661793|54-A/G 6663947|19-T/G 6664041|32-A/G 6664042|66-G/A 6664043|13-T/A 100017392|44-T/G 100020618|50-C/T 100022663|33-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6630289|20-G/C 6650619|36-T/C 6650638|22-A/C 6650699|38-T/C 6650728|58-T/C 6650755|23-T/A 6650783|14-G/A 6650849|14-T/C 6650880|67-A/G 6651095|41-C/T 6651245|18-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651292|26-C/G 6651352|20-T/C 6651467|62-G/C 6651557|42-C/T 6651631|26-C/T 6651664|24-T/C 6651688|48-C/T 6651718|35-C/T 6651795|51-C/T 6651923|42-T/C 6651965|39-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652219|19-T/C 6652378|63-C/T 6652434|66-A/C 6652655|53-T/G 6652722|31-C/A 6652830|22-T/C 6652882|43-C/A 6653040|42-C/T 6653271|6-A/G 6653385|63-G/T 6653386|12-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653418|27-T/A 6653450|16-A/G 6653476|17-G/C 6653520|26-A/G 6653763|12-G/A 6653916|15-T/C 6654026|50-T/C 6654061|33-A/G 6657577|47-G/A 6657800|39-C/A 6658145|22-C/T   
## 1 1 1 1 1 1 1 1 1 2 1   
## 6658508|25-A/G 6661100|58-G/C 6661185|17-G/C 6661209|14-C/T 6661230|12-C/T 6661236|16-T/C 6661314|22-A/C 6661446|29-G/A 6661535|11-G/A 6661559|28-T/C 6661597|46-G/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661642|45-G/T 6661657|60-G/A 6661731|68-A/G 6661796|25-A/G 6662683|15-T/C 6664747|36-A/C 6665469|54-T/A 6665629|23-C/G 100023210|29-C/A 100065681|26-G/T 100114697|13-C/G   
## 1 1 2 1 1 1 1 1 1 1 1   
## 6630523|63-G/A 6650409|45-T/C 6650528|28-G/T 6650721|49-C/T 6651065|27-G/T 6651098|23-T/C 6651125|47-G/A 6651426|10-G/A 6651605|61-C/A 6651634|10-G/C 6651759|12-C/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651815|20-A/C 6652098|62-G/A 6652125|13-C/T 6652182|12-A/G 6652205|23-G/T 6652340|36-A/G 6652361|22-A/G 6652367|17-C/A 6652519|22-A/T 6652681|7-T/C 6652787|16-C/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653095|8-G/T 6653128|9-G/T 6653131|30-G/A 6653340|41-C/T 6653516|66-C/G 6653855|60-C/A 6654020|41-T/C 6654087|18-G/A 6657400|14-C/T 6658359|12-G/A 6661176|55-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661182|18-C/T 6661371|21-A/G 6661403|66-A/C 100065611|31-A/C 6661497|12-G/A 6661654|59-A/G 6662907|21-A/G 6663946|23-C/G 6665056|53-C/T 6665628|28-C/A 100019769|39-T/C   
## 1 1 1 2 1 1 1 1 1 2 1   
## 100082375|66-T/G 100082404|55-T/C 6650592|12-C/A 6651184|37-G/A 6652576|37-G/T 6652672|55-C/T 6653304|23-A/T 6656915|10-G/T 6657307|34-A/T 6657558|38-C/T 6658381|25-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6658521|6-G/C 6661752|23-A/C 6664327|23-G/A 100044751|5-A/G 100085984|13-G/A 100115531|5-T/A 6643578|12-A/G 100106109|11-G/A 100113138|5-T/G 100117994|11-T/A 6662821|6-T/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6664383|8-A/G 6665284|5-C/G 6665328|8-T/A 6665629|20-C/G 100118214|11-C/A 6663102|10-G/A 100021042|56-T/C 100090841|7-C/A 100103683|13-G/A 100103683|6-A/T 100106227|13-C/A   
## 1 2 1 1 1 1 2 1 1 1 1   
## 100106247|9-T/A 100111488|6-C/G 100112338|6-T/G 100114623|5-C/G 6644428|5-T/A 6647555|5-C/A 6648501|8-A/G 6648560|7-T/C 6658337|6-C/G 6664325|9-C/T 6664355|7-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6664406|5-G/T 6664885|10-C/T 6665134|5-A/G 6665147|13-C/T 100065344|49-T/C 6661457|44-C/T 6661867|13-G/A 6661122|26-C/T 100064630|57-A/G 100025554|68-T/A 6658677|32-C/G   
## 2 1 1 1 2 1 1 1 2 1 1   
## 6635413|16-T/A 6661764|43-C/A 6652801|27-G/A 100024646|8-G/C 100066569|63-G/A 6652374|43-T/C 6661449|54-A/C 6661688|9-G/T 6661583|7-C/T 6661219|45-G/A 100016118|67-A/C   
## 1 1 1 1 1 2 1 2 2 1 1   
## 100065968|17-C/T 6664008|7-T/G 100019909|40-A/G 100024919|19-A/C 100021772|52-T/C 100066372|27-A/G 100091350|43-A/C 100017975|34-A/G 100045781|34-C/A 6652884|53-G/A 100017252|27-G/A   
## 1 1 1 2 1 1 1 1 1 1 1   
## 100017894|53-G/A 100022254|26-T/A 6632275|61-T/C 100065115|49-T/C 100065825|30-T/C 6654008|51-C/T 6653230|18-T/G 100020850|15-T/A 100024608|28-A/G 100065720|36-C/T 100019004|19-T/C   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100022949|21-T/C 100024718|58-G/A 100065076|9-G/C 6650868|53-G/A 100017101|27-T/G 100017766|10-C/A 100019793|62-T/A 100021136|57-G/A 100021706|33-T/C 100025017|58-T/C 6652036|20-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100015261|30-G/A 100015698|55-A/C 100016039|28-T/C 100021704|31-A/T 100021798|6-G/A 100022137|6-T/C 100022883|14-A/G 100023375|24-A/C 100064876|34-G/A 100022317|10-A/G 100065186|8-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653805|57-G/C 100021710|10-A/G 100023305|24-G/A 6634600|17-T/C 6650598|62-C/A 100017818|14-T/G 100020277|67-T/G 100020322|14-C/T 100021252|30-G/A 100022007|39-C/T 100022967|55-T/C   
## 1 1 1 1 1 1 1 1 2 1 1   
## 100023231|52-G/C 100024979|12-A/T 6651448|5-C/A 6661619|36-C/T 100101013|46-C/T 100015916|40-T/G 100019381|29-T/C 100021309|54-A/G 100022531|25-T/C 100022877|17-A/C 100023365|32-C/T   
## 1 1 1 1 2 1 1 1 1 1 1   
## 100023869|51-T/A 100066103|5-G/A 100066389|65-G/C 6652703|57-T/C 100019288|33-T/C 100020549|44-T/G 100020551|60-A/T 100023117|6-G/T 100023343|62-G/A 100065070|10-C/T 100119322|60-G/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653215|23-A/C 100015905|30-T/A 100018538|19-A/G 100020139|46-T/C 100020548|9-A/C 100065378|43-C/T 100065666|20-A/T 100065687|58-C/T 6651010|63-C/T 6651023|13-C/T 6651465|19-A/G   
## 1 2 1 1 1 1 2 1 1 1 1   
## 6653507|50-C/G 6661164|56-C/G 100015555|49-G/A 100017215|20-C/T 100018040|51-T/A 100018557|8-A/C 100019185|63-C/G 100019688|44-C/T 100023075|63-C/G 6630180|30-A/G 100015432|27-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100017493|63-A/G 100020399|26-G/A 100020528|67-A/G 100021151|33-C/G 100021753|16-G/A 100021795|51-G/A 100062072|14-A/C 100066634|26-T/A 6661693|17-A/G 100015331|61-T/C 100015609|28-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100017169|13-G/A 100017928|37-T/A 100019505|12-C/A 100020075|44-G/T 100020413|29-G/A 100021373|46-G/A 100021417|26-A/C 100022461|56-A/G 100022969|9-G/A 100023275|19-T/C 100082212|44-A/G   
## 1 1 1 1 1 1 1 1 2 1 1   
## 6652622|54-G/A 6653084|57-C/G 6653710|21-C/T 6653840|32-A/T 100021632|19-T/C 100022984|17-G/C 100064905|26-T/A 100015960|29-G/A 100016761|32-C/T 100017811|61-T/C 100019007|29-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100020970|16-G/A 100065097|13-T/C 6651396|51-T/G 6651430|31-C/T 100015246|12-A/G 100017606|48-T/C 100018953|27-G/C 100019018|13-A/G 100020129|19-G/A 100020404|28-A/G 100020733|17-G/A   
## 1 1 1 1 1 1 1 1 1 1 2   
## 100021724|12-A/C 100066663|43-G/A 100122660|5-A/G 6630550|32-T/C 6652105|37-A/G 100015837|30-T/C 100016214|35-G/T 100017908|21-G/A 100019267|32-G/A 100023141|5-C/T 100023174|41-C/T   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100064755|8-G/A 6651656|34-G/A 6651767|59-G/C 6664728|67-C/T 100018065|63-T/A 100019510|9-G/A 100019632|22-T/C 100019754|7-A/T 100020251|60-G/A 100021712|18-T/A 100044571|14-T/G   
## 1 1 1 1 2 1 1 1 2 1 1   
## 6661691|15-C/T 6663917|15-C/T 100018085|21-A/G 100019876|24-A/C 100020554|42-G/T 100022262|60-C/A 100023321|57-A/G 100065480|65-T/A 6652163|42-T/G 6661278|34-C/G 6661299|21-G/T   
## 1 1 1 1 1 1 1 2 1 1 1   
## 100016113|5-T/A 100018753|18-C/A 100022995|26-G/A 100045005|36-T/A 100065425|18-T/G 100065813|42-A/C 100066450|34-C/G 6652607|6-A/G 6653544|67-T/C 6661463|59-T/G 6661534|24-C/T   
## 1 1 1 2 1 1 2 1 1 1 1   
## 100020053|13-A/T 100020534|56-C/G 100020747|66-T/A 100022664|19-A/G 100023314|12-C/T 100024345|29-C/T 100065655|8-A/T 100082306|16-G/C 6632614|14-G/C 6650544|61-G/A 6661521|5-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661754|5-A/T 100017623|23-C/T 100019111|65-T/A 100020626|26-A/C 100022838|5-C/T 6661655|44-C/A 100015424|32-C/A 100017638|47-T/C 100019862|5-A/G 100064626|46-C/T 100066576|33-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100082421|35-G/T 100082421|56-A/T 6661595|45-G/A 100018565|14-C/T 100019547|16-A/T 100021316|68-A/T 100066021|13-T/C 100066577|66-T/C 6635995|53-T/G 6650794|31-T/C 6651294|52-C/T   
## 1 1 1 2 1 1 1 1 1 1 1   
## 6661643|39-A/C 6665642|53-T/C 100017091|53-T/C 100018288|5-C/T 100019411|13-C/T 100022970|53-A/G 100044935|38-C/G 100065133|26-G/A 100065604|17-G/A 6653270|12-C/T 100082437|5-G/T   
## 1 1 1 1 2 1 2 1 1 1 1   
## 100017079|68-T/A 100018306|21-T/A 100065207|61-C/A 6651674|58-G/A 6661762|25-C/T 100016541|14-A/T 100019240|64-C/A 100022760|39-A/C 6661631|14-G/T 100015984|25-C/T 100020169|39-T/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100020171|37-C/T 100020514|46-G/A 100093365|13-T/C 6631375|67-A/T 6651160|63-T/G 6651417|40-A/G 6653272|47-T/C 6661637|58-G/T 6661875|62-G/A 100016327|11-G/T 100017411|17-C/A   
## 1 2 2 1 1 1 1 2 1 1 1   
## 100021938|40-C/A 100104022|29-G/C 6653086|61-G/A 6654063|52-T/C 6661270|57-C/T 6661413|37-C/T 6661571|64-G/A 6662928|6-G/T 6665563|11-G/C 100015347|8-A/G 100015697|17-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6630379|34-A/G 6651111|37-G/A 6651135|63-T/A 6652080|40-C/G 6653891|42-G/A 6661255|43-T/G 6661262|56-A/G 6661441|11-A/G 100019678|23-G/T 100065386|6-G/C 100082362|41-C/G   
## 1 1 1 1 1 1 1 2 1 1 2   
## 100119892|9-C/T 6650706|34-C/G 6651084|9-T/C 6652828|42-G/A 6653640|66-C/T 6661213|29-A/C 6661501|61-G/T 100020312|34-A/G 100066078|57-C/T 6651216|56-G/C 6651663|16-T/G   
## 2 2 1 1 1 1 1 1 2 1 1   
## 6652291|30-C/A 6661623|16-C/T 6664064|11-C/A 100019069|65-C/T 6629913|31-T/G 6650658|32-T/C 6651643|7-G/A 6651651|36-T/C 6652652|32-C/T 6652781|24-G/A 6652781|64-C/G   
## 1 1 1 2 1 1 1 1 1 1 1   
## 6652958|54-G/C 6661185|61-C/T 6661218|12-C/T 6661232|58-C/T 6662683|28-G/C 6662714|21-A/C 6663024|21-C/T 100016570|44-C/T 100017965|14-G/A 100018649|23-G/A 100021210|28-A/G   
## 1 1 1 1 1 1 1 1 2 1 1   
## 100044629|5-T/A 100065997|37-G/A 100066075|25-C/G 100119599|31-T/C 6633592|39-A/T 6650534|49-T/C 6650535|67-A/T 6651337|9-A/G 6653918|11-A/G 6657564|24-C/T 6661126|11-C/T   
## 2 1 1 1 1 2 1 1 1 1 1   
## 6661428|5-C/T 6661666|46-C/T 6661783|8-T/C 6661798|20-C/T 6661798|28-T/C 6661836|10-G/A 6661836|20-G/C 6661863|56-C/T 6662849|35-T/C 6665679|46-T/G 100093359|29-C/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6629858|37-A/T 6643954|6-G/T 6652019|59-G/C 6652746|56-G/T 6652810|45-C/G 6653160|44-G/A 6653239|27-C/T 6653352|54-C/G 6653632|19-G/A 6662822|7-G/A 6664724|62-G/C   
## 1 1 1 1 1 1 1 1 1 1 2   
## 100044710|9-T/G 100093660|28-C/A 6633718|59-C/T 6641748|42-C/A 6658299|7-T/C 6661450|36-G/A 6643586|10-T/G 6643586|9-C/A 6648203|14-A/T 6664350|5-C/T 100106226|9-C/A   
## 2 1 1 1 2 1 1 1 1 1 1   
## 100111464|9-T/C 6643578|11-A/T 6664414|23-C/A 6664432|8-G/T 6643814|11-C/G 6643814|5-G/A 100100648|8-G/T 100103657|7-G/C 100106110|9-A/G 100106239|8-T/G 100109437|5-C/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100109437|9-C/G 100110529|5-C/T 100111487|5-T/G 100122090|8-T/A 6649192|5-T/C 6657874|5-G/C 6658144|18-A/T 6662919|11-A/C 6663018|25-T/C 6664273|5-C/A 6664306|8-C/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6664893|38-G/C 6664910|11-C/G 6665153|7-A/G 100082484|50-G/T 100118470|9-C/T 6664010|54-C/T 100046106|24-G/T 6666102|8-G/A 6657032|15-C/T 6665215|57-C/T 100018359|44-C/T   
## 1 1 1 1 2 1 1 1 1 1 1   
## 100023139|68-G/T 6664085|47-C/T 6661211|58-C/T 100066559|31-T/C 6663985|50-C/T 6665628|45-T/C 100097039|23-C/G 6665040|44-A/G 100093411|9-A/C 100093413|26-G/C 6634480|31-T/A   
## 1 1 2 1 2 2 1 1 1 1 1   
## 100065820|27-T/C 100065626|5-A/C 100017456|5-A/C 100065031|12-G/A 100090339|7-T/C 6654096|11-C/A 100045278|30-G/C 6650722|8-G/C 100023932|52-G/T 6661186|27-A/G 100066349|48-C/A   
## 1 1 1 1 1 2 1 1 1 1 1   
## 6664781|12-G/A 100018124|53-C/G 100064999|21-G/A 100074314|17-G/A 6661474|58-C/G 6664089|39-C/A 100074315|18-C/T 100109510|37-A/G 100106299|29-A/C 6652532|17-A/G 6666146|37-G/A   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100020687|19-G/A 100017102|43-A/G 100016103|11-C/T 100016936|24-G/C 100065009|15-G/C 100021792|22-G/A 100065064|48-C/T 6651486|23-C/A 100022395|5-G/T 6635620|7-T/G 100021158|56-G/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100024001|29-C/A 100065225|30-T/C 100065766|32-C/A 100065871|7-G/C 6657554|17-A/G 100021381|48-A/G 100065073|30-T/C 100065186|6-A/G 100082387|67-G/T 100022890|66-G/A 100023224|41-T/C   
## 1 1 1 1 1 1 1 1 1 2 1   
## 100066151|44-C/A 100065712|39-A/G 100016548|22-A/C 100018316|52-G/A 100018669|51-A/G 100020096|10-G/A 100021832|59-T/C 100045940|24-C/A 100066650|24-A/G 100045116|6-C/T 100112452|57-A/G   
## 1 1 1 1 1 1 1 1 1 2 1   
## 6653883|52-C/G 100021186|32-G/C 100021930|67-G/A 100065300|66-G/T 100082101|62-A/G 100119315|9-G/T 6650840|6-C/G 6664036|6-A/T 100015791|35-A/G 100021993|35-A/T 100065071|26-C/T   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100106305|20-G/C 100020586|49-T/G 100022366|24-T/C 100022982|18-T/C 100102365|9-C/G 100016200|62-T/G 100017620|16-C/T 100018736|57-T/C 100020340|6-T/C 100066082|8-G/T 6663098|31-C/G   
## 1 1 1 1 1 1 1 2 1 1 1   
## 100018726|57-G/T 100019037|42-G/A 100021366|54-C/T 100022220|45-A/G 100066146|14-T/C 100066266|57-C/G 100066574|19-T/C 100016560|7-T/C 100066037|49-C/G 100121195|35-C/G 100018616|49-T/G   
## 1 1 2 1 1 1 1 1 1 1 1   
## 100066663|58-T/C 100118142|5-T/C 6665806|57-G/A 100018844|30-C/T 100091301|63-G/T 100096922|11-G/T 6651543|26-C/T 100016510|41-T/A 100018353|22-G/T 100019853|68-A/T 100021078|39-A/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100021925|13-A/G 100065479|51-A/G 100066412|14-T/C 100091301|22-C/G 100019195|66-T/A 100023208|34-G/A 100065057|21-C/T 100065426|35-C/A 100073631|7-G/C 100016006|34-T/G 100017176|29-G/A   
## 1 1 1 1 1 1 1 1 2 1 2   
## 100018612|5-A/C 100020218|34-A/C 100065408|22-T/G 100065476|64-G/A 100065761|7-G/A 6632042|19-G/C 100015587|20-C/A 100016037|24-A/G 100021787|68-A/C 100022942|14-C/G 100066550|58-G/A   
## 2 1 1 1 1 1 1 1 2 1 1   
## 100082539|7-G/A 6650594|30-T/G 6653546|21-T/C 6664281|14-A/T 100016076|49-A/C 100022081|49-G/A 100022274|36-C/A 100116482|57-T/A 100121512|34-G/C 100017777|61-G/A 100064625|41-A/G   
## 1 2 1 2 1 1 1 2 1 1 1   
## 100064874|12-T/C 100106306|45-G/A 100106306|65-G/A 100021587|57-C/T 100065160|65-G/T 100073403|34-A/C 100082633|51-A/G 100097045|48-T/C 6652651|47-T/A 6661761|37-C/T 100017728|53-A/C   
## 1 1 1 2 1 1 1 1 1 1 1   
## 100065286|5-A/C 100082197|10-C/T 6633952|10-G/C 6657904|18-T/C 100065579|38-A/C 6661858|20-C/A 100019471|14-G/A 100044832|16-G/T 100065848|33-G/A 100066117|37-G/T 100112452|34-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6630404|40-A/C 100103994|35-G/T 100017343|6-T/C 100064738|40-C/G 100064746|17-G/A 100074010|27-G/C 6631936|55-T/C 6661620|58-C/G 100016884|51-C/A 100065351|47-C/G 6631698|7-C/G   
## 1 1 1 2 1 1 1 2 1 1 1   
## 6652538|34-T/C 6657259|24-G/A 100016745|16-T/C 100065233|43-G/A 6630611|19-A/C 6652270|62-C/G 6652729|29-T/G 100020530|29-C/A 6630408|13-G/T 6630626|34-A/T 6631766|58-C/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6633539|7-G/A 6634322|14-T/G 6652458|12-A/T 6653006|66-G/A 6653115|48-T/A 6663957|45-C/T 100066473|39-A/G 6650554|32-A/G 6657465|23-T/A 6663949|9-G/A 100020033|33-A/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100082315|13-G/A 6629848|65-C/G 6630880|24-C/G 6650849|38-G/A 6650881|15-G/A 6651487|20-C/T 6651826|47-T/A 6652855|33-G/T 6657563|28-T/G 6657811|15-G/A 6658667|25-T/G   
## 2 2 1 1 1 1 2 1 1 1 1   
## 6662907|9-T/A 6665143|45-A/G 100021831|19-T/A 100045184|5-G/C 100065651|20-A/C 100066434|64-T/A 100066660|33-T/C 6633749|29-T/A 6635481|20-A/G 6650535|47-C/A 6652320|27-G/C   
## 1 1 1 2 1 1 1 1 1 1 1   
## 6652796|29-G/C 6654065|42-C/G 6657294|51-C/A 6658085|11-A/G 6661346|29-T/A 6661679|17-C/T 6662799|12-C/A 6662831|22-C/T 6663021|23-A/G 100085932|36-G/C 6630269|58-C/T   
## 2 1 1 1 2 1 1 1 1 2 1   
## 6630995|13-C/T 6633153|34-C/T 6644233|38-G/T 6650943|57-C/G 6650961|27-T/G 6651177|55-C/G 6651864|18-T/C 6652465|10-A/T 6652776|7-C/T 6654017|47-C/T 6657683|10-G/C   
## 1 1 1 1 2 1 1 2 1 2 1   
## 6657925|11-T/C 6658404|12-T/G 6664915|43-G/T 100045721|8-T/A 100082404|10-G/T 100093333|22-G/A 6633054|40-T/A 6642765|20-C/T 6643196|21-C/G 6653359|24-C/T 6658471|31-G/C   
## 1 1 1 1 1 1 2 1 1 1 2   
## 100065416|12-T/C 6661414|26-T/C 6664306|12-G/A 6665409|5-T/A 6642901|10-G/A 100108705|8-G/A 6665151|5-A/T 100122090|6-T/A 6662690|20-C/T 100016003|7-T/A 100016649|43-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100019431|29-C/T 100023959|16-T/C 100024997|62-T/G 100044851|16-G/C 100064658|7-C/T 100064682|49-G/A 100064707|51-G/A 100064714|52-G/A 100064753|29-A/G 100064840|30-G/A 100065000|48-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100065025|5-A/G 100065087|14-G/A 100065157|40-T/G 100065238|55-G/T 100065368|11-G/C 100065400|61-A/G 100065428|33-G/C 100065497|38-G/T 100065538|49-T/G 100065597|12-A/T 100065605|63-C/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100065647|9-T/C 100065669|36-A/C 100065706|45-G/A 100065736|5-A/G 100065739|9-C/T 100065933|35-G/A 100066025|19-T/C 100066134|25-T/C 100066259|18-C/T 100066274|66-A/G 100066332|57-T/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100066410|32-G/A 100066624|60-C/G 100082151|41-C/A 100082232|23-T/G 100082297|57-C/T 100082311|43-C/T 100082409|16-T/A 100082418|7-T/C 100082564|6-T/C 100082633|21-G/A 100086276|23-G/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100086585|5-G/T 100091075|52-C/T 100091130|54-T/C 100093549|30-T/C 100098502|34-A/T 100101042|48-T/G 100121195|12-A/G 100121196|29-T/C 100121197|43-C/G 100121199|47-T/A 100121200|51-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 100122496|35-G/A 6630263|32-T/A 6630513|10-G/C 6631038|8-T/C 6631621|56-C/G 6633643|35-C/T 6634127|43-A/G 6635254|35-A/C 6641856|17-G/T 6642355|17-A/G 6650389|35-G/A   
## 1 1 1 1 1 1 2 1 1 1 1   
## 6650444|8-A/G 6650519|63-A/G 6650553|61-C/G 6650587|17-C/A 6650591|24-A/G 6650676|68-C/T 6650899|7-G/A 6650902|63-C/T 6650919|10-A/G 6651039|12-G/A 6651054|54-C/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6651207|33-A/G 6651431|65-C/G 6651512|39-C/A 6651635|32-C/T 100065262|63-T/A 6651763|26-G/A 6651874|8-T/A 6651879|12-C/T 6652022|6-C/T 100065511|46-G/C 6652174|20-A/T   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6652193|50-G/A 6652287|47-C/A 6652538|35-G/A 6652743|25-G/A 100065924|8-G/T 6652898|57-G/T 6653034|66-G/A 6653037|45-C/G 6653161|37-C/T 6653161|51-C/G 6653240|43-A/G   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6653383|7-T/C 6653394|26-G/A 6653420|30-G/T 6653514|60-C/G 6653521|20-A/T 6653525|7-A/G 6653571|21-G/T 6653574|48-G/T 6653793|20-C/T 6653861|28-C/G 6653990|38-G/A   
## 1 1 1 1 1 1 1 1 1 1 2   
## 6654094|56-G/T 6654108|11-A/G 6657811|16-C/T 6658021|8-T/G 6658173|44-C/A 6658487|25-C/A 6658616|17-G/T 6661180|50-T/C 6661214|14-C/G 6661229|60-G/A 6661236|33-G/A   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6661487|18-A/G 6661524|9-G/A 6661550|30-T/C 100082471|28-C/T 6661631|29-G/C 100082491|60-C/T 6661651|25-G/A 100082562|68-C/A 6661778|27-A/G 6661827|57-C/G 6661838|61-A/T   
## 1 1 2 1 1 1 1 1 1 2 1   
## 6661845|30-A/G 6662631|42-G/A 6662646|5-A/C 6662657|27-G/A 6662765|9-A/G 6662767|43-T/A 6662797|33-T/C 6663018|35-C/G 6663941|10-G/C 6663953|25-A/G 6663990|56-G/T   
## 1 1 1 1 1 1 1 1 1 1 2   
## 6664007|22-C/A 6664018|43-T/C 100091330|60-C/T 6664739|19-C/T 6665051|50-C/A 6665130|20-T/A 6665130|26-T/A 6665131|16-G/T 100109477|22-G/A 6665563|54-C/T 6665566|58-T/C   
## 1 1 1 1 1 1 1 1 1 1 1   
## 6665567|59-A/G 6665600|6-T/C 6665637|6-G/C 6665638|50-G/C 6665992|26-C/T 6666146|48-T/C   
## 1 1 1 1 1 1   
##   
## # Number of alleles per population:   
## Bullen Range Kambah Pool Lanyon Murramore Nerreman Tharwa Sandwash   
## 7177 7130 7024 7059 7365 7465   
##   
## # Percentage of missing data:   
## [1] 22.73779  
##   
## # Observed heterozygosity:   
## 6661549|60-C/T 6650588|15-C/T 6661794|21-A/G 6664081|63-G/A 6653885|30-A/G 6661177|64-C/T 6661457|52-C/T 6653401|39-G/A 6657572|30-T/A 6661566|34-A/G 6663962|65-C/T   
## 0.895833333 0.695238095 0.594339623 0.593301435 0.606965174 0.628959276 0.856000000 0.616071429 0.600917431 0.602739726 0.648648649   
## 6665217|18-A/G 6661207|60-A/C 6661398|51-C/T 6651899|27-T/A 6653020|28-A/C 6653704|64-T/G 6650504|59-T/C 6652003|38-G/C 6661105|11-G/T 6661432|29-C/A 6652162|44-A/T   
## 0.604790419 0.603375527 0.679775281 0.634782609 0.600000000 0.596566524 0.615023474 0.623456790 0.612903226 0.705583756 0.603305785   
## 6653798|57-C/T 6653191|40-A/G 6664876|31-G/A 6661163|31-T/C 6652675|16-G/T 6652288|45-C/T 6650933|66-G/A 6653948|58-T/C 6663083|49-G/A 6662726|45-A/G 6664756|9-C/T   
## 0.669902913 0.594594595 0.594827586 0.729508197 0.629139073 0.658730159 0.606837607 0.568306011 0.565022422 0.703703704 0.646017699   
## 6661688|18-A/G 6666128|43-C/G 6652433|13-A/G 6652352|5-T/C 6664270|14-C/A 6651416|17-C/T 6664751|11-T/A 6657734|47-A/G 6663081|18-A/G 6651148|64-A/T 6656916|22-T/C   
## 0.680555556 0.588477366 0.595744681 0.573033708 0.606694561 0.645669291 0.581589958 0.578947368 0.586826347 0.600823045 0.568965517   
## 6653573|49-T/C 6661198|22-T/G 6665027|17-A/T 6664900|6-C/T 6650826|66-G/A 6653766|40-A/C 6665588|8-C/T 6652573|8-C/A 6652700|14-C/G 6664334|9-A/G 6651772|17-A/T   
## 0.632258065 0.575107296 0.591666667 0.576744186 0.658119658 0.587500000 0.604166667 0.604938272 0.595959596 0.591489362 0.579166667   
## 6651828|36-G/A 6650476|13-A/C 6651474|15-T/C 6652836|30-C/T 6653346|25-C/A 6658563|22-C/T 6661870|10-G/T 6657169|37-T/C 6661569|7-A/G 6652342|46-G/A 6656937|18-C/T   
## 0.669811321 0.563559322 0.574712644 0.563318777 0.595555556 0.587155963 0.573839662 0.562043796 0.639344262 0.632812500 0.618421053   
## 6661537|56-G/A 6664008|14-G/A 6651473|53-G/A 6661884|29-T/A 6662691|24-C/T 6661181|61-C/T 6651798|39-C/A 6661610|46-T/C 6653512|60-C/G 6651413|19-C/A 6651436|18-C/T   
## 0.598290598 0.701657459 0.569230769 0.563876652 0.578512397 0.587628866 0.616161616 0.551282051 0.556962025 0.533333333 0.644736842   
## 6663093|22-C/A 6652854|20-T/C 6657907|22-C/T 6664719|5-A/G 6651857|34-G/T 6658182|11-G/A 6661203|33-G/T 100066381|65-T/C 6661291|28-A/C 6651404|67-A/G 6661583|6-T/C   
## 0.596774194 0.549763033 0.555045872 0.571428571 0.569620253 0.610576923 0.558333333 0.585227273 0.546666667 0.584210526 0.636363636   
## 6653019|13-C/T 6661633|39-G/T 6653539|14-G/C 6652507|49-A/G 6662661|7-T/C 6661859|57-A/G 6661395|60-C/T 6661690|43-G/A 6653303|26-C/T 6650697|6-C/A 6661748|26-C/T   
## 0.560975610 0.670454545 0.568750000 0.513157895 0.588235294 0.572519084 0.784313725 0.523605150 0.570312500 0.562211982 0.593750000   
## 6661276|34-A/G 6651590|59-C/G 6661435|48-G/A 6664012|53-A/G 6651071|8-C/T 6661174|27-G/A 6657901|34-G/A 6661288|56-T/C 6664895|15-G/A 6665065|54-A/G 6653483|52-C/T   
## 0.557077626 0.563981043 0.692307692 0.560344828 0.545833333 0.598591549 0.554502370 0.553571429 0.611111111 0.587962963 0.544378698   
## 6652822|57-G/A 100065688|55-A/G 6661405|37-G/T 6661817|33-A/G 6651443|47-G/T 6651921|15-T/A 6654090|16-G/A 6653899|53-A/G 6661211|62-G/A 6652984|32-G/A 6661495|42-T/C   
## 0.556291391 0.632075472 0.548936170 0.565000000 0.547325103 0.637931034 0.588709677 0.551724138 0.776397516 0.529661017 0.512820513   
## 6650679|43-C/T 6661246|33-G/A 6653043|54-C/G 6651254|12-A/T 6653789|32-G/T 6650988|24-G/A 6650862|68-C/A 6653541|8-A/G 6662900|30-G/A 6653618|37-G/A 6664721|14-C/T   
## 0.635514019 0.509009009 0.534979424 0.535087719 0.533653846 0.551569507 0.603305785 0.511210762 0.536697248 0.553672316 0.537878788   
## 6652395|48-C/T 6661842|33-T/A 6661739|54-G/A 6652644|26-G/A 6652332|20-T/C 6651976|25-G/A 6661113|14-C/T 6661301|20-G/A 6662986|27-C/T 6653529|7-G/A 6651972|24-A/G   
## 0.523364486 0.534979424 0.526315789 0.525641026 0.516587678 0.530701754 0.663551402 0.474747475 0.552147239 0.525821596 0.497872340   
## 6652901|58-C/T 6653167|32-C/T 6652763|59-G/A 6651610|56-G/C 6661486|27-C/T 6664344|37-A/G 6661743|17-G/A 6651212|18-A/G 6651054|64-T/A 6653313|42-A/G 6652640|45-C/A   
## 0.462500000 0.591304348 0.546255507 0.525000000 0.651162791 0.542168675 0.519736842 0.568862275 0.606965174 0.504545455 0.500000000   
## 6653127|48-G/A 6652179|62-G/A 6664422|18-A/G 6661732|8-C/T 6658587|26-G/A 6661161|53-A/C 6657089|25-C/T 6650998|9-A/T 6652379|23-G/C 6652823|50-C/A 6653209|28-G/C   
## 0.563380282 0.523605150 0.532934132 0.508333333 0.551282051 0.506382979 0.578231293 0.502057613 0.478991597 0.550387597 0.566666667   
## 6664750|24-C/T 6666098|18-G/A 6664416|28-A/G 6661208|26-A/T 100017494|26-T/C 6657426|10-G/T 6650467|17-T/C 6661591|23-T/C 6661615|53-A/G 6651689|52-C/T 100093282|6-C/T   
## 0.523206751 0.513513514 0.468750000 0.523437500 0.518072289 0.485232068 0.517006803 0.506172840 0.508620690 0.508875740 0.511627907   
## 6651044|31-C/T 6663926|8-G/A 6661122|39-C/T 6653015|45-G/T 6651960|46-A/G 6658395|10-A/G 6664288|7-C/G 6651937|12-G/T 6661119|32-T/C 6653567|68-C/T 6657105|21-A/G   
## 0.480176211 0.692307692 0.773333333 0.509259259 0.488584475 0.467661692 0.500000000 0.480519481 0.513761468 0.490990991 0.485849057   
## 6653958|12-C/T 6664417|17-G/A 6653929|22-G/A 6653560|40-C/T 6651307|58-C/T 6651918|7-T/C 6652335|27-T/C 6652403|61-A/C 6661676|25-C/T 6657686|15-A/G 6661180|15-G/A   
## 0.480263158 0.518987342 0.493421053 0.497925311 0.487500000 0.503267974 0.491803279 0.485355649 0.489795918 0.527272727 0.553398058   
## 6664065|56-A/T 6662654|14-C/T 6661258|19-T/G 6661326|21-G/T 6661503|51-G/A 6665677|54-T/C 6651345|67-A/G 6653158|39-C/T 6661434|33-C/T 6650700|61-G/A 6665573|50-G/T   
## 0.515625000 0.564885496 0.502145923 0.483091787 0.480000000 0.462184874 0.431578947 0.520000000 0.476793249 0.494382022 0.460937500   
## 100103686|15-C/T 6661407|28-A/T 6662956|24-T/G 6653198|44-C/T 100119886|12-A/G 6653976|22-T/C 6661123|44-T/C 6661423|44-C/T 6661694|9-T/C 6653208|48-G/A 6661587|35-T/C   
## 0.647619048 0.488687783 0.487603306 0.547368421 0.453744493 0.448275862 0.482758621 0.547619048 0.482300885 0.507042254 0.402439024   
## 6653932|10-C/T 6657861|14-G/A 6664287|35-C/T 6653108|33-A/G 6650863|33-C/T 6653166|35-T/C 6652001|24-A/G 6657913|25-C/G 100109898|15-G/A 6661240|65-T/A 6661268|13-G/A   
## 0.398058252 0.497560976 0.549295775 0.469483568 0.466666667 0.481707317 0.468085106 0.437768240 0.461883408 0.463414634 0.533834586   
## 6653580|43-G/T 6657145|22-C/A 6661660|20-C/T 6652645|41-C/T 6651100|28-C/T 6661548|20-A/G 6657725|32-C/T 6652908|9-A/T 6661838|60-T/G 6652562|28-G/A 6654077|33-C/T   
## 0.452674897 0.451612903 0.450216450 0.418918919 0.437125749 0.623655914 0.530434783 0.444444444 0.454935622 0.521739130 0.445833333   
## 6661761|38-G/A 6658102|52-C/T 6657350|31-T/A 6651178|33-C/T 6661253|38-T/C 100104030|16-C/A 6664895|24-C/A 6653522|21-A/G 6661899|11-A/G 6650883|48-C/T 6661607|53-C/G   
## 0.612244898 0.491124260 0.475138122 0.425000000 0.425233645 0.474654378 0.458333333 0.500000000 0.546762590 0.443925234 0.444444444   
## 6654004|30-T/A 6653722|5-T/G 6654003|26-C/A 6652045|5-C/T 6658305|27-T/C 6657714|46-T/C 6661603|40-G/C 6650949|5-A/T 6664725|29-A/G 6657697|38-A/G 6661471|62-C/G   
## 0.422018349 0.417777778 0.442396313 0.500000000 0.491803279 0.461538462 0.439655172 0.398340249 0.433962264 0.371980676 0.464912281   
## 6661765|40-G/A 6661481|66-A/C 6653282|53-T/C 6652110|26-C/T 6652196|51-C/T 6652944|56-G/A 6658191|17-C/G 6661286|15-G/A 6653684|7-T/C 6653203|66-A/G 6661751|44-T/G   
## 0.406113537 0.431192661 0.428571429 0.460937500 0.420289855 0.521367521 0.440594059 0.411214953 0.457516340 0.411214953 0.413043478   
## 6661711|66-G/A 6650674|36-C/T 6653554|14-G/A 6651804|55-G/C 6664076|29-C/A 6663980|50-G/A 100102214|5-C/T 6653379|50-A/G 6651865|33-T/G 6661260|22-A/T 6651954|62-T/C   
## 0.376068376 0.412500000 0.414634146 0.418750000 0.429864253 0.410041841 0.493243243 0.403361345 0.384297521 0.385281385 0.410377358   
## 6656942|42-G/A 6652635|57-G/A 6661149|41-C/T 6650632|65-G/A 6650568|31-G/C 6650938|6-C/T 6658511|21-A/C 6654094|65-T/C 6653106|31-C/T 6661381|44-A/G 6652779|66-A/G   
## 0.361702128 0.410596026 0.414414414 0.387755102 0.374485597 0.376744186 0.427966102 0.364705882 0.392070485 0.412087912 0.369158879   
## 6650898|47-G/A 6657805|7-A/G 6661727|46-C/T 6662592|9-C/T 6661085|13-C/T 6661239|45-A/G 6665990|9-G/C 6650977|39-G/A 6652000|22-C/T 6658391|30-C/T 6661184|41-C/G   
## 0.364928910 0.416243655 0.383783784 0.415929204 0.375000000 0.448598131 0.663865546 0.366071429 0.371559633 0.388646288 0.367965368   
## 6651519|67-C/G 6652011|54-C/T 6661376|29-C/T 6650669|9-A/G 100073501|45-A/G 6651742|50-G/A 6653416|29-C/T 6661643|49-G/A 6650635|62-G/A 6651529|9-C/T 6652878|58-G/T   
## 0.379166667 0.396551724 0.346153846 0.387234043 0.481481481 0.374485597 0.415094340 0.365740741 0.356223176 0.371681416 0.455284553   
## 6665222|67-C/A 6661481|18-C/T 6665990|48-C/G 6661216|67-C/T 6663955|62-T/C 6652246|10-G/A 6661167|12-T/A 6661710|53-G/A 6664085|17-G/T 6661652|62-A/C 6657045|15-A/G   
## 0.373949580 0.549295775 0.648854962 0.335329341 0.349056604 0.299065421 0.353909465 0.379888268 0.455089820 0.377682403 0.472727273   
## 6661805|6-C/G 6652339|26-G/T 6661277|47-G/A 6661335|49-T/G 6652597|28-C/T 6661737|51-G/T 6664079|62-A/T 6661334|49-G/T 6661187|52-C/T 6653800|24-G/A 6665242|22-G/A   
## 0.364055300 0.387640449 0.375000000 0.369158879 0.341317365 0.336206897 0.358024691 0.370558376 0.389221557 0.318385650 0.394736842   
## 6651247|35-C/G 6653693|39-C/A 6661436|12-T/C 6650629|61-C/A 6653328|49-C/T 6650603|26-A/G 6651494|48-G/A 6652060|23-C/T 6657933|10-C/T 6651038|40-T/C 6664362|28-C/T   
## 0.361344538 0.555555556 0.324200913 0.366515837 0.468468468 0.378571429 0.380281690 0.348936170 0.495145631 0.319327731 0.341317365   
## 6651571|67-C/T 6664050|15-A/G 6652084|30-C/T 6661846|32-C/T 6653638|33-A/C 6657305|12-A/C 6663909|36-C/T 6661305|58-A/G 6657606|35-G/A 6661206|19-A/C 6657339|6-G/A   
## 0.353293413 0.440366972 0.331877729 0.350877193 0.314049587 0.350427350 0.358490566 0.283653846 0.379310345 0.308724832 0.379844961   
## 6657292|22-T/A 6661485|59-A/G 6650475|43-C/T 6652083|41-G/A 6663998|25-T/C 6661115|22-T/G 100102214|35-G/A 6651822|26-T/C 6653698|49-A/T 6651072|34-A/C 6661221|40-G/A   
## 0.318181818 0.337016575 0.392523364 0.320833333 0.341614907 0.321888412 0.362068966 0.361445783 0.324786325 0.343750000 0.310043668   
## 6664084|45-C/T 6664046|47-A/G 6664412|13-G/A 6652764|38-C/T 6652859|41-C/T 6662842|43-C/T 6653459|28-T/C 6652467|20-G/T 6658444|32-T/G 6663948|54-G/A 6661848|65-T/G   
## 0.325396825 0.352941176 0.326530612 0.333333333 0.310810811 0.420560748 0.299516908 0.315126050 0.323651452 0.311004785 0.324074074   
## 6661692|19-C/T 6661666|47-C/A 6657189|5-T/A 6663931|25-C/T 6661747|23-A/G 6664777|21-T/G 6657196|41-G/A 6662626|20-G/C 6661431|59-G/A 6651183|67-C/T 100020564|19-A/G   
## 0.404255319 0.266375546 0.382812500 0.404109589 0.304932735 0.285123967 0.291666667 0.310344828 0.286343612 0.323353293 0.255813953   
## 6658409|20-A/C 6661097|28-C/T 6657230|7-A/G 6661119|56-G/A 6661554|36-A/G 6650618|9-G/C 6653999|19-C/T 6663991|5-C/T 6652381|42-A/T 6651915|13-C/T 6662884|19-C/T   
## 0.292181070 0.329341317 0.314720812 0.324786325 0.316326531 0.287610619 0.231578947 0.310810811 0.286363636 0.302439024 0.276595745   
## 6664330|6-A/G 6658057|21-T/G 6664271|29-T/G 6658345|31-A/G 6664281|18-T/A 6651466|33-G/A 6651085|26-C/T 6653605|24-T/C 100044679|44-A/G 100115090|8-A/G 6661464|30-G/T   
## 0.273127753 0.293388430 0.295652174 0.280487805 0.277056277 0.265765766 0.281250000 0.283505155 0.302197802 0.246636771 0.283783784   
## 6650884|45-C/T 6661861|5-T/C 6651870|51-T/C 6650549|15-C/T 6662909|15-A/C 6661345|10-T/C 100096951|40-T/A 6651934|39-C/A 6653561|20-A/G 6663982|40-G/A 6661677|22-C/T   
## 0.325396825 0.264044944 0.293859649 0.276190476 0.342857143 0.252212389 0.287610619 0.282828283 0.284615385 0.276315789 0.261467890   
## 6661705|29-C/G 6661413|63-C/T 100065757|18-C/G 6661266|30-A/G 6661310|64-T/C 6661349|63-A/G 100116458|50-G/A 6665749|7-G/A 6652731|67-C/G 6653078|31-C/T 6653889|13-C/T   
## 0.287081340 0.266666667 0.238095238 0.303482587 0.298429319 0.259615385 0.242798354 0.259433962 0.262500000 0.233480176 0.268292683   
## 6650390|62-T/A 6665512|36-G/A 6653694|33-C/T 6661130|57-A/C 6650397|43-A/G 6652725|65-G/A 6664898|31-T/A 6664740|45-G/A 6661717|60-G/A 6661866|27-T/C 6661803|57-G/C   
## 0.236842105 0.292452830 0.254166667 0.251028807 0.272727273 0.250000000 0.243093923 0.226804124 0.244541485 0.297520661 0.216494845   
## 6653812|35-T/C 6653634|39-G/A 6653421|13-A/G 6653117|34-C/G 6652078|22-T/A 6663918|8-C/G 6651738|38-G/C 100073717|6-G/A 6662614|36-C/T 6663009|7-C/T 6665630|52-T/C   
## 0.256097561 0.223214286 0.229787234 0.228310502 0.235537190 0.226337449 0.234567901 0.209302326 0.250000000 0.257575758 0.247422680   
## 6661118|33-G/A 6651890|7-G/A 6650967|42-C/A 6661605|18-C/T 6651286|19-T/A 6653631|43-C/T 6661436|18-C/T 6661386|46-C/T 6656991|15-A/G 6658489|9-C/T 100018527|6-C/T   
## 0.239819005 0.220657277 0.230452675 0.289473684 0.218340611 0.261682243 0.226666667 0.227027027 0.290909091 0.256637168 0.204651163   
## 6663957|56-G/A 6653138|31-G/A 6653361|55-G/A 6662597|30-A/G 6653013|37-T/C 6664770|35-T/G 100018912|62-G/T 6650463|42-T/A 6664775|59-A/G 6651694|29-A/T 6664064|49-A/G   
## 0.230769231 0.198275862 0.196428571 0.194029851 0.248175182 0.213333333 0.197530864 0.205761317 0.176795580 0.180555556 0.207048458   
## 6652918|18-G/A 6651840|35-G/A 6651055|13-G/A 6653477|22-A/T 6661719|26-T/A 6661828|67-T/A 6654030|47-G/A 6665066|58-G/C 6653260|47-G/T 6650860|49-G/A 6654039|20-G/A   
## 0.202702703 0.212643678 0.242857143 0.196652720 0.226744186 0.228070175 0.175355450 0.166666667 0.185185185 0.197309417 0.186868687   
## 6665336|52-C/T 6650985|20-G/A 6665243|28-G/C 6662888|44-A/C 6665236|63-T/C 6663983|17-C/T 100066027|14-A/T 6653607|5-T/C 6661170|39-C/T 6661781|60-G/A 100073694|44-G/A   
## 0.218934911 0.171717172 0.166666667 0.202479339 0.197530864 0.181102362 0.182203390 0.196629213 0.270000000 0.175438596 0.183574879   
## 6663947|55-T/C 6661831|54-T/C 6652266|47-T/C 6663080|20-G/A 6665672|66-T/A 6658491|28-C/A 6661680|19-G/T 6662595|39-C/T 6665990|6-A/T 6657377|47-C/T 6661828|68-T/A   
## 0.191616766 0.173728814 0.201388889 0.161616162 0.177215190 0.161434978 0.156250000 0.230000000 0.166666667 0.133858268 0.185185185   
## 6651958|27-A/G 6653919|17-C/T 100021874|46-A/G 100016068|62-T/A 6665489|31-C/T 100082278|57-C/T 6651291|51-G/T 6653890|21-C/T 6663954|56-C/A 100021943|40-T/C 6652214|62-T/A   
## 0.192771084 0.204724409 0.136986301 0.153508772 0.154185022 0.165048544 0.155172414 0.148717949 0.151079137 0.151260504 0.140350877   
## 100022950|33-A/C 6651253|68-C/T 6650643|36-C/A 6652860|42-G/A 6664014|62-G/A 6661808|48-C/T 6658138|27-A/C 100017513|60-C/T 6661261|32-C/T 6652821|67-C/T 6666304|10-A/T   
## 0.148760331 0.171171171 0.142857143 0.140425532 0.158798283 0.158878505 0.156378601 0.137931034 0.147826087 0.137724551 0.149659864   
## 6665455|61-G/T 100082682|51-T/C 6653384|6-A/G 100023325|25-A/G 100101067|36-C/T 6651685|49-T/A 6653586|60-T/C 6666177|13-A/T 6652540|8-G/T 6651209|49-A/G 100066244|11-A/T   
## 0.142857143 0.131578947 0.136563877 0.057971014 0.143750000 0.148648649 0.134529148 0.144000000 0.169230769 0.135964912 0.148760331   
## 6652377|20-G/A 6661200|23-T/G 100064741|45-G/C 6658040|18-T/A 6653702|48-T/C 6652310|50-C/T 100080867|16-C/T 6665067|64-C/A 6653076|28-C/T 6653648|6-G/A 6651991|67-A/T   
## 0.131313131 0.128099174 0.125000000 0.119658120 0.112994350 0.139664804 0.145631068 0.129032258 0.107784431 0.139534884 0.127192982   
## 6661634|15-T/G 6664050|24-G/C 6652868|58-A/G 6661564|13-A/G 6650547|43-C/G 100064827|8-G/C 6650552|61-G/A 6661602|25-T/C 6661456|61-G/A 6651197|66-T/A 6652994|27-C/T   
## 0.116071429 0.129186603 0.120930233 0.106382979 0.127572016 0.125748503 0.095505618 0.117283951 0.123595506 0.092827004 0.073619632   
## 6661887|13-A/T 6661310|58-T/C 6650745|19-T/G 100017712|8-T/A 6651911|52-G/A 6650417|11-A/C 6652308|53-T/G 6661174|36-C/T 6651243|32-G/A 6662595|43-G/A 6661238|17-G/T   
## 0.144000000 0.116022099 0.107296137 0.096638655 0.092783505 0.094650206 0.078838174 0.112500000 0.088983051 0.107296137 0.104265403   
## 6653091|46-C/G 6651733|50-G/A 6661209|58-G/A 6662998|47-T/C 6650989|12-C/T 6661260|32-A/C 6664754|18-T/C 6653705|22-C/A 6651897|14-A/G 6661468|27-G/A 6662877|32-C/T   
## 0.097674419 0.094650206 0.138888889 0.111111111 0.118421053 0.089743590 0.088888889 0.096774194 0.085585586 0.081250000 0.069565217   
## 6652769|52-G/A 6657468|35-T/C 6664040|37-G/T 6654036|20-C/G 6652581|49-T/C 6663926|28-C/T 6650558|18-A/C 6650767|11-C/T 6650470|54-G/A 6652008|64-T/A 100066158|21-G/A   
## 0.061855670 0.067073171 0.081545064 0.077586207 0.064516129 0.083832335 0.057416268 0.066666667 0.081339713 0.050847458 0.079646018   
## 6661900|39-T/C 100022191|13-A/T 6665045|39-A/T 6652766|56-A/G 6652767|24-T/A 6651271|49-G/A 6661314|26-G/A 6653619|65-T/C 100116986|5-T/C 100116987|6-T/G 6653081|42-A/G   
## 0.073770492 0.096000000 0.071428571 0.059090909 0.053921569 0.062780269 0.064102564 0.051136364 0.067415730 0.066666667 0.054545455   
## 6664720|40-A/G 6652605|24-T/C 6661530|52-T/G 6653380|28-A/G 6661534|38-G/A 100100705|17-C/A 6661784|26-C/G 6653485|62-T/C 6658269|15-G/A 6657310|18-C/G 6653319|56-C/A   
## 0.058558559 0.041237113 0.044052863 0.031250000 0.040000000 0.037735849 0.061320755 0.033018868 0.031390135 0.026455026 0.043165468   
## 6662895|13-G/A 6650569|12-C/A 100018011|33-A/T 6653025|64-G/A 100020592|58-C/G 6651157|23-G/A 6652995|7-T/C 6664385|5-T/G 100080823|15-G/A 100098565|15-A/G 6662594|6-A/G   
## 0.034013605 0.044444444 0.055118110 0.024691358 0.037914692 0.019417476 0.019607843 0.017777778 0.017937220 0.036363636 0.026431718   
## 6662608|14-T/C 100111015|17-T/A 6651630|13-G/A 100015677|15-G/A 100021199|37-T/C 6651723|7-T/C 6651946|25-T/C 6652107|59-C/T 6662703|23-A/G 6656926|24-G/A 6662639|8-G/T   
## 0.028301887 0.036036036 0.020408163 0.022421525 0.007299270 0.013071895 0.024539877 0.018181818 0.022222222 0.022421525 0.023076923   
## 6644134|13-A/C 100015999|30-C/T 6651264|67-C/T 100082192|45-T/C 6658187|20-A/G 6658030|16-T/G 6664447|43-A/G 6657081|38-A/G 6657519|27-C/A 6657646|21-G/A 6658294|22-A/G   
## 0.038135593 0.039301310 0.023952096 0.017543860 0.015384615 0.012500000 0.030303030 0.004830918 0.012605042 0.035398230 0.019047619   
## 6663106|39-T/C 6665877|8-T/C 6657134|12-C/T 6662930|5-G/T 100073664|24-C/A 100093267|33-A/T 6665045|33-A/T 6653064|39-T/C 6652028|11-T/C 6652053|54-A/G 6661327|40-C/T   
## 0.016393443 0.013888889 0.026315789 0.018518519 0.010101010 0.031496063 0.032258065 0.008196721 0.013452915 0.016949153 0.029045643   
## 100020810|55-A/G 6661141|23-C/T 100018274|35-A/G 100020489|64-T/C 100021048|30-T/C 100021494|48-T/C 100015195|36-C/T 6652099|5-C/T 100019298|65-T/C 100020731|53-A/G 100065190|44-T/C   
## 0.018867925 0.012765957 0.028037383 0.015228426 0.016393443 0.011299435 0.012500000 0.013513514 0.017045455 0.021551724 0.012552301   
## 6651997|59-A/G 6658436|20-C/T 6650975|51-G/A 6657565|7-G/A 6658077|34-T/C 6652620|41-C/T 6657312|42-G/A 6657368|39-G/A 6657412|9-T/G 6657526|48-C/T 6658588|11-C/T   
## 0.005524862 0.012987013 0.013333333 0.014084507 0.005076142 0.013513514 0.008510638 0.008928571 0.016666667 0.009345794 0.009523810   
## 6662668|7-A/T 6662868|15-G/A 6663029|17-G/A 6664446|24-T/C 100086116|7-C/A 100093344|14-G/C 100098451|30-G/T 100104877|27-G/A 6656935|13-T/G 6657240|11-C/T 6657387|17-A/T   
## 0.012500000 0.017937220 0.018987342 0.020618557 0.012605042 0.006250000 0.012500000 0.012500000 0.010309278 0.014285714 0.012500000   
## 6658126|24-C/G 6662893|11-C/G 100098564|20-T/C 100108662|16-G/A 100090375|13-A/C 6654111|67-T/C 100018022|29-C/T 100018793|30-G/A 100019919|22-G/A 100020224|39-A/G 100021950|26-G/A   
## 0.012987013 0.014018692 0.004739336 0.008064516 0.025423729 0.000000000 0.018867925 0.022935780 0.019736842 0.008810573 0.025641026   
## 100065898|33-G/A 100016342|65-A/G 6653141|47-T/A 100020182|5-A/G 100017739|16-A/G 100019425|22-T/C 100019993|60-T/C 100020111|24-T/C 100022090|7-C/A 100020509|41-C/T 100019969|57-T/C   
## 0.018018018 0.029702970 0.021276596 0.009009009 0.004424779 0.008620690 0.008968610 0.010309278 0.004201681 0.009009009 0.014388489   
## 100021750|68-T/G 6650682|7-C/T 100073640|6-A/G 6658242|13-G/A 6661085|49-C/T 6650645|14-C/G 100022464|43-T/A 100065437|41-T/C 6652497|42-C/A 6653265|58-G/C 6653475|24-G/A   
## 0.004291845 0.005050505 0.008810573 0.013605442 0.000000000 0.005050505 0.012448133 0.013274336 0.008230453 0.019607843 0.004484305   
## 100021941|30-C/T 6658496|17-G/A 6661755|16-A/C 6661423|60-C/T 100015613|67-G/A 6652888|64-A/G 6657111|13-T/C 6658119|34-T/A 6661367|26-G/T 100111976|26-A/G 100016385|11-T/C   
## 0.008733624 0.000000000 0.025210084 0.034482759 0.017857143 0.008620690 0.023529412 0.008438819 0.011235955 0.007142857 0.017937220   
## 100073644|37-C/T 6650454|46-A/G 6650627|13-T/C 6651042|67-C/T 6652424|44-T/C 6653438|30-C/T 6653954|43-A/G 6657314|43-G/A 6657355|38-G/A 6657359|15-A/G 6657460|29-G/A   
## 0.010928962 0.009132420 0.011764706 0.005988024 0.012552301 0.008733624 0.010101010 0.004291845 0.020000000 0.009090909 0.005102041   
## 6657482|8-A/G 6657781|17-C/A 6661090|62-A/T 6661394|35-A/G 6662671|17-A/G 6662872|17-G/T 6663077|27-G/T 100080773|11-T/C 6650529|9-A/G 6651847|21-G/A 6652313|42-C/T   
## 0.008968610 0.009433962 0.004115226 0.000000000 0.006622517 0.009389671 0.008733624 0.008968610 0.008510638 0.008849558 0.012500000   
## 6656897|6-A/T 6657147|18-G/A 6657176|29-T/G 6657326|12-G/A 6657353|6-A/G 6657411|13-G/A 6657545|31-T/C 6657603|29-G/A 6657689|26-G/A 6657743|8-C/G 6657998|8-A/G   
## 0.015625000 0.013513514 0.008695652 0.012903226 0.013215859 0.006802721 0.013698630 0.010204082 0.012820513 0.008230453 0.017937220   
## 6658208|29-C/T 6658287|13-A/G 6658348|17-A/T 6658475|20-C/A 6658498|16-G/A 6658580|46-G/C 6661448|44-G/T 6661799|23-C/T 6662617|41-T/G 6662633|33-G/C 6662813|9-G/T   
## 0.000000000 0.008510638 0.008333333 0.009090909 0.016129032 0.008928571 0.008333333 0.012765957 0.008438819 0.004149378 0.010152284   
## 6662843|9-A/G 6662968|7-T/C 6662976|12-A/C 6664360|25-T/C 6664442|16-C/T 6664875|15-A/G 100021224|39-C/T 100073899|13-T/C 100098800|29-G/T 100100663|9-T/A 6650431|37-G/A   
## 0.008510638 0.013071895 0.008547009 0.006134969 0.009708738 0.027272727 0.020000000 0.023529412 0.010204082 0.008695652 0.005649718   
## 6656974|5-A/T 6657112|32-C/T 6657945|33-T/A 6658433|38-T/A 6664304|20-G/T 6664309|9-T/C 100116189|14-C/A 100045177|15-A/G 100073820|20-A/G 100086048|24-A/T 100098455|12-T/G   
## 0.008298755 0.017391304 0.008230453 0.004201681 0.008403361 0.017699115 0.012552301 0.009090909 0.007692308 0.012345679 0.008695652   
## 100098486|16-T/A 100098772|34-A/T 100112391|7-C/G 6651055|18-T/C 100086270|5-G/C 100112446|22-G/C 6661857|31-C/T 6658676|11-C/G 100016220|5-A/G 100021127|7-A/G 6665873|25-A/G   
## 0.005181347 0.008230453 0.016597510 0.022222222 0.018750000 0.016949153 0.008810573 0.009345794 0.009009009 0.005076142 0.014492754   
## 6654134|52-T/A 100016595|6-G/A 100021410|63-C/T 100023315|21-T/C 6653760|49-C/A 100021585|32-T/G 100023219|12-A/G 6658683|43-C/T 100064732|20-A/G 100016355|33-T/C 100019393|16-C/T   
## 0.024390244 0.007751938 0.013043478 0.008928571 0.018867925 0.008298755 0.017621145 0.018691589 0.015384615 0.008888889 0.014563107   
## 100020119|15-A/G 100022894|28-G/A 100082537|56-C/T 100016273|19-A/G 100023327|12-C/T 100015858|19-C/T 100022410|6-G/A 100017258|51-G/T 100019095|48-C/T 100020063|20-G/A 100015954|31-A/G   
## 0.000000000 0.014492754 0.009433962 0.009302326 0.006578947 0.000000000 0.000000000 0.012931034 0.004672897 0.005050505 0.006097561   
## 100021964|13-G/C 100085852|36-T/C 6651226|18-G/C 100021819|62-A/C 100022277|8-T/G 100064827|60-G/T 100018209|24-G/C 100022569|31-G/A 6653298|40-A/G 100015576|20-G/A 100016155|45-A/G   
## 0.005319149 0.012987013 0.006024096 0.004291845 0.004273504 0.004255319 0.004739336 0.008620690 0.004504505 0.005050505 0.000000000   
## 100018361|5-C/T 100018644|13-A/G 100065285|54-G/A 100066085|48-C/G 100066350|63-A/G 100082653|31-C/G 100019242|15-T/C 100065918|65-C/T 100082574|16-T/C 100112503|22-T/C 6651116|23-G/A   
## 0.006756757 0.012765957 0.009569378 0.004366812 0.009523810 0.000000000 0.005747126 0.000000000 0.000000000 0.004310345 0.000000000   
## 6664424|11-C/T 100017539|66-C/A 100019104|53-C/T 100020067|42-A/C 100020868|41-A/G 100064882|50-T/C 6658317|12-A/T 6661605|7-T/C 6664288|12-C/T 100016786|17-G/A 100020956|6-T/C   
## 0.000000000 0.009216590 0.004672897 0.004132231 0.008810573 0.009259259 0.004385965 0.000000000 0.006578947 0.012658228 0.000000000   
## 100016197|32-C/T 100017640|9-C/G 100018738|55-G/T 6651375|43-G/A 6651394|40-A/T 6657692|30-G/C 6661438|21-G/A 100015230|14-A/T 100015429|54-A/G 100016348|67-T/C 100022665|32-G/A   
## 0.000000000 0.004739336 0.009900990 0.008583691 0.004166667 0.004716981 0.008849558 0.004237288 0.008474576 0.009803922 0.012711864   
## 6650646|12-A/G 6651058|8-C/T 6652871|25-G/T 6653284|49-A/G 100020780|47-T/C 100082291|18-C/T 6657270|16-C/A 6658306|32-A/G 6663971|20-C/T 100018785|45-G/A 100019578|24-A/G   
## 0.000000000 0.004166667 0.009259259 0.008771930 0.006944444 0.000000000 0.009216590 0.005376344 0.008658009 0.005154639 0.008510638   
## 100021429|16-A/G 6651301|13-T/C 6653801|25-T/C 6662791|9-T/C 6665675|15-G/A 6665677|34-G/A 6651053|25-C/T 6651062|23-G/C 6657266|49-A/G 6661781|11-G/A 6662884|20-G/A   
## 0.013274336 0.000000000 0.000000000 0.008849558 0.004484305 0.004739336 0.006802721 0.004201681 0.008771930 0.000000000 0.005050505   
## 6661633|24-T/C 100064957|57-C/G 6650480|42-G/T 6651168|20-T/C 6651202|6-G/T 6651669|51-A/T 6651901|52-A/G 6652133|6-G/A 6652277|34-G/T 6652429|23-C/A 6652852|41-C/T   
## 0.000000000 0.005154639 0.008368201 0.009478673 0.005524862 0.004115226 0.004166667 0.007751938 0.000000000 0.000000000 0.004504505   
## 6653859|66-G/C 6657107|30-C/T 6657341|14-T/G 6657827|41-T/C 6657863|36-T/C 6657972|11-T/G 6658332|28-G/A 6661576|17-T/C 6662852|8-G/C 6665753|18-G/A 6665974|16-T/A   
## 0.000000000 0.004366812 0.000000000 0.004424779 0.012987013 0.004310345 0.000000000 0.000000000 0.000000000 0.013513514 0.005181347   
## 6665974|39-G/C 100022319|61-G/T 100066473|44-C/T 6650457|59-C/T 6650512|39-G/A 6650541|48-T/C 6650816|44-C/T 6651070|58-A/C 6651408|58-C/G 6651681|14-C/T 6651690|41-A/G   
## 0.004444444 0.005102041 0.010526316 0.000000000 0.004464286 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651751|52-A/G 6651951|29-T/C 6652480|24-G/A 6652536|25-A/G 6653136|38-A/G 6653193|66-G/C 6653366|47-T/C 6653406|51-T/C 6653654|13-A/G 6653743|54-T/C 6653795|65-G/T   
## 0.004166667 0.000000000 0.013452915 0.000000000 0.004830918 0.000000000 0.000000000 0.004385965 0.000000000 0.008403361 0.000000000   
## 6656968|20-T/C 6657138|49-C/T 6657141|6-G/A 6657590|27-T/C 6657970|16-C/G 6658518|17-G/A 6658664|15-C/A 6661383|36-A/G 6661406|53-T/C 6661709|47-A/C 6661820|30-C/T   
## 0.004739336 0.009009009 0.007751938 0.008196721 0.000000000 0.000000000 0.009433962 0.005102041 0.000000000 0.004115226 0.004366812   
## 6661892|24-C/T 6662654|9-C/A 6662663|5-A/T 6663104|29-A/G 6664717|21-A/G 6665800|40-A/C 6665804|30-T/C 100018586|15-A/G 100045576|29-G/A 100064632|55-G/A 100124805|23-T/C   
## 0.008264463 0.008298755 0.000000000 0.009433962 0.004716981 0.000000000 0.000000000 0.000000000 0.000000000 0.008928571 0.000000000   
## 6650420|21-G/A 6650787|62-C/A 6650795|22-T/C 6651016|52-G/A 6651805|15-A/G 6652208|23-C/T 6652257|65-G/T 6652383|57-G/C 6652388|11-A/G 6652788|54-A/G 6652943|57-G/A   
## 0.000000000 0.000000000 0.004310345 0.005154639 0.000000000 0.004255319 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653199|35-A/C 6653447|32-A/G 6653467|25-G/A 6653565|10-G/C 6653569|24-A/T 6654084|42-A/G 6656901|37-A/C 6656919|48-T/A 6656965|28-C/T 6657179|25-G/A 6657434|21-C/A   
## 0.000000000 0.005376344 0.004385965 0.000000000 0.004115226 0.004545455 0.000000000 0.004219409 0.005988024 0.004385965 0.004132231   
## 6657454|17-T/C 6657477|8-A/G 6657523|10-C/T 6657578|8-C/T 6657628|10-A/G 6657698|41-A/G 6657753|24-G/A 6657784|15-C/G 6657818|27-A/G 6657821|26-T/C 6657854|14-G/A   
## 0.000000000 0.004484305 0.009708738 0.004166667 0.004975124 0.008810573 0.000000000 0.004184100 0.012048193 0.012048193 0.009756098   
## 6657918|33-T/A 6657923|13-T/C 6657975|18-C/G 6658063|26-T/C 6658152|11-T/C 6658175|49-T/C 6658353|18-G/T 6658417|35-C/A 6658431|14-A/G 6658485|8-A/G 6658531|35-G/A   
## 0.004115226 0.000000000 0.005291005 0.000000000 0.008968610 0.006451613 0.007692308 0.000000000 0.004504505 0.000000000 0.005747126   
## 6661099|20-G/A 6661250|41-T/C 6661252|5-A/G 6661823|31-T/C 6661826|50-T/A 6661853|33-G/A 6662682|18-G/C 6662708|45-C/A 6662717|10-T/A 6662720|17-G/A 6663956|7-C/T   
## 0.005050505 0.004424779 0.009009009 0.006849315 0.004545455 0.004504505 0.012048193 0.004504505 0.004132231 0.006329114 0.005050505   
## 6664324|31-T/C 6664897|36-T/G 6664904|21-A/G 6665135|35-C/T 6665977|58-C/T 100062054|9-T/G 100066053|65-C/G 100073867|18-T/C 100098449|11-T/C 100102329|39-G/C 100104849|27-A/C   
## 0.000000000 0.004219409 0.004716981 0.000000000 0.006250000 0.000000000 0.000000000 0.011111111 0.004484305 0.004444444 0.008230453   
## 100118311|8-T/G 6651728|12-T/C 6651869|31-G/A 6651992|39-T/C 6652070|15-A/G 6652698|58-A/G 6653498|29-C/G 6656984|39-A/T 6656988|16-A/T 6657054|5-A/G 6657255|43-C/T   
## 0.000000000 0.009009009 0.000000000 0.000000000 0.009090909 0.004651163 0.004784689 0.004424779 0.007812500 0.009009009 0.009345794   
## 6657257|18-T/G 6657264|21-A/C 6657486|25-A/G 6657731|27-T/C 6657762|30-T/G 6658275|5-T/C 6658351|8-T/A 6658356|40-T/A 6662713|37-C/T 6662735|7-T/C 6662802|35-T/C   
## 0.005102041 0.004237288 0.000000000 0.008196721 0.004115226 0.005617978 0.008403361 0.000000000 0.010928962 0.006535948 0.000000000   
## 6664285|14-G/T 6664286|5-A/G 6664411|22-G/A 100116189|12-G/A 100020566|50-G/A 100073416|9-G/C 100073555|13-T/C 100073946|24-C/A 100082262|34-C/T 100082279|42-T/G 100093533|7-G/T   
## 0.005376344 0.009009009 0.000000000 0.012903226 0.008230453 0.004424779 0.000000000 0.005050505 0.004424779 0.000000000 0.008230453   
## 100093556|10-T/A 100093571|9-A/T 100093658|5-T/C 100102354|38-T/G 100102368|8-T/C 100108745|39-G/C 100124806|24-A/G 6652013|36-G/A 100019613|42-A/G 6653942|18-C/G 100021748|48-G/A   
## 0.004132231 0.004115226 0.005617978 0.004273504 0.004629630 0.004444444 0.000000000 0.000000000 0.004545455 0.000000000 0.014084507   
## 100022307|64-C/T 6661279|61-A/G 100016043|65-A/G 100021551|26-C/G 6651509|9-T/C 100015681|31-G/A 100022444|19-C/T 100065978|51-A/C 100015971|32-G/A 100018341|11-C/T 100018791|30-T/A   
## 0.004524887 0.004524887 0.009900990 0.000000000 0.000000000 0.004310345 0.010526316 0.000000000 0.008474576 0.004761905 0.004587156   
## 100021444|27-G/T 6651402|31-T/C 6652371|36-A/G 100016955|21-T/C 100017267|60-T/C 100017271|28-T/A 100017633|14-G/T 100018216|18-C/T 100018585|65-G/A 100018930|7-A/G 100019458|6-T/C   
## 0.004366812 0.000000000 0.000000000 0.008928571 0.000000000 0.008438819 0.010752688 0.000000000 0.000000000 0.005076142 0.000000000   
## 100020508|64-T/C 100021998|13-T/C 100065288|30-C/T 6657675|5-C/T 100018006|38-A/G 100018907|18-T/C 100018908|67-C/T 100019522|42-C/T 100021552|23-G/T 100021990|59-T/C 100066166|11-T/A   
## 0.015228426 0.011764706 0.000000000 0.006756757 0.009661836 0.011111111 0.005988024 0.008333333 0.004310345 0.004694836 0.004184100   
## 6651977|40-G/C 6661494|35-T/C 6661600|20-T/C 100023675|41-A/G 100064707|39-C/T 100066332|9-G/A 100111975|14-G/C 100015765|23-G/A 100017875|29-A/G 100019456|25-T/C 100019962|30-A/G   
## 0.000000000 0.000000000 0.000000000 0.008810573 0.000000000 0.004219409 0.018750000 0.004854369 0.004716981 0.012269939 0.000000000   
## 100020185|57-C/A 100020870|33-C/G 100021266|13-G/A 6651172|33-A/G 100015703|20-A/G 6653988|60-A/T 100018373|30-C/T 100020483|16-G/A 100022388|34-C/T 100022854|43-G/T 100023104|56-C/T   
## 0.007092199 0.009132420 0.006802721 0.004694836 0.007692308 0.004347826 0.004366812 0.008064516 0.008849558 0.004115226 0.000000000   
## 100023409|22-T/C 100086339|36-T/G 6651925|23-G/C 100120327|18-G/A 100120327|6-G/A 100016290|59-A/C 100020594|60-T/A 100022242|47-G/T 100022320|10-T/C 100022502|23-T/A 6651745|39-T/C   
## 0.008620690 0.004219409 0.000000000 0.000000000 0.015503876 0.006289308 0.004166667 0.000000000 0.004366812 0.004132231 0.008196721   
## 6661848|25-T/G 100016236|36-G/T 100016349|39-A/G 100016910|15-T/A 100020122|19-C/G 100021092|17-T/C 100022165|12-A/G 100023470|59-G/A 6661692|56-G/A 100016458|65-C/G 100018964|48-T/G   
## 0.004608295 0.011111111 0.008810573 0.017241379 0.004739336 0.013605442 0.004405286 0.008810573 0.000000000 0.000000000 0.000000000   
## 100021554|25-A/G 100023185|19-T/G 6650701|18-A/G 6652394|37-T/C 6653506|13-T/A 6664058|35-C/T 100016479|45-A/T 100017508|19-C/G 100018962|16-T/C 100022682|11-A/T 100066335|57-A/T   
## 0.014492754 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100082668|8-A/T 6658494|15-A/G 100015625|54-A/G 100016249|62-A/C 100016393|18-A/T 100016660|55-C/T 100017075|58-G/A 100017124|8-A/G 100017541|11-T/A 100018026|11-T/C 100019630|31-T/C   
## 0.004347826 0.000000000 0.000000000 0.008583691 0.004405286 0.000000000 0.000000000 0.008968610 0.004184100 0.004484305 0.000000000   
## 100019855|44-T/C 100019873|44-G/A 100019915|44-G/T 100022465|65-C/G 100022648|51-G/A 100044512|21-C/T 6650696|57-G/A 6653452|20-G/A 100015340|55-T/G 100017500|23-A/C 100020588|47-C/A   
## 0.004184100 0.000000000 0.000000000 0.000000000 0.000000000 0.005128205 0.000000000 0.000000000 0.004444444 0.004444444 0.000000000   
## 100022422|51-G/T 100022425|5-T/C 100023388|34-C/A 100023484|57-G/A 100023525|29-A/G 100064648|32-T/C 100065646|5-C/A 100073396|12-C/T 100073814|33-T/C 6650655|58-G/A 6651105|51-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004716981 0.004201681 0.004444444 0.000000000 0.004444444 0.000000000 0.000000000   
## 6651192|9-A/G 6652274|53-T/C 6652608|18-G/C 6652649|33-C/G 6653266|5-T/A 6661462|57-A/G 100016352|41-C/T 100016515|37-T/A 100016629|18-T/C 100017186|6-T/C 100018441|46-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.011111111 0.011627907 0.000000000   
## 100019819|59-T/G 100021768|16-G/T 100022658|14-G/A 100022749|22-C/T 100023505|21-C/G 100064613|60-T/C 6650443|20-C/T 6650647|27-A/C 6650672|16-T/C 6650875|47-G/A 6652044|30-A/G   
## 0.004291845 0.006622517 0.004878049 0.000000000 0.004149378 0.004484305 0.000000000 0.000000000 0.000000000 0.009478673 0.000000000   
## 6652814|39-C/T 6653050|59-G/T 6653245|23-A/G 6653382|37-T/C 100015237|28-T/A 100016165|7-G/A 100017157|49-G/A 100017486|22-T/G 100019175|10-C/G 100019665|26-G/A 100020841|64-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004694836 0.000000000 0.004291845 0.000000000 0.000000000 0.010152284   
## 100120329|23-A/G 6650705|36-C/T 6651136|7-G/C 6651295|17-C/T 6651888|7-A/G 6652092|41-A/G 6652390|29-T/C 6653344|40-A/G 100017290|62-G/T 100017981|57-C/T 100018180|55-T/C   
## 0.008888889 0.000000000 0.000000000 0.000000000 0.000000000 0.004405286 0.000000000 0.000000000 0.000000000 0.000000000 0.011976048   
## 100018460|39-T/G 100018667|65-G/A 100019573|61-A/C 100020403|29-G/T 100023540|56-T/G 100065318|8-A/G 100066600|5-T/C 100066622|14-T/C 100086014|36-T/C 100098840|27-G/A 6650711|25-C/A   
## 0.008368201 0.005102041 0.000000000 0.010204082 0.000000000 0.000000000 0.000000000 0.004716981 0.012987013 0.006250000 0.000000000   
## 6651249|51-G/C 6653001|20-G/A 6653114|14-T/A 6653811|17-T/C 6661187|29-A/C 100015694|44-A/T 100016554|8-A/G 100017386|12-G/A 100017844|43-G/A 100020562|42-C/G 100021051|67-G/T   
## 0.000000000 0.000000000 0.004132231 0.000000000 0.000000000 0.004132231 0.013452915 0.006451613 0.012875536 0.000000000 0.004291845   
## 100065266|5-T/C 6650693|44-C/T 6651276|7-A/G 6651724|68-A/G 6652175|66-T/C 6652356|17-A/G 6653008|30-C/G 6653473|47-C/T 6653869|47-T/G 6654016|14-A/G 6664729|22-C/T   
## 0.000000000 0.000000000 0.005076142 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009174312   
## 6661750|65-G/A 100016089|30-C/T 100017364|16-A/G 100017568|38-A/G 100017636|20-G/A 100018230|62-T/C 100020647|25-G/A 100023048|6-T/C 100023313|65-G/T 100023842|66-T/C 6650662|57-T/A   
## 0.000000000 0.000000000 0.000000000 0.009661836 0.005050505 0.000000000 0.008771930 0.000000000 0.009259259 0.000000000 0.000000000   
## 6650857|56-T/C 6650871|15-T/G 6652354|41-T/G 6652712|18-A/G 6652897|32-G/A 6653119|17-A/G 6653277|45-G/C 6653413|34-C/T 6653686|19-A/G 6653906|8-T/C 6656936|12-G/A   
## 0.000000000 0.000000000 0.004219409 0.000000000 0.004237288 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6658216|16-T/C 6661637|61-A/T 6664071|59-C/T 6652420|13-T/G 100017654|43-G/C 100021742|38-C/A 100044665|10-T/G 100064985|48-C/T 100065246|12-A/G 100066557|28-C/T 100082397|38-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004115226 0.000000000 0.008403361 0.000000000 0.004405286 0.000000000 0.000000000   
## 6650620|8-A/G 6650692|56-G/A 6650978|6-G/A 6651221|15-T/C 6651235|33-A/G 6651703|33-T/C 6651891|44-T/C 6652170|11-A/G 6652463|46-A/C 6652496|43-C/T 6653226|65-A/G   
## 0.000000000 0.008547009 0.007751938 0.000000000 0.000000000 0.000000000 0.000000000 0.012121212 0.005025126 0.000000000 0.000000000   
## 6653778|39-T/A 6654074|20-G/T 6658572|16-A/G 6661139|49-C/A 6661309|12-G/A 6661345|40-C/G 6662659|12-A/C 100120331|53-T/G 100020242|53-A/G 100021807|31-T/C 100065925|36-C/T   
## 0.004444444 0.000000000 0.004424779 0.000000000 0.000000000 0.004201681 0.004273504 0.008298755 0.000000000 0.000000000 0.000000000   
## 100066073|6-T/C 100102122|31-C/A 6650428|57-G/T 6652370|62-G/A 6653373|60-G/T 6653417|48-C/G 6653777|46-G/T 6653792|53-C/A 6654058|18-T/C 6661147|26-G/C 6661226|53-C/T   
## 0.011627907 0.004115226 0.000000000 0.000000000 0.000000000 0.004366812 0.000000000 0.004184100 0.005555556 0.000000000 0.000000000   
## 6661658|19-C/T 6661670|43-T/C 6663906|23-C/T 6664040|9-G/T 100017806|36-A/G 100019553|65-G/A 100020150|48-T/C 100022824|15-T/C 100045255|15-T/C 100064683|52-A/G 100065044|38-G/T   
## 0.000000000 0.000000000 0.000000000 0.005076142 0.005102041 0.005102041 0.000000000 0.005747126 0.000000000 0.004166667 0.000000000   
## 100065331|11-A/G 100082376|10-G/T 100114017|32-T/C 6650513|52-C/T 6650793|26-A/C 6650805|11-A/G 6650968|18-A/T 6651099|28-A/G 6651150|45-T/C 6651383|67-T/G 6651541|66-T/C   
## 0.000000000 0.000000000 0.000000000 0.005917160 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651588|49-C/T 6651711|11-A/G 6651715|59-C/G 6651731|68-G/T 6652027|41-G/A 6652109|27-A/G 6652130|35-T/C 6652152|19-T/G 6652278|43-G/C 6652658|29-A/T 6652840|16-G/A   
## 0.009009009 0.000000000 0.000000000 0.000000000 0.004166667 0.012048193 0.000000000 0.000000000 0.004115226 0.000000000 0.008064516   
## 6652867|64-C/T 6652883|26-G/C 6653149|58-C/T 6653187|24-G/T 6653229|41-A/G 6653591|11-G/C 6653796|8-T/C 6653829|21-C/A 6653872|47-G/T 6653967|40-G/A 6657086|36-C/A   
## 0.000000000 0.000000000 0.006250000 0.000000000 0.000000000 0.000000000 0.004629630 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657671|40-C/T 6657902|21-T/C 6661102|10-A/G 6661477|67-A/G 6661483|14-G/C 6661530|26-C/G 6661560|54-A/G 6661564|45-T/A 6662672|28-C/A 6664046|51-T/C 6664055|23-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.006250000 0.004716981 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100120332|58-C/A 100120330|33-G/T 100015220|59-C/A 100016151|11-T/C 100016562|12-G/A 100016798|34-C/T 100021467|36-G/A 100065538|21-A/T 100065912|28-G/A 100098480|21-A/C 6650742|33-G/A   
## 0.008298755 0.008333333 0.000000000 0.004484305 0.012903226 0.000000000 0.000000000 0.004784689 0.014492754 0.000000000 0.004504505   
## 6650889|38-G/T 6651263|53-A/C 6651318|7-C/T 6651340|27-C/T 6651392|24-C/T 6651403|11-C/A 6651475|6-A/G 6651645|50-G/A 6651662|13-T/A 6651726|49-G/A 6651740|27-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004132231 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651858|23-A/G 6651880|60-C/T 6651889|58-T/C 6651919|45-G/T 6652026|29-G/T 6652151|12-T/C 6652259|45-G/T 6652382|40-G/A 6652492|21-C/T 6652504|25-A/G 6652541|50-A/G   
## 0.004444444 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008733624 0.000000000 0.000000000 0.000000000   
## 6652568|29-G/T 6652593|5-G/T 6652667|36-T/C 6652794|64-C/T 6652856|20-T/A 6653235|13-T/G 6653395|26-G/A 6653420|50-G/A 6653458|58-C/T 6653463|23-A/G 6653479|25-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008888889 0.000000000   
## 6653599|33-C/T 6653745|15-T/C 6653871|33-G/A 6653881|45-G/A 6657644|31-G/T 6657994|16-G/A 6658139|28-G/A 6658379|30-A/G 6658529|38-A/G 6658559|22-T/G 6658652|28-T/C   
## 0.000000000 0.005747126 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004975124 0.004830918 0.000000000 0.004830918   
## 6658660|28-C/G 6661093|40-C/A 6661130|16-T/C 6661369|40-T/C 6661393|35-C/A 6661665|50-T/C 6661672|7-G/A 6661712|36-C/T 6663057|27-A/C 6663982|51-T/G 6665517|21-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004484305 0.000000000 0.000000000 0.006250000 0.004115226 0.000000000 0.009569378   
## 6665665|51-T/C 6665807|65-G/A 100104824|10-C/A 100020394|66-C/G 100020441|43-A/C 100021095|9-T/C 100021324|61-A/G 100044982|27-T/C 6633176|7-T/C 6650394|45-T/C 6650524|64-C/A   
## 0.004385965 0.000000000 0.009950249 0.000000000 0.004761905 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650526|41-A/C 6650616|12-C/T 6650617|39-T/G 6650695|29-G/A 6650768|33-C/T 6650776|41-A/G 6650824|6-C/G 6650856|61-G/C 6650931|6-C/T 6650932|50-A/G 6650935|64-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004166667 0.000000000 0.000000000 0.004310345 0.000000000 0.004201681 0.000000000   
## 6650950|61-A/C 6650971|13-G/A 6651076|54-T/C 6651094|7-C/T 6651112|44-A/C 6651140|51-A/G 6651141|28-C/T 6651166|8-G/A 6651232|36-T/A 6651234|42-A/T 6651248|33-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651256|30-A/G 6651296|34-G/A 6651362|29-A/G 6651505|25-A/G 6651536|18-C/T 6651549|18-T/C 6651584|29-A/G 6651585|28-G/A 6651603|27-G/A 6651650|53-C/T 6651682|41-G/A   
## 0.004975124 0.000000000 0.000000000 0.014492754 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004672897 0.000000000   
## 6651722|21-T/C 6651790|34-A/C 6651836|41-C/A 6651920|32-T/A 6651945|47-T/C 6651948|51-G/A 6651949|50-A/C 6651978|13-T/C 6651988|28-A/T 6651995|36-G/C 6651996|46-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004651163 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652021|23-A/T 6652050|59-T/C 6652102|5-C/T 6652139|9-C/G 6652157|32-T/A 6652164|29-T/C 6652198|12-T/A 6652209|23-C/G 6652232|10-G/A 6652236|58-T/C 6652248|19-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004115226 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652256|38-A/G 6652399|58-G/T 6652408|36-G/T 6652455|7-A/G 6652563|7-G/C 6652666|14-C/T 6652708|30-T/C 6652718|43-C/A 6652723|11-A/G 6652744|49-T/G 6652761|57-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652809|41-A/G 6652820|37-G/T 6652865|19-C/G 6653005|35-T/C 6653010|64-G/C 6653038|53-G/C 6653130|47-A/T 6653175|37-A/G 6653237|34-C/T 6653376|49-A/C 6653396|18-A/G   
## 0.004405286 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004424779 0.000000000 0.000000000   
## 6653462|51-G/A 6653499|18-A/G 6653523|14-A/C 6653530|62-T/C 6653604|19-T/A 6653643|33-G/C 6653655|16-T/C 6653725|23-C/A 6653838|44-C/T 6653994|51-G/A 6656884|31-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004329004 0.000000000 0.000000000 0.006097561   
## 6656889|19-A/G 6657085|18-T/G 6657130|23-G/T 6657217|6-G/T 6657267|27-G/T 6657331|17-A/G 6657391|26-A/G 6657478|16-A/C 6657485|17-C/T 6657548|20-A/G 6657600|33-G/A   
## 0.004651163 0.005102041 0.008620690 0.000000000 0.004366812 0.000000000 0.007142857 0.000000000 0.007874016 0.000000000 0.004504505   
## 6657637|34-A/C 6657667|22-A/G 6657873|49-G/A 6658002|34-T/C 6658172|30-C/A 6658300|7-T/A 6658375|19-C/G 6658441|13-C/T 6658569|13-G/A 6661094|36-A/G 6661297|9-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.008264463 0.000000000 0.004739336 0.004878049 0.006802721 0.000000000 0.000000000   
## 6661311|33-T/C 6661392|20-A/G 6661396|55-T/C 6661401|35-G/A 6661459|27-G/A 6661496|33-C/G 6661598|62-A/G 6661609|59-A/C 6661636|18-T/A 6661653|9-G/A 6661756|25-G/A   
## 0.000000000 0.000000000 0.005988024 0.005747126 0.000000000 0.000000000 0.008438819 0.006289308 0.004273504 0.000000000 0.000000000   
## 6661788|59-G/T 6661804|5-T/A 6661860|33-C/T 6662701|6-A/G 6662705|5-C/G 6662826|20-C/T 6663036|30-T/G 6663052|30-A/G 6663927|13-G/A 6664053|24-C/T 6664315|17-A/G   
## 0.000000000 0.000000000 0.000000000 0.004405286 0.000000000 0.000000000 0.000000000 0.004975124 0.000000000 0.004132231 0.006622517   
## 6664393|35-G/A 100101004|14-G/C 6664748|30-C/A 6665122|15-A/T 6665280|39-G/A 6665349|39-T/A 100109477|21-T/C 6665749|9-T/C 6665804|12-G/A 6665805|15-G/A 6665809|11-A/G   
## 0.005747126 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004424779 0.000000000 0.000000000 0.000000000   
## 6665975|52-G/A 6666169|13-T/A 6666355|23-A/G 100123948|55-T/C 100022390|44-G/A 100023236|15-G/A 100073694|7-G/A 100082381|22-C/A 100098535|7-C/G 100098787|33-A/G 100123797|15-G/T   
## 0.000000000 0.004115226 0.000000000 0.000000000 0.004830918 0.000000000 0.004694836 0.000000000 0.000000000 0.000000000 0.000000000   
## 6632181|18-G/A 6650384|58-A/G 6650392|28-C/A 6650405|15-T/C 6650425|36-A/T 6650440|25-T/C 6650441|46-C/T 6650503|7-C/T 6650511|35-A/T 6650582|52-A/C 6650601|22-C/T   
## 0.013513514 0.004651163 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650694|13-A/C 6650707|5-A/G 6650750|63-G/A 6650751|7-T/G 6650881|41-T/C 6650887|8-T/G 6650895|17-A/G 6650942|29-A/G 6651068|27-G/A 6651106|54-A/T 6651126|7-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651199|46-C/G 6651277|12-C/T 6651309|58-A/G 6651440|6-A/G 6651559|24-C/T 6651568|46-G/C 6651596|5-C/T 6651608|37-G/A 6651626|23-G/C 6651670|12-A/G 6651678|31-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004115226   
## 6651702|11-C/T 6651729|48-A/G 6651775|9-A/G 6651799|50-C/G 6651833|60-C/T 6651834|42-T/G 6651856|61-G/A 6651902|48-A/T 6651916|32-C/T 6651940|40-C/T 6651955|38-C/A   
## 0.000000000 0.004926108 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004219409   
## 6652103|6-G/A 6652221|13-A/G 6652233|30-C/T 6652271|50-T/C 6652312|29-A/G 6652323|41-T/C 6652348|30-G/A 6652387|29-A/C 6652570|42-C/A 6652579|68-G/T 6652611|59-C/A   
## 0.000000000 0.000000000 0.000000000 0.004629630 0.000000000 0.000000000 0.000000000 0.000000000 0.004115226 0.000000000 0.000000000   
## 6652679|46-G/C 6652770|46-T/C 6652916|41-A/G 6652924|5-G/T 6653139|25-C/T 6653290|15-T/C 6653405|19-T/G 6653547|59-T/C 6653608|25-C/G 6653635|5-T/C 6653678|35-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004694836 0.000000000 0.000000000 0.000000000   
## 6653689|26-T/A 6653786|26-A/G 6653788|50-G/A 6653837|14-C/T 6653866|26-A/T 6653923|19-A/T 6653998|66-G/A 6654062|37-C/T 6654076|43-A/C 6656943|6-A/T 6656950|8-C/G   
## 0.005813953 0.000000000 0.004115226 0.015151515 0.000000000 0.004115226 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657301|15-A/G 6657373|32-C/A 6657396|21-C/T 6657408|41-T/C 6657466|14-C/G 6657470|5-C/T 6657514|43-G/A 6657532|34-T/C 6657551|9-T/C 6657596|44-G/A 6657604|9-T/G   
## 0.000000000 0.004237288 0.005128205 0.000000000 0.000000000 0.013513514 0.000000000 0.005076142 0.004424779 0.004830918 0.000000000   
## 6657613|10-A/C 6657630|52-C/T 6657681|17-C/T 6657715|15-C/T 6657723|9-A/T 6657726|41-A/G 6657729|7-G/A 6657752|22-T/A 6657881|18-C/G 6658064|41-T/A 6658065|28-A/C   
## 0.004237288 0.000000000 0.007874016 0.000000000 0.004115226 0.000000000 0.004694836 0.004132231 0.000000000 0.000000000 0.000000000   
## 6658111|29-A/T 6658148|11-T/C 6658186|19-A/G 6658226|42-C/T 6658296|10-A/T 6658347|20-C/G 6658374|29-C/T 6658438|42-C/G 6658501|21-A/C 6658566|40-C/T 6661096|38-A/G   
## 0.000000000 0.000000000 0.000000000 0.004166667 0.000000000 0.004310345 0.000000000 0.004464286 0.004237288 0.004149378 0.000000000   
## 6661098|8-C/T 6661155|52-A/G 6661165|8-T/C 6661251|38-A/G 6661269|21-G/A 6661341|8-C/T 6661391|21-C/A 6661466|12-C/T 6661555|18-G/C 6661659|40-C/T 6661684|52-G/A   
## 0.000000000 0.004166667 0.004629630 0.004830918 0.000000000 0.004166667 0.000000000 0.006578947 0.000000000 0.000000000 0.000000000   
## 6661698|59-T/A 6661775|7-A/G 6661797|49-G/A 6662590|20-A/G 6662615|6-C/T 6662790|12-G/C 6662818|19-G/A 6662832|11-A/G 6662835|7-G/C 6662944|22-G/C 6662946|24-G/A   
## 0.004444444 0.000000000 0.000000000 0.000000000 0.000000000 0.008438819 0.004878049 0.000000000 0.004901961 0.000000000 0.000000000   
## 6662996|36-G/A 6663047|41-G/A 6663054|17-C/T 6663939|28-A/T 6663975|44-T/C 6663987|39-C/G 6664296|7-C/G 6664312|54-A/T 6664428|37-G/A 100082074|52-T/C 6664722|41-T/G   
## 0.000000000 0.004166667 0.007874016 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005649718 0.010309278 0.000000000   
## 6665235|64-T/C 6665278|5-A/G 6665282|36-G/A 6665346|17-A/G 6665662|22-T/C 6665663|28-T/A 6665849|25-C/T 6665877|33-T/C 6665879|38-A/T 6666358|65-C/T 100016475|46-G/A   
## 0.000000000 0.000000000 0.009433962 0.000000000 0.004310345 0.004219409 0.006802721 0.004444444 0.004347826 0.000000000 0.000000000   
## 100016905|48-C/A 100018192|15-C/A 100018375|55-C/G 100021981|25-T/A 100045028|11-A/G 100065468|15-G/A 100065569|37-C/A 100073412|16-T/C 100073701|13-G/T 100074011|18-G/C 100082459|38-C/A   
## 0.000000000 0.000000000 0.004219409 0.000000000 0.006060606 0.000000000 0.000000000 0.015384615 0.004201681 0.006024096 0.004219409   
## 100086150|10-G/T 100086229|17-T/C 100086237|9-C/A 100091190|32-A/G 100091207|45-C/G 100091251|13-T/C 100096444|12-A/C 100098472|22-C/G 100103647|6-C/A 100107103|17-C/T 6650387|53-A/G   
## 0.004219409 0.000000000 0.000000000 0.000000000 0.000000000 0.011764706 0.004273504 0.004149378 0.013824885 0.000000000 0.004310345   
## 6650481|61-G/A 6650788|22-T/C 6651332|37-A/C 6651818|50-T/C 6651863|32-C/T 6652372|10-T/C 6652511|31-G/A 6652754|21-A/G 6652755|9-G/A 6653571|19-A/G 6653574|37-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004366812 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653585|24-C/T 6657101|27-G/A 6657124|22-T/C 6657595|21-A/G 6657640|37-T/G 6657747|20-T/A 6657809|8-A/C 6657847|15-A/G 6657859|39-G/C 6657980|25-A/G 6658003|48-T/C   
## 0.000000000 0.000000000 0.004310345 0.004716981 0.000000000 0.005319149 0.004444444 0.000000000 0.004444444 0.014492754 0.000000000   
## 6658141|5-G/C 6658173|38-T/C 6658437|16-G/A 6658509|5-T/C 6658625|7-G/C 6661101|21-T/C 6661509|18-T/G 6661745|36-G/A 6661802|6-G/A 6661814|14-T/G 6662656|29-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004464286 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6662837|7-T/A 6662873|7-G/C 6662947|5-G/A 6663032|15-G/A 6664269|17-T/G 6664285|27-A/C 6664757|14-T/C 6664912|6-T/C 6665124|27-C/T 6665664|30-A/C 6665874|13-A/G   
## 0.000000000 0.000000000 0.008547009 0.008968610 0.010471204 0.000000000 0.000000000 0.011627907 0.006134969 0.004273504 0.004255319   
## 6665876|47-A/G 6666225|7-A/G 100065638|51-G/C 100065980|45-T/C 100073421|25-T/C 100073630|15-C/G 100073757|34-G/C 100073948|30-G/A 100074014|19-T/A 100074068|17-A/G 100082248|28-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004587156 0.004366812 0.000000000 0.000000000   
## 100086042|5-C/T 100093665|8-T/G 100098602|36-T/A 100098836|24-A/C 100102147|13-C/T 100121015|18-T/C 100066223|13-G/A 100106210|14-T/G 6665285|9-C/T 6661710|31-T/C 6653668|61-T/A   
## 0.013513514 0.004273504 0.008333333 0.004366812 0.004878049 0.000000000 0.000000000 0.013698630 0.008849558 0.000000000 0.000000000   
## 100024870|39-A/C 6663929|41-A/C 100019092|30-T/A 6661298|58-T/C 100016534|66-G/A 100023056|37-G/A 100082643|25-G/C 100064775|20-G/A 100023265|24-C/A 6651137|52-T/C 6652727|6-C/A   
## 0.000000000 0.000000000 0.000000000 0.005464481 0.000000000 0.011299435 0.013986014 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021017|32-G/T 100073776|11-G/A 100015600|63-A/T 6665051|27-A/T 100019246|34-T/A 6651056|34-C/T 6661829|9-C/T 6665126|22-A/C 100016268|6-T/C 100020350|21-A/G 100023328|20-T/C   
## 0.004807692 0.000000000 0.000000000 0.000000000 0.000000000 0.004424779 0.000000000 0.009433962 0.011627907 0.004716981 0.004739336   
## 100066210|28-C/T 6661110|21-T/A 100018023|63-A/G 100020236|59-G/A 100021188|32-G/C 100021960|39-C/T 100023459|46-A/G 100017280|64-T/G 100018247|39-T/A 100021898|39-C/T 100022093|45-A/T   
## 0.000000000 0.004291845 0.000000000 0.004405286 0.000000000 0.000000000 0.009132420 0.008583691 0.004444444 0.010000000 0.004255319   
## 100023129|9-T/A 100023441|20-A/G 100065302|16-G/A 100066548|17-C/T 6650550|11-T/G 100016077|58-A/G 100018469|20-T/G 100019543|16-G/T 100020860|10-A/C 100022172|17-T/G 100045257|30-G/T   
## 0.004347826 0.007692308 0.000000000 0.000000000 0.000000000 0.004651163 0.000000000 0.000000000 0.000000000 0.000000000 0.004166667   
## 6650546|47-C/A 6653399|26-T/A 100015390|53-T/G 100017298|53-C/T 100017444|58-C/T 100017989|5-T/C 100018126|55-A/G 100018257|27-G/T 100018350|18-A/T 100020244|19-T/A 100021605|34-G/T   
## 0.000000000 0.000000000 0.004149378 0.004672897 0.000000000 0.000000000 0.000000000 0.000000000 0.004405286 0.000000000 0.004219409   
## 100023076|20-A/T 100023357|49-A/T 6653628|59-A/G 6661821|17-T/A 100015255|25-C/T 100015707|14-A/T 100015710|46-C/T 100016017|19-C/T 100017899|6-A/G 100019473|54-C/T 100020145|63-C/G   
## 0.000000000 0.000000000 0.000000000 0.009009009 0.000000000 0.004237288 0.005405405 0.000000000 0.004405286 0.008620690 0.000000000   
## 100021743|44-C/T 100022776|55-C/A 100023242|39-G/C 100082188|29-T/C 100015628|14-G/A 100020893|36-A/G 100021540|61-G/A 100021665|36-G/A 100022938|66-G/C 100023291|60-T/A 6661242|40-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661353|60-C/T 100016201|10-C/T 100016537|37-T/G 100016842|18-C/T 100016876|65-C/T 100016987|65-G/A 100017504|59-C/A 100019821|57-T/A 100020901|34-T/C 100021671|8-G/A 100021969|10-T/C   
## 0.000000000 0.009708738 0.000000000 0.000000000 0.000000000 0.000000000 0.004166667 0.000000000 0.000000000 0.000000000 0.004366812   
## 100022199|66-G/A 100022545|35-T/C 100022573|13-G/C 100022831|52-G/A 100066558|7-C/T 100016263|30-C/G 100016306|10-A/T 100017198|10-T/A 100017275|13-A/G 100017509|15-C/G 100018032|68-T/C   
## 0.000000000 0.000000000 0.000000000 0.005154639 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004716981   
## 100018336|6-C/T 100018672|56-G/T 100019100|44-G/T 100019286|14-C/G 100019912|15-C/T 100020907|14-C/T 100021161|47-T/A 100021810|7-T/C 100023367|18-C/T 100064740|15-A/T 6653264|41-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6663072|37-T/A 100016098|7-T/C 100016143|59-T/C 100016740|12-A/C 100016777|38-T/C 100018407|47-C/A 100018609|48-C/T 100019034|62-G/A 100019293|6-G/T 100019468|41-G/A 100019644|45-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008771930   
## 100019745|64-C/T 100021138|40-C/T 100022777|45-C/T 100066874|50-C/A 100091157|27-T/G 6652941|42-T/C 6653902|40-C/T 6664728|12-C/T 100015633|60-A/G 100016193|8-T/A 100017485|19-T/C   
## 0.009049774 0.000000000 0.000000000 0.000000000 0.000000000 0.004273504 0.004149378 0.006578947 0.000000000 0.000000000 0.000000000   
## 100018162|27-C/T 100019061|21-G/C 100019334|15-C/T 100019756|22-T/C 100020056|55-G/T 100020924|20-C/T 100022009|9-G/A 100022323|36-A/G 100022703|5-T/C 100023049|42-G/A 100023218|64-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004273504   
## 100023269|66-A/G 100024832|25-T/C 100044738|8-C/T 100065081|38-C/T 100065706|32-G/A 100096952|53-C/A 6651239|56-C/A 6651495|32-A/G 6652638|14-C/A 6653296|13-A/C 6661158|36-C/T   
## 0.004672897 0.000000000 0.004166667 0.000000000 0.004237288 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006250000   
## 100015381|11-T/A 100015413|40-A/T 100015882|61-G/T 100017512|41-A/C 100018395|5-T/C 100019423|68-C/G 100019434|60-G/T 100019704|32-C/G 100019785|27-T/C 100021066|30-G/A 100021425|47-C/A   
## 0.000000000 0.000000000 0.005102041 0.000000000 0.005617978 0.004201681 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021475|63-A/T 100021915|65-G/A 100022373|12-A/G 100022606|28-T/C 100022910|49-A/G 100025041|57-G/A 100044554|19-G/A 100064948|49-T/A 100065362|20-C/T 6650752|20-T/A 6652176|15-T/C   
## 0.000000000 0.005102041 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653696|11-C/T 6662909|25-T/C 100015291|39-T/G 100016129|26-G/A 100017225|65-T/C 100017536|38-A/T 100017676|8-G/A 100019216|7-C/G 100019420|52-C/G 100019494|63-G/T 100020318|21-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004166667 0.000000000   
## 100020532|11-T/G 100020604|29-A/G 100020745|51-A/C 100021499|21-G/C 100021838|13-T/A 100021978|37-T/C 100022031|7-T/A 100022223|45-A/G 100023499|68-G/T 100023507|21-G/A 6634782|49-G/A   
## 0.000000000 0.000000000 0.004310345 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004484305   
## 6650656|12-T/G 6652475|14-A/T 6661333|17-C/T 100015448|67-A/T 100015469|19-T/A 100015537|12-C/T 100015992|7-C/A 100016029|18-C/T 100016274|21-C/T 100016854|18-G/T 100017144|48-G/A   
## 0.000000000 0.008474576 0.000000000 0.004385965 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017489|57-G/A 100017909|16-T/C 100018611|43-C/A 100018927|63-G/C 100019035|27-T/A 100019236|16-C/T 100020671|26-T/C 100021001|60-T/A 100021318|46-C/G 100021549|61-A/C 100021863|20-C/T   
## 0.000000000 0.000000000 0.004975124 0.000000000 0.000000000 0.004854369 0.000000000 0.004166667 0.000000000 0.000000000 0.004329004   
## 100023205|16-G/T 100044711|34-G/A 100064599|63-A/C 100065680|37-G/A 100118396|21-A/G 6651534|52-G/A 6651570|59-C/T 6652200|26-G/A 6652872|49-G/A 6654031|17-C/T 6661376|52-G/A   
## 0.000000000 0.004739336 0.000000000 0.000000000 0.009433962 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005154639   
## 6662917|14-G/T 6666226|12-T/G 100015950|5-A/G 100016109|31-A/T 100016805|54-A/G 100016861|15-T/C 100017893|45-T/C 100018244|41-A/T 100018636|16-G/A 100018890|25-T/C 100018982|31-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005747126 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019094|40-C/T 100019137|21-G/C 100019699|26-G/C 100020118|29-C/T 100020890|29-C/T 100021219|23-C/T 100021521|57-T/G 100022288|6-G/C 100022337|30-A/G 100022554|22-T/C 100023064|19-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.009433962 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004878049   
## 100045690|24-G/A 6650514|37-T/A 6651982|15-T/A 6653247|28-A/C 6653292|47-C/G 6653430|58-A/G 6653481|64-T/C 6653533|6-C/A 6653865|59-A/C 6661831|60-G/A 100015200|15-A/C   
## 0.004484305 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015297|26-C/T 100015382|10-T/A 100017834|8-C/T 100020258|46-C/T 100021617|53-T/C 100021932|18-G/T 100022038|23-C/A 100022622|15-A/G 100022667|15-C/T 100022800|24-C/A 100022903|55-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004329004 0.000000000 0.000000000 0.000000000 0.000000000   
## 100023130|51-G/C 100023154|5-T/C 100023531|17-A/G 100045599|24-A/G 100065227|31-T/C 100065691|24-C/T 100066039|22-G/A 100066092|14-C/T 100074069|38-T/C 100106301|19-A/G 6650690|47-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007575758 0.000000000 0.000000000 0.005263158   
## 6651361|32-G/A 6652061|58-G/A 6652327|54-A/T 6653204|40-A/G 6653393|35-C/A 6653673|65-A/G 6653746|33-C/A 6661305|25-C/G 6664067|16-C/A 6664716|12-T/C 100015645|28-C/T   
## 0.004237288 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016045|44-C/T 100016331|42-T/C 100017699|11-G/A 100018593|39-G/A 100018814|46-A/G 100019003|20-A/T 100019081|63-A/T 100019377|57-G/A 100019413|55-T/G 100019588|52-G/A 100021006|21-C/T   
## 0.000000000 0.000000000 0.004807692 0.000000000 0.004566210 0.000000000 0.000000000 0.000000000 0.004444444 0.000000000 0.000000000   
## 100021094|7-C/G 100022208|18-A/C 100022310|31-G/A 100022384|48-G/A 100022899|42-C/G 100108128|12-A/T 6650846|64-A/G 6650911|65-G/A 6651088|5-A/C 6651399|12-C/A 6652520|9-A/G   
## 0.000000000 0.000000000 0.004310345 0.000000000 0.000000000 0.004385965 0.000000000 0.000000000 0.000000000 0.000000000 0.008510638   
## 6653133|15-G/A 6653564|53-G/A 6653709|31-G/A 6653720|68-C/A 6653797|40-A/T 6653874|10-G/T 6653907|59-A/G 6653965|43-A/G 100065805|29-G/T 6661880|32-C/T 100015400|35-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005524862 0.000000000 0.005102041 0.008695652 0.006097561   
## 100016174|6-C/A 100016241|19-C/T 100016653|31-G/A 100017080|12-A/T 100017172|64-G/C 100017659|13-G/A 100017936|42-T/C 100018252|52-A/G 100018331|42-G/A 100019441|49-A/T 100020597|8-T/A   
## 0.000000000 0.000000000 0.000000000 0.004385965 0.000000000 0.000000000 0.004273504 0.008333333 0.000000000 0.004273504 0.000000000   
## 100020814|67-G/A 100022284|10-G/A 100022341|63-A/G 100023203|29-C/G 100023334|6-G/T 100023527|5-T/A 100082625|32-A/G 6631600|18-G/A 6634219|54-C/T 6650605|38-G/A 6650666|57-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.013513514 0.008620690 0.000000000 0.009174312   
## 6650850|54-G/C 6651176|17-T/A 6651223|56-T/G 6651266|67-C/T 6651497|13-G/A 6651500|53-T/A 6652020|49-C/T 6652396|20-C/T 6652765|20-C/T 6653179|35-C/A 6653588|36-G/A   
## 0.000000000 0.000000000 0.004166667 0.000000000 0.000000000 0.000000000 0.009009009 0.000000000 0.004329004 0.004484305 0.000000000   
## 6653617|17-C/G 6653803|13-C/G 6653921|17-G/A 6654071|34-C/T 6658453|44-C/T 6662623|41-C/T 100015396|38-G/A 100015614|19-G/A 100015961|7-A/G 100016361|49-G/A 100016600|22-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.010526316 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017130|57-T/G 100017328|47-G/A 100018645|27-A/G 100018647|11-T/C 100019579|57-A/G 100019755|66-T/A 100020516|10-T/C 100021870|45-T/C 100022119|34-G/A 100022158|40-C/G 100022170|46-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004366812 0.000000000 0.004739336 0.000000000 0.000000000   
## 100022467|38-A/C 100022708|55-T/C 100023428|39-C/A 100064901|22-G/A 100066583|50-G/C 100082198|48-A/G 100082209|53-T/A 100114666|37-A/T 6650551|48-A/C 6650640|8-G/T 6651037|14-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004926108 0.004115226 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651123|16-G/T 6651198|35-C/T 6651548|20-C/G 6652349|48-A/C 6652912|31-C/T 6652960|9-G/T 6653047|24-C/T 6653111|54-G/C 6653182|48-A/G 6653306|31-C/A 6653329|47-T/C   
## 0.000000000 0.007042254 0.004310345 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004115226 0.000000000   
## 6653695|53-T/C 6657908|24-T/C 6658488|17-G/A 6661172|54-T/C 6661256|38-C/G 6665238|10-A/T 100016051|64-C/A 100016065|42-C/A 100016173|67-C/G 100016227|33-T/G 100016734|15-A/G   
## 0.004329004 0.005154639 0.000000000 0.000000000 0.004201681 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017686|33-G/C 100017703|8-T/C 100017977|13-T/C 100018439|16-T/C 100020203|19-G/A 100021102|63-A/C 100021231|28-T/G 100021723|29-T/G 100022522|40-C/T 100022709|6-G/A 100045624|6-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004878049 0.000000000 0.000000000 0.004347826 0.000000000 0.000000000 0.000000000   
## 6650668|41-T/C 6650746|17-T/C 6650807|17-C/T 6650886|31-G/A 6650934|11-G/A 6651435|37-C/T 6651778|31-G/A 6651783|65-C/T 6652191|59-C/T 6652464|36-A/G 6652873|35-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004807692 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653077|56-T/C 6653537|32-A/G 6653577|27-G/A 6653747|15-A/G 6661083|6-C/T 6661240|52-C/A 6661424|62-T/C 6661830|19-T/C 6665513|19-G/C 6661486|13-G/C 100015240|23-G/A   
## 0.000000000 0.005376344 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016947|13-A/G 100018671|65-G/A 100019864|8-C/G 100019949|8-C/T 100020694|31-T/C 100022684|13-T/A 100022926|58-G/T 100023200|68-C/T 100044609|42-A/G 100065342|51-C/T 100066803|48-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004115226 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100085950|35-A/G 100108060|20-G/C 6630419|14-G/A 6650581|35-C/G 6650628|40-T/C 6650650|35-G/T 6650684|65-A/T 6650719|47-G/A 6650735|38-G/C 6650879|60-C/T 6651049|16-C/G   
## 0.000000000 0.000000000 0.004878049 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006172840 0.000000000 0.000000000   
## 6651124|38-C/T 6651144|62-T/C 6651167|41-A/G 6651516|36-T/G 6651679|24-G/A 6651984|7-T/A 6652023|10-G/A 6652091|50-T/A 6652242|32-G/A 6652409|10-T/C 6653236|64-T/C   
## 0.000000000 0.000000000 0.000000000 0.004219409 0.000000000 0.000000000 0.000000000 0.004545455 0.000000000 0.004366812 0.000000000   
## 6653348|13-G/A 6653637|32-G/T 6653657|58-T/C 6653943|15-G/T 6653959|63-A/G 6654028|68-A/G 6654050|51-G/T 6654072|32-C/A 6657061|32-A/G 6661522|65-A/G 6665120|10-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004761905 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100120328|20-T/C 100120333|61-G/A 100065668|5-T/C 100015835|6-C/T 100016061|39-G/C 100016656|14-T/C 100017602|16-G/A 100019319|48-T/C 100019777|21-G/C 100021190|47-T/C 100022177|66-A/G   
## 0.000000000 0.011235955 0.000000000 0.000000000 0.008888889 0.000000000 0.000000000 0.011299435 0.000000000 0.000000000 0.000000000   
## 100023241|6-T/C 100044452|9-C/G 100065422|7-G/A 100066442|52-G/A 6650473|26-A/G 6650482|38-T/C 6650496|24-C/T 6650610|24-T/A 6650644|49-A/G 6650834|54-C/A 6650842|16-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.007142857 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651138|26-A/T 6651261|54-G/A 6651453|19-A/C 6651597|59-A/G 6651744|34-A/T 6651756|62-G/A 6651812|33-C/T 6651980|42-A/G 6652201|21-C/A 6652243|14-C/G 6652864|38-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004291845 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653219|11-G/C 6653248|20-T/C 6653427|25-A/G 6653971|28-A/T 6657006|6-C/A 6657540|27-G/A 6661088|54-C/T 100082471|46-T/C 6661706|26-T/C 6664071|6-G/A 100016295|41-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018466|44-G/A 100020140|32-T/C 100020690|9-T/G 100020765|38-G/C 100021275|46-C/T 100045738|12-T/A 100082496|60-G/T 6650712|28-A/C 6650913|49-A/G 6650972|30-C/T 6651222|59-G/A   
## 0.004830918 0.004201681 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651438|51-T/C 6651492|20-G/A 6651654|52-A/G 6651829|48-G/A 6651860|44-T/G 6651877|63-C/T 6651935|33-C/T 6651974|35-C/T 6651986|27-T/C 6652262|36-T/C 6652560|9-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652688|16-G/A 6652875|8-C/G 6653021|18-A/G 6653263|25-G/C 6653294|9-G/A 6653410|59-G/C 6653536|55-G/A 6653603|22-T/C 6653802|50-G/C 6653830|13-C/T 6653963|35-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004310345 0.000000000 0.000000000 0.014084507   
## 6654043|16-A/G 6658028|40-G/C 6661349|14-C/A 6661568|63-A/T 6661747|28-T/C 6663960|60-T/C 6663980|14-A/G 100019622|48-T/A 100019802|12-C/T 100020020|13-G/A 100021576|15-T/C   
## 0.004424779 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006578947 0.000000000 0.000000000   
## 100022394|27-C/T 100023389|57-T/G 100023502|39-T/A 100073839|28-C/G 6635439|23-T/C 6650563|22-C/T 6650688|61-A/G 6650747|16-A/C 6650772|42-C/A 6650861|34-T/A 6651030|62-A/T   
## 0.000000000 0.000000000 0.004444444 0.004132231 0.008230453 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651225|58-T/C 6651322|19-G/A 6651329|44-C/A 6651331|12-T/A 6651353|65-C/A 6651374|45-A/G 6651589|18-T/A 6651687|45-A/G 6651748|42-G/T 6651933|62-A/G 6652449|21-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652527|63-C/A 6652542|24-G/C 6652684|46-A/G 6652730|63-C/G 6652782|44-C/T 6652925|43-T/C 6653316|17-T/A 6653365|26-A/G 6653370|22-C/T 6653474|66-G/A 6653556|52-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004901961 0.000000000 0.000000000 0.004587156 0.000000000 0.000000000   
## 6653733|18-G/T 6653741|19-T/C 6653765|48-T/C 6653879|16-T/C 6654049|52-T/A 6657335|32-G/A 6658312|10-A/G 6661127|7-A/C 6661289|11-T/C 6661380|15-T/G 6661529|31-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004464286 0.000000000   
## 6661563|46-C/A 6661785|56-A/G 6661832|23-C/T 6663079|11-G/A 6665675|20-A/G 6666102|6-C/T 100121706|16-C/T 100015265|55-C/A 100015554|25-A/G 100017634|45-C/T 100018229|31-T/A   
## 0.000000000 0.000000000 0.004255319 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018597|37-C/G 100018998|48-T/C 100019106|32-T/C 100093589|24-T/C 6632259|35-G/A 6632582|5-C/T 6650532|52-G/A 6650756|47-A/G 6650830|17-G/A 6650851|66-A/T 6650928|5-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650987|34-A/G 6651080|35-C/T 6651107|37-G/A 6651110|32-G/T 6651196|62-C/A 6651288|46-T/C 6651442|63-C/T 6651613|49-C/A 6651658|42-A/T 6651720|6-A/G 6651765|63-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651802|34-G/T 6651873|50-T/C 6651874|53-T/A 6651906|20-T/A 6651943|26-G/A 6651957|58-G/A 6652104|41-C/G 6652143|61-T/G 6652149|28-A/G 6652158|57-C/T 6652181|32-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652211|12-C/T 6652240|22-G/A 6652269|40-C/T 6652459|65-C/T 6652473|56-G/T 6652516|46-A/G 6652757|25-T/C 6652797|7-G/T 6652811|14-C/T 6652891|17-T/C 6652914|32-A/G   
## 0.000000000 0.000000000 0.000000000 0.006756757 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652922|32-G/A 6653051|5-G/C 6653071|48-C/T 6653276|22-T/C 6653337|5-T/C 6653343|21-C/G 6653392|28-C/G 6653404|15-T/C 6653456|52-A/G 6653484|18-G/A 6653641|8-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004166667 0.000000000 0.000000000   
## 6653669|32-C/T 6653732|48-A/T 6653735|8-T/G 6653739|44-G/C 6653814|28-G/A 6653826|65-T/G 6653844|35-A/G 6653895|16-A/G 6653898|20-C/A 6653961|15-T/C 6654048|23-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005747126 0.000000000   
## 6657273|10-C/G 6657733|25-C/T 6657825|20-A/C 6658114|32-C/G 6658233|5-T/G 6658363|20-A/C 6661157|31-A/G 6661223|43-A/T 6661238|20-T/G 6661454|19-A/G 6661478|59-G/T   
## 0.000000000 0.000000000 0.004115226 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661581|31-C/T 6661584|33-A/T 6661734|17-A/G 6662610|35-C/T 6663909|13-G/T 6664051|46-A/C 6665119|8-A/G 6666170|15-A/C 6666170|17-G/A 6666170|6-G/A 100018529|16-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008064516   
## 100019109|54-C/T 100020873|6-C/G 100020968|7-A/G 100021983|42-A/C 100022525|11-T/A 100065722|64-T/C 6650393|5-T/C 6650424|56-T/C 6650439|56-G/A 6650466|32-T/C 6650505|17-A/G   
## 0.000000000 0.000000000 0.000000000 0.004132231 0.000000000 0.005076142 0.005617978 0.000000000 0.000000000 0.000000000 0.006622517   
## 6650506|45-A/C 6650533|15-G/T 6650557|47-G/T 6650621|36-G/A 6650631|22-C/T 6650685|22-A/T 6650724|18-T/A 6650838|22-C/T 6650866|40-T/C 6650867|54-T/C 6650893|22-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650917|35-C/T 6650920|31-G/C 6651018|30-A/C 6651060|22-T/C 6651146|26-G/A 6651378|67-C/T 6651387|24-T/A 6651391|45-G/A 6651444|17-T/C 6651450|54-T/G 6651457|37-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005154639 0.000000000 0.000000000 0.000000000   
## 6651484|65-A/G 6651503|6-A/G 6651510|59-A/G 6651537|19-A/C 6651552|29-C/T 6651562|32-G/C 6651569|33-T/G 6651580|22-T/A 6651606|13-T/C 6651612|31-C/T 6651615|24-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651705|42-A/G 6651737|5-C/T 6651892|35-T/C 6651930|26-G/C 6651938|17-A/C 6652055|48-A/G 6652132|43-T/C 6652144|17-G/A 6652212|22-A/G 6652231|38-C/A 6652386|55-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652398|40-G/A 6652413|28-C/A 6652427|27-T/A 6652438|68-G/A 6652494|24-T/C 6652515|15-A/G 6652518|57-T/C 6652535|53-G/T 6652564|55-A/G 6652619|16-T/C 6652816|67-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009090909 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652945|37-C/A 6653041|46-A/G 6653142|49-C/A 6653144|56-G/T 6653148|46-A/C 6653163|62-T/C 6653369|63-C/T 6653408|40-T/C 6653429|7-A/G 6653439|17-G/C 6653493|47-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008264463 0.000000000   
## 6653501|7-C/T 6653502|28-G/C 6653504|7-C/G 6653563|7-T/A 6653593|19-T/C 6653740|20-C/T 6653755|14-T/C 6653790|16-T/G 6653834|11-T/C 6653851|28-A/C 6653936|33-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004484305 0.000000000 0.000000000   
## 6653989|22-G/A 6654038|30-G/A 6654047|8-G/A 6654066|45-C/G 6657075|25-A/C 6657215|14-A/T 6657652|33-T/C 6658198|15-T/C 6658380|19-G/A 6658597|10-T/C 6661103|59-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004366812 0.000000000   
## 6661108|53-A/G 6661557|11-G/A 6661627|50-T/C 6661879|7-T/C 6662888|24-C/A 6662892|24-C/T 6664359|17-A/T 6664391|17-A/G 6664780|11-C/T 6665039|22-C/G 6666100|22-C/T   
## 0.004310345 0.004807692 0.000000000 0.006535948 0.000000000 0.000000000 0.000000000 0.000000000 0.004761905 0.000000000 0.000000000   
## 6666102|30-T/C 6654102|57-C/A 100016395|29-T/C 100020724|58-C/T 100022521|22-C/T 100022955|34-C/A 100045457|17-G/A 100073683|46-G/A 100093512|17-C/G 100102305|42-T/G 100121708|34-C/G   
## 0.000000000 0.000000000 0.006578947 0.000000000 0.000000000 0.000000000 0.006329114 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650447|47-T/C 6650456|36-A/G 6650499|21-C/T 6650502|55-C/G 6650518|44-C/T 6650566|9-A/G 6650589|18-C/T 6650595|24-C/T 6650602|41-G/A 6650625|38-T/C 6650630|7-C/G   
## 0.006944444 0.000000000 0.000000000 0.000000000 0.010526316 0.000000000 0.000000000 0.004132231 0.004166667 0.000000000 0.000000000   
## 6650642|21-G/A 6650708|55-C/A 6650731|33-G/A 6650777|15-G/C 6650798|22-T/C 6650874|54-T/G 6650892|52-T/C 6650926|30-T/C 6650951|18-A/G 6650983|20-T/G 6651002|11-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004608295   
## 6651006|19-G/A 6651015|9-T/A 6651028|11-C/T 6651064|34-C/G 6651075|68-C/T 6651082|17-A/G 6651108|57-A/T 6651169|15-T/C 6651211|35-G/A 6651214|29-G/C 6651218|36-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005102041   
## 6651236|9-A/C 6651265|9-G/A 6651293|36-A/T 6651299|48-A/G 6651311|22-C/T 6651316|37-T/G 6651339|7-G/A 6651360|17-C/A 6651411|25-A/G 6651455|40-A/G 6651480|6-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004504505 0.000000000   
## 6651535|17-G/C 6651553|40-C/T 6651633|11-G/C 6651642|43-A/C 6651652|13-T/A 6651653|46-A/T 6651666|39-C/A 6651668|54-T/C 6651692|43-T/C 6651779|57-A/G 6651819|25-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651894|54-A/G 6651913|20-A/G 6651928|6-C/T 6651950|10-C/T 6651962|57-C/T 6651979|59-G/T 6652004|68-A/T 6652041|41-T/C 6652076|24-T/G 6652082|47-A/G 6652128|6-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005102041 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652178|42-C/T 6652228|29-C/T 6652229|59-T/C 6652252|11-C/T 6652279|53-A/T 6652302|43-G/A 6652328|42-T/G 6652402|15-A/G 6652405|52-T/C 6652430|41-A/T 6652442|59-A/G   
## 0.016666667 0.000000000 0.004694836 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652444|19-A/C 6652476|42-G/A 6652478|11-G/T 6652495|5-G/A 6652517|8-A/G 6652531|35-T/C 6652633|57-C/A 6652685|43-G/A 6652711|52-C/T 6652775|11-G/A 6652812|20-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005917160 0.000000000 0.004739336   
## 6652825|12-T/C 6652846|44-A/G 6652876|5-G/A 6652899|47-T/G 6652923|25-T/A 6652938|38-G/A 6652954|34-G/A 6652977|48-A/C 6653056|35-C/G 6653113|5-G/A 6653221|12-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653285|45-G/C 6653299|45-T/C 6653300|45-T/C 6653301|16-C/T 6653302|10-C/T 6653314|19-C/A 6653350|22-C/T 6653402|19-G/T 6653488|18-C/T 6653495|56-A/T 6653519|51-A/G   
## 0.000000000 0.008771930 0.000000000 0.004854369 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007812500 0.000000000   
## 6653534|60-C/T 6653576|42-C/A 6653592|23-G/A 6653671|64-C/A 6653680|17-G/A 6653685|30-G/A 6653711|10-T/A 6653718|49-A/C 6653737|54-G/A 6653753|52-T/C 6653780|36-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653880|38-A/G 6653900|13-T/A 6653944|44-G/A 6653977|55-A/G 6653997|67-G/A 6654006|12-T/C 6654014|37-G/A 6654041|11-A/G 6654055|10-A/G 6654086|14-G/A 6654088|35-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004878049 0.000000000   
## 6656956|22-A/G 6657047|46-C/T 6657188|43-C/G 6657327|42-G/C 6657536|7-A/G 6657721|47-G/C 6657808|17-T/A 6657912|46-T/G 6658001|44-A/T 6658011|9-C/A 6658107|14-C/G   
## 0.000000000 0.000000000 0.000000000 0.004149378 0.005076142 0.000000000 0.000000000 0.000000000 0.004132231 0.000000000 0.010101010   
## 6658156|5-G/T 6658199|15-T/C 6658229|33-G/T 6658234|5-T/G 6658254|27-T/C 6658284|37-G/A 6658292|22-T/C 6658327|20-A/G 6658407|20-G/A 6658414|11-G/A 6658562|19-G/T   
## 0.000000000 0.000000000 0.004166667 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6658586|32-A/C 6658643|11-C/T 6658671|14-C/T 6661089|25-T/C 6661118|54-A/G 6661135|53-G/A 6661189|30-T/C 6661215|39-T/G 6661222|65-T/A 6661248|53-C/G 6661249|13-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661292|48-T/C 6661362|55-T/C 6661374|18-A/G 6661410|32-G/T 6661422|22-C/T 6661440|5-C/T 6661444|36-A/G 6661467|8-T/G 6661491|67-G/C 6661502|37-A/T 6661590|51-A/C   
## 0.000000000 0.000000000 0.005988024 0.000000000 0.004587156 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661599|28-A/G 6661630|50-G/A 6661635|15-T/C 6661640|37-T/A 6661680|9-C/G 6661723|32-C/T 6661736|14-G/C 6661758|19-G/A 6661804|60-A/G 6661810|40-A/C 6661811|44-T/A   
## 0.005208333 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004166667 0.000000000   
## 6661811|67-G/A 6661833|57-C/T 6661841|11-G/A 6661855|40-T/C 6661864|19-T/A 6661882|41-A/G 6661883|8-G/A 6661885|20-A/T 6662600|6-A/G 6662722|30-G/C 6662742|10-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004405286 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6662844|10-A/C 6662885|9-G/T 6662886|27-C/T 6662910|18-C/G 6662926|18-T/C 6663096|18-A/T 6663907|45-A/G 6663910|8-C/T 6663965|32-C/T 6663983|49-G/C 6663986|51-T/A   
## 0.004237288 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664025|20-C/T 6664038|20-G/A 6664063|32-G/A 6664295|6-G/A 6664431|31-A/G 6664713|15-G/A 6665122|10-A/C 6665220|17-C/T 6665221|28-T/C 100109498|18-A/G 100109477|15-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100109477|9-A/C 6665568|14-T/C 6665571|10-T/C 6665805|26-C/G 6666099|20-C/T 6666516|59-G/A 100124929|12-A/G 100016665|5-A/G 100016860|40-G/A 100019055|15-C/A 100019486|67-T/C   
## 0.000000000 0.000000000 0.004366812 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020835|48-C/G 100044994|33-G/A 100064828|9-G/T 100064931|32-G/A 100065941|26-T/C 100073522|28-A/G 100081694|12-C/T 100093694|8-T/G 100114698|38-A/T 100121709|38-A/G 6631771|63-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6643511|8-T/C 6650389|25-A/G 6650408|50-C/T 6650436|33-G/A 6650531|50-G/A 6650573|57-G/A 6650637|15-T/C 6650654|52-A/C 6650710|46-T/G 6650720|22-A/T 6650779|16-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004184100 0.000000000   
## 6650822|27-G/A 6650832|27-T/C 6650901|27-G/A 6650902|39-G/T 6650937|10-A/G 6650960|65-A/G 6651019|62-A/G 6651142|65-T/C 6651204|9-G/A 6651227|47-C/T 6651280|20-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651418|16-G/T 6651508|15-G/T 6651574|38-G/T 6651577|11-A/G 6651598|31-T/C 6651697|15-C/T 6651725|7-T/C 6651760|20-A/T 6651762|50-A/G 6651788|15-A/G 6651792|9-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006535948 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651793|43-T/C 6651862|51-C/T 6651882|23-G/A 6651884|35-A/C 6651903|16-A/G 6651924|35-T/C 6651929|41-G/T 6651993|33-G/A 6651998|13-G/T 6652029|51-G/A 6652043|18-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004424779 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652138|37-A/G 6652167|65-C/G 6652206|59-C/A 6652238|26-C/T 6652289|28-A/T 6652298|67-A/G 6652307|44-C/A 6652334|58-A/T 6652336|15-C/A 6652366|34-C/A 6652425|29-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004716981 0.000000000 0.000000000   
## 6652524|49-C/T 6652588|40-G/T 6652613|43-C/G 6652632|21-A/G 6652778|29-G/A 6652802|13-A/T 6652819|42-A/C 6652826|14-T/C 6653026|52-G/C 6653068|62-G/C 6653116|22-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004464286 0.000000000 0.000000000   
## 6653218|66-C/G 6653354|23-C/A 6653444|44-G/T 6653464|25-A/G 6653494|25-G/A 6653568|59-G/C 6653672|51-G/T 6653690|24-G/C 6653700|47-T/C 6653713|41-T/C 6653736|20-T/A   
## 0.000000000 0.004329004 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653875|30-C/T 6653968|66-C/G 6653974|33-T/A 6653991|65-G/T 6657021|28-G/A 6657102|16-C/T 6657128|18-G/A 6657132|5-A/C 6657178|34-G/A 6657193|53-C/T 6657201|19-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007142857 0.004739336 0.000000000 0.000000000   
## 6657204|30-A/C 6657318|9-G/A 6657354|8-C/T 6657383|35-G/T 6657458|5-C/G 6657566|43-G/A 6657607|43-G/A 6657631|9-G/A 6657655|8-T/C 6657745|21-C/A 6657813|21-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657950|26-T/C 6658016|18-C/G 6658025|28-G/A 6658074|26-C/A 6658086|13-T/C 6658116|19-T/G 6658140|8-T/C 6658176|39-C/T 6658256|13-G/C 6658270|50-G/T 6658309|15-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6658382|35-G/A 6658386|9-G/T 6658396|48-A/T 6658416|19-T/C 6658448|12-A/G 6658539|20-A/G 6658593|6-T/C 6658605|5-T/A 6658616|40-G/T 6658646|18-C/A 6661133|7-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661179|34-A/T 6661195|26-A/G 6661294|16-G/T 6661342|14-G/C 6661347|62-A/G 6661359|29-T/C 6661360|12-T/C 6661375|25-G/A 6661390|29-G/A 6661411|10-A/T 6661415|7-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661429|43-A/G 6661461|24-A/G 6661525|21-A/G 6661561|6-A/G 6661611|46-A/C 6661622|45-G/T 100097038|21-G/A 6661741|18-C/T 6661767|9-T/C 6661768|5-T/C 6661780|15-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.005025126 0.000000000 0.008849558 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661784|18-A/G 6661801|15-C/T 6662572|23-G/A 6662577|20-C/A 6662598|13-T/G 6662619|18-C/T 6662621|6-C/T 6662686|27-C/T 6662729|33-C/T 6662743|22-C/T 6662903|44-T/C   
## 0.005988024 0.000000000 0.000000000 0.000000000 0.000000000 0.013157895 0.000000000 0.006134969 0.004166667 0.000000000 0.000000000   
## 6664062|57-T/C 6664077|54-G/T 6664087|35-A/T 6664282|11-G/A 6664352|17-T/G 6664715|34-G/A 6665049|6-C/T 6665121|17-A/G 6665508|35-A/G 6665515|61-A/G 6665540|8-G/A   
## 0.007194245 0.000000000 0.000000000 0.004807692 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004524887 0.000000000   
## 6665849|33-C/T 6666095|7-A/G 6666174|7-C/T 6666520|31-G/A 100015941|21-T/C 100016251|35-G/A 100016732|29-G/A 100045346|24-C/T 100045582|33-G/A 100045632|7-G/A 100064767|54-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004132231 0.000000000 0.004694836 0.000000000   
## 100064928|53-G/A 100065927|39-C/T 100074119|31-T/C 100082416|45-C/A 100085968|36-G/A 100091287|38-A/T 100093420|8-G/A 100104859|48-T/C 100121707|24-C/G 6650478|7-C/T 6650577|59-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650765|26-G/A 6651007|49-A/G 6651119|61-A/G 6651133|33-C/T 6651237|16-C/T 6651693|21-C/T 6651704|49-G/T 6651952|32-C/T 6652155|42-G/C 6652275|21-C/T 6652283|16-C/T   
## 0.000000000 0.000000000 0.004524887 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652292|40-G/A 6652303|27-C/T 6652553|13-A/G 6652626|33-A/G 6652630|7-G/C 6652656|7-T/C 6652758|10-G/A 6653200|23-C/A 6653877|30-A/G 6653984|20-G/T 6656875|8-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004201681 0.000000000   
## 6656924|30-G/C 6656996|5-A/T 6657117|41-C/T 6657154|6-G/A 6657156|29-A/C 6657483|18-T/G 6657561|6-C/T 6657735|31-T/A 6657741|7-G/A 6657814|9-A/G 6657850|12-C/G   
## 0.000000000 0.000000000 0.000000000 0.007751938 0.000000000 0.000000000 0.000000000 0.000000000 0.004694836 0.004255319 0.000000000   
## 6657942|13-C/G 6657997|45-C/T 6658062|30-T/G 6658550|29-A/G 6658582|12-C/G 6658632|5-T/C 6661273|54-T/A 6661308|52-T/C 6661408|14-C/T 6661538|9-G/A 6661791|66-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.010309278 0.000000000 0.000000000 0.000000000   
## 6661818|22-G/A 6662638|5-A/G 6662824|38-C/T 6662887|8-G/C 6663037|41-C/G 6664882|7-A/C 6665050|32-A/T 6665295|5-T/C 100019888|47-T/C 100045453|46-G/A 100045704|9-A/G   
## 0.000000000 0.000000000 0.004273504 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100064586|17-G/C 100066059|7-C/T 100074054|47-T/A 100082120|8-T/C 100086057|9-A/G 100086096|24-G/T 100093333|41-G/C 100098548|28-A/G 100104693|28-T/A 100104890|20-C/A 100106918|8-T/C   
## 0.000000000 0.000000000 0.010638298 0.000000000 0.004255319 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100086278|15-A/T 100098561|7-T/A 100112393|13-T/C 6665409|19-C/A 100106209|11-T/A 6652014|36-G/A 100016895|29-G/A 6661843|44-G/A 6652389|64-T/C 6661649|50-A/C 6657666|21-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.012552301 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661268|63-T/G 100023082|28-G/T 100017188|42-C/G 6661288|45-T/C 100021319|48-T/G 100045470|27-C/T 6661435|57-G/T 100065514|5-T/C 6630387|13-C/T 100065726|10-C/T 6653782|5-C/T   
## 0.000000000 0.000000000 0.004464286 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006756757   
## 100021899|36-A/T 100066454|16-G/T 100065272|30-T/C 100066129|22-G/A 6653374|61-T/C 6664733|54-T/A 100022349|67-T/A 100015942|46-A/C 100016792|52-G/C 100018206|33-G/A 100064825|31-G/T   
## 0.000000000 0.000000000 0.000000000 0.006578947 0.000000000 0.012422360 0.000000000 0.000000000 0.004464286 0.000000000 0.000000000   
## 100066202|30-T/C 100073401|49-C/A 6633382|47-T/C 100021640|61-G/C 100022856|29-A/C 100023978|37-A/T 6652591|64-T/C 6661464|50-T/A 100015796|50-T/A 100016769|29-T/C 100019373|29-G/A   
## 0.000000000 0.000000000 0.006944444 0.000000000 0.000000000 0.004545455 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100023055|35-A/T 100097014|5-T/G 6661225|60-T/C 6661548|33-A/T 100017088|61-C/T 100023509|31-T/C 100015492|43-G/A 100018948|22-T/C 100020108|6-G/A 100020234|29-G/C 100021104|60-G/C   
## 0.000000000 0.004444444 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004464286   
## 100022438|10-G/T 100065777|27-G/T 6634350|32-G/T 100015248|33-A/G 100016465|17-G/A 100016470|38-G/A 100017055|22-C/A 100020326|38-A/G 100020580|5-T/G 100020916|54-A/T 100022162|26-G/C   
## 0.004219409 0.000000000 0.004807692 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022968|12-G/A 100023214|50-T/C 100023558|48-A/G 100065527|10-A/G 100108046|10-C/G 6652805|19-C/T 6653649|51-C/A 100016806|34-T/C 100016973|34-G/A 100017185|9-C/T 100019652|10-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008849558 0.000000000   
## 100020977|12-T/C 100021791|20-G/A 100064895|33-A/T 100064988|25-T/C 6653972|28-A/G 6658602|21-G/C 100015510|28-A/T 100016175|6-T/C 100016191|14-G/A 100018397|31-G/T 100019542|48-A/C   
## 0.004504505 0.005050505 0.000000000 0.000000000 0.005208333 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020295|21-C/T 100020374|38-T/C 100021678|59-A/G 100066638|43-T/G 6653330|11-G/A 100015953|68-T/C 100016139|30-C/T 100016326|61-C/T 100016487|19-G/T 100016577|32-A/G 100016760|26-T/A   
## 0.000000000 0.000000000 0.000000000 0.004237288 0.000000000 0.000000000 0.000000000 0.005154639 0.000000000 0.005376344 0.000000000   
## 100016954|51-G/A 100017145|65-A/G 100017289|41-G/C 100017927|57-A/G 100019119|41-A/C 100019129|28-A/G 100020392|13-C/T 100021327|23-G/A 100022094|8-A/T 100023476|68-C/T 100065094|17-G/A   
## 0.000000000 0.000000000 0.000000000 0.007633588 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004504505 0.000000000   
## 100082310|17-G/A 100091292|53-C/T 6633859|61-C/G 6651602|9-A/G 6653320|67-A/G 100015805|62-G/A 100016005|36-T/C 100017432|35-A/G 100019685|30-C/T 100020281|34-T/C 100020816|17-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.005263158 0.000000000 0.012987013 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020920|57-A/G 100021124|31-G/T 100021513|63-A/G 100021836|10-G/A 100022515|43-C/T 100023216|57-G/T 100023496|7-C/T 100023681|60-G/A 100065088|33-A/T 100065666|45-T/C 100066471|53-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008771930 0.000000000   
## 6652033|13-A/C 6661430|6-G/T 6661570|26-C/T 6661730|63-G/C 100016186|12-C/A 100016774|44-T/A 100017111|47-A/G 100017208|21-G/A 100017523|52-T/C 100017874|53-A/G 100018144|64-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.010309278 0.008620690 0.004310345   
## 100018225|53-A/G 100018942|41-G/T 100019677|5-A/G 100022269|27-A/T 100066082|15-C/A 100066253|43-C/A 100066444|14-G/A 100114672|22-C/T 6651282|60-A/T 6651428|21-T/C 6652874|33-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015264|22-A/T 100015814|11-C/G 100015850|40-T/C 100016120|45-G/A 100017115|64-C/T 100017958|17-G/A 100018308|19-A/G 100018683|52-C/T 100019218|10-T/C 100019222|23-G/C 100020050|41-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020331|13-C/T 100020335|6-A/C 100021226|41-T/G 100021502|29-G/A 100021862|6-G/A 100021994|17-A/G 100022357|61-G/A 100022781|47-C/T 100023182|23-A/G 100023311|52-A/T 100023534|68-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007874016 0.008888889 0.000000000 0.000000000   
## 6653500|12-A/G 6661123|54-G/C 6665401|24-G/T 100015499|31-G/A 100015907|12-G/C 100016631|34-T/C 100019009|45-G/A 100019123|42-G/A 100019424|28-A/G 100019445|67-A/C 100019654|17-C/T   
## 0.000000000 0.000000000 0.014925373 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020359|57-A/G 100020876|63-C/T 100022261|20-C/T 100022625|36-A/G 100023251|49-T/A 100090852|5-C/T 6653799|6-G/A 6661647|17-A/C 100015702|42-C/T 100015896|29-T/C 100016097|8-A/G   
## 0.007633588 0.004347826 0.000000000 0.000000000 0.000000000 0.013513514 0.000000000 0.000000000 0.004166667 0.000000000 0.000000000   
## 100016416|52-T/A 100016914|9-T/G 100017736|15-G/C 100018093|40-G/C 100018383|12-A/G 100018805|31-A/G 100018914|23-G/A 100019000|63-T/G 100019412|18-C/T 100019519|62-G/C 100019671|36-A/G   
## 0.000000000 0.004166667 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005102041   
## 100019895|42-T/C 100020000|31-A/G 100020210|64-C/T 100021670|11-G/A 100021761|67-C/T 100022043|14-T/A 100022106|27-G/A 100022213|48-C/T 100022452|60-C/T 100022997|31-G/A 100065791|46-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004672897 0.000000000 0.000000000 0.000000000   
## 100066265|30-T/C 100066487|11-G/A 100101063|5-T/C 6634524|57-T/A 6652255|33-A/G 6661618|12-C/T 100015912|66-G/T 100015914|56-A/G 100016606|50-T/C 100016946|25-C/A 100017520|47-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004545455 0.000000000 0.000000000 0.000000000   
## 100018722|5-C/A 100019526|9-G/A 100019891|44-C/T 100020909|55-A/T 100020985|50-A/G 100021139|33-G/C 100021214|56-G/A 100021255|31-C/T 100021313|59-A/C 100022420|43-T/C 100022458|29-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004405286 0.000000000 0.000000000 0.000000000   
## 100022624|40-G/C 100022691|40-C/T 100023114|8-T/A 100023164|37-T/C 100023165|10-C/T 100023475|55-A/G 100024879|34-A/G 6650963|31-A/G 6650995|35-T/C 100015203|28-T/C 100015415|9-G/T   
## 0.000000000 0.000000000 0.004201681 0.000000000 0.000000000 0.000000000 0.004566210 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015496|59-G/T 100015847|60-G/C 100015873|28-A/C 100015977|34-A/G 100016012|21-A/C 100016160|65-G/A 100016617|11-C/G 100016919|15-T/A 100016933|17-A/C 100017138|9-G/C 100017592|13-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004464286 0.004424779 0.000000000   
## 100017929|18-A/C 100018201|42-T/G 100018285|15-G/A 100018596|39-G/A 100018944|19-C/A 100019340|48-A/G 100019515|10-G/A 100019761|17-G/A 100019817|32-A/G 100020455|16-G/A 100020993|47-T/C   
## 0.004784689 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005376344 0.000000000 0.000000000   
## 100022157|60-A/G 100023102|7-C/T 100045024|30-A/C 100065312|53-G/T 100066063|67-C/T 100066423|46-G/A 6634305|33-C/G 6651275|16-A/C 6652010|36-G/A 6661116|34-A/C 6664719|65-C/G   
## 0.008695652 0.000000000 0.000000000 0.000000000 0.005988024 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015734|66-G/C 100015877|41-T/C 100016028|28-G/T 100016794|51-C/G 100016930|62-C/T 100016976|17-C/G 100017073|58-C/A 100017352|5-T/A 100017471|13-G/C 100017594|43-T/C 100017596|13-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004115226 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018057|54-A/T 100018384|20-C/A 100018436|8-C/T 100018459|29-C/T 100018601|57-C/A 100018886|5-G/C 100019401|38-C/A 100019538|40-A/G 100019682|13-G/C 100019773|68-G/T 100019884|7-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020084|63-C/A 100020358|5-G/C 100020410|17-G/T 100020846|22-A/G 100021982|22-G/C 100022352|35-G/C 100023106|5-T/A 100023435|47-T/A 100023548|13-A/T 100064672|55-C/T 100091227|51-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007812500 0.000000000 0.000000000 0.000000000 0.000000000   
## 100121014|17-C/T 6653240|15-A/T 100015605|26-A/G 100015623|29-T/A 100015712|9-A/T 100015915|16-G/C 100016293|25-T/A 100016319|36-T/C 100016723|21-C/T 100017173|15-T/A 100017697|22-G/A   
## 0.015748031 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.012987013 0.000000000 0.000000000 0.006578947   
## 100018492|22-T/C 100018548|16-C/T 100018796|68-C/T 100018865|11-C/A 100018936|13-C/T 100019019|18-A/G 100019086|21-G/A 100019131|12-T/C 100019765|29-C/T 100019951|22-C/T 100020346|50-T/C   
## 0.004310345 0.000000000 0.009009009 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004587156 0.000000000   
## 100021253|53-T/C 100021441|53-T/C 100021634|50-A/C 100021664|5-T/C 100021900|25-G/C 100021918|16-G/C 100021944|59-G/C 100022064|57-C/T 100022439|9-G/A 100022958|60-G/A 100023335|10-T/C   
## 0.000000000 0.004329004 0.000000000 0.005617978 0.000000000 0.000000000 0.004716981 0.000000000 0.004219409 0.004347826 0.000000000   
## 100066167|17-A/C 6652225|65-T/C 6653132|37-C/T 6653692|35-T/A 6661742|53-G/T 6663972|39-G/A 6664076|30-T/C 100015254|42-A/G 100015421|66-C/T 100017443|50-T/A 100018227|9-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009090909 0.000000000 0.000000000 0.000000000   
## 100018684|33-T/C 100019036|18-A/C 100019346|5-C/T 100019642|57-C/T 100020216|59-T/G 100020462|12-G/T 100020825|41-T/A 100021447|5-C/T 100021487|10-A/G 100022350|27-C/T 100022637|44-C/T   
## 0.004444444 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022974|38-G/A 100023108|17-G/A 100023245|57-A/T 100023390|19-G/A 100023533|34-T/C 100064760|51-A/T 100064984|7-A/T 6635254|28-C/T 6650882|51-G/T 6651794|65-C/A 6652456|5-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.005076142 0.000000000 0.000000000 0.000000000 0.004310345 0.000000000 0.000000000   
## 6652956|28-T/C 6653074|11-G/T 6653246|55-C/T 6653257|11-T/C 6653558|37-T/C 6653841|24-C/G 6661717|50-A/G 100015306|34-G/T 100017026|18-T/C 100017183|63-A/C 100017740|39-T/C   
## 0.000000000 0.004608295 0.000000000 0.000000000 0.000000000 0.004329004 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018186|14-G/A 100018502|54-A/C 100019407|9-A/G 100019597|22-G/T 100019799|11-C/T 100020064|5-A/G 100020467|61-C/G 100021342|19-T/G 100021726|23-G/T 100021853|38-A/G 100022073|47-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004830918 0.000000000   
## 100022174|61-T/C 100022237|64-T/G 100022450|28-C/T 100023247|11-G/A 100024830|48-A/T 100065475|5-A/C 100065743|19-C/T 6651542|50-G/C 6652006|5-C/A 6652136|34-G/A 6652490|28-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653164|33-G/T 6661138|57-G/A 6661286|13-C/T 100015294|55-T/C 100015312|26-G/C 100015717|58-T/C 100016035|58-C/T 100017166|55-C/G 100017336|19-C/T 100017436|6-T/A 100018333|8-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004219409 0.000000000 0.000000000 0.000000000   
## 100018623|26-G/A 100018949|25-G/A 100019179|31-T/A 100019378|46-T/C 100019715|11-C/T 100020007|20-C/A 100020186|42-A/T 100020325|12-G/A 100020984|22-A/T 100021063|19-C/T 100021116|47-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021276|48-T/C 100021323|21-A/G 100023352|36-C/T 100023524|20-T/A 100064607|25-T/A 100064666|61-G/A 100066449|6-A/G 100104023|51-G/T 6651556|12-T/C 6651732|66-T/C 6652161|13-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.015384615 0.000000000 0.000000000 0.000000000 0.000000000 0.011764706 0.000000000   
## 6653042|9-A/T 6661220|17-G/T 100015287|46-T/C 100015379|18-A/G 100015449|18-T/C 100016230|18-C/G 100016245|55-T/C 100016437|62-T/C 100017249|15-G/A 100018724|8-T/C 100018729|20-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004484305 0.000000000 0.000000000   
## 100018771|32-C/T 100019308|38-T/C 100019625|33-C/T 100019716|25-C/T 100020654|61-G/A 100021098|19-A/T 100021170|5-G/C 100021240|55-G/C 100021330|41-C/T 100021985|6-G/C 100022470|47-C/T   
## 0.000000000 0.000000000 0.004166667 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022786|9-C/T 100022992|63-G/C 100023087|65-T/C 100023089|12-A/T 100065113|20-C/T 100065660|34-T/C 100082081|14-T/C 6650676|61-A/G 6650683|35-G/A 6650847|62-G/T 6651376|46-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004329004 0.000000000 0.000000000 0.004524887 0.000000000 0.000000000 0.000000000   
## 6651698|17-A/G 6652341|11-G/A 6652418|6-T/A 6652657|13-T/C 6653549|37-G/A 6653926|47-C/T 6661137|45-A/G 6661795|29-A/G 6664067|38-C/T 100015300|34-C/G 100015553|64-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015662|64-G/A 100015747|67-T/C 100016172|45-C/A 100016321|25-T/C 100016379|15-C/T 100016524|6-T/G 100016678|13-G/A 100017389|39-C/A 100017447|10-T/G 100018638|48-T/C 100019669|13-T/C   
## 0.000000000 0.000000000 0.000000000 0.006134969 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005649718 0.000000000   
## 100021395|62-G/A 100021505|40-T/C 100021653|13-T/G 100021672|31-T/C 100022109|34-G/A 100022563|58-C/T 100022828|22-T/C 100023017|29-A/T 100066440|62-C/G 100066652|41-G/A 100096906|18-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006250000 0.000000000 0.000000000 0.000000000 0.004166667 0.000000000   
## 6630114|53-A/C 6650736|10-G/T 6651252|16-C/T 6653034|28-A/G 6653152|22-C/A 6653197|10-T/C 6653543|62-T/A 6653729|12-T/C 6658435|49-C/A 6661280|18-T/C 6661782|19-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005555556 0.000000000   
## 100015470|41-C/T 100016237|28-C/A 100016452|17-G/A 100016620|23-T/C 100016680|26-G/A 100016867|47-C/T 100016970|8-C/T 100018066|41-A/G 100018458|45-C/T 100018598|40-C/T 100019260|10-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019313|6-T/C 100020459|17-G/C 100022183|15-A/C 100022219|59-T/A 100022324|20-A/T 100022476|18-T/C 100022820|44-T/C 100065830|50-G/A 100073534|35-A/T 100108129|53-C/A 6631518|25-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650419|25-C/G 6650596|64-G/T 6650922|18-T/C 6650997|7-A/G 6651758|26-G/A 6652094|60-T/C 6652276|10-G/A 6652446|14-G/A 6652850|15-T/C 6652911|22-A/G 6653387|31-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008968610 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653442|7-A/G 6653457|43-C/T 6653666|33-A/G 6653913|54-A/G 6661714|10-A/T 6661819|18-T/C 6665305|19-G/A 100015271|40-A/G 100015651|23-C/T 100016940|6-T/G 100017024|68-G/A   
## 0.005076142 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018261|61-T/C 100018474|24-G/A 100018954|18-A/G 100019606|34-G/A 100019837|9-G/A 100020506|37-T/A 100020651|11-C/G 100021368|14-C/T 100021399|20-A/C 100021433|22-A/C 100021823|21-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007575758 0.000000000 0.000000000 0.000000000   
## 100022483|30-T/A 100022774|66-T/G 100023022|43-C/T 100023206|43-A/G 100023292|16-A/G 100023396|25-C/T 100024289|11-T/C 100045482|25-C/T 100065022|34-A/G 100065562|43-G/A 100065795|26-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004291845 0.000000000   
## 100066292|25-T/C 100073974|41-A/C 100082647|16-C/A 6650814|43-G/C 6650908|37-A/C 6651113|11-C/G 6651346|28-A/T 6651709|24-A/G 6652049|29-T/C 6652500|45-G/T 6652777|22-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006578947 0.000000000 0.000000000   
## 6653333|13-T/C 6653390|14-T/G 6653414|31-T/C 6653728|20-G/T 6654032|23-T/G 6654037|57-A/G 6657904|10-G/C 6661607|55-C/A 6661700|18-G/A 6662767|16-T/C 6664074|40-T/G   
## 0.000000000 0.000000000 0.000000000 0.004201681 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664074|44-G/C 6664735|26-T/G 6665238|34-T/C 100124938|57-G/A 100015346|10-T/A 100016456|52-G/C 100016501|31-A/T 100017004|22-C/T 100017283|39-T/G 100017322|41-G/A 100017407|26-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017421|12-A/G 100018243|9-T/C 100018879|32-C/A 100019658|67-A/G 100020347|21-G/C 100021567|15-A/G 100021727|64-T/A 100023434|25-T/C 100066346|64-T/C 100066369|51-A/G 100066626|37-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6631525|11-C/T 6650677|49-C/T 6650829|66-C/T 6650865|22-G/T 6651274|64-A/G 6651327|26-G/A 6651363|38-T/A 6651684|66-A/G 6652046|31-A/G 6652267|48-T/C 6652284|17-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652529|31-T/C 6652900|9-A/G 6653610|43-G/T 6653665|46-C/T 6653751|12-A/T 6653876|40-A/G 6654005|53-G/A 6654018|46-G/A 6661150|29-C/G 6661536|5-G/A 6664750|33-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100103994|12-C/T 100103994|20-G/A 100104021|9-A/G 100015729|18-T/G 100015952|21-T/A 100016302|16-G/A 100016507|10-G/T 100016962|46-C/T 100017543|65-T/C 100018176|18-T/A 100018259|44-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004291845 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019881|23-C/A 100019923|11-A/T 100020081|6-T/A 100020349|28-G/T 100022424|20-G/A 100023400|43-G/T 100044682|9-A/G 100044750|30-A/G 100065250|9-G/T 100065326|31-T/A 100065589|31-A/G   
## 0.004329004 0.000000000 0.000000000 0.000000000 0.005050505 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100066526|17-G/A 100091166|12-G/A 100091166|42-A/G 6650613|48-C/T 6650687|41-T/G 6650796|6-C/T 6650803|47-G/C 6651101|36-C/G 6651528|20-A/T 6651771|12-T/C 6651853|15-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652025|35-C/T 6652815|7-T/G 6652936|53-A/C 6653177|8-T/G 6653241|40-G/T 6653293|49-G/A 6653307|12-A/G 6653389|28-A/G 6653538|48-T/C 6653579|57-T/A 6653832|7-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661683|57-A/G 6661685|63-G/A 6661816|48-A/G 6661824|42-G/C 6661850|36-A/T 6661890|47-A/G 6665337|42-A/G 100015757|13-C/T 100016204|33-T/C 100017468|57-G/T 100017967|62-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018112|46-A/C 100018165|13-C/T 100018718|21-G/A 100019849|5-G/A 100019859|8-G/A 100022136|24-T/C 100022312|53-T/C 100045521|11-T/G 100065432|12-T/G 100065536|20-G/A 100066606|52-G/T   
## 0.005025126 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100082316|6-G/A 100082368|14-T/G 100097022|6-T/C 100108129|36-G/A 6631225|7-T/C 6631997|14-C/T 6650612|10-C/T 6650648|12-C/G 6651035|6-G/A 6651242|13-G/A 6651289|37-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651290|54-T/A 6651373|58-C/T 6651393|29-G/A 6651401|31-A/G 6651427|13-G/A 6651437|43-G/C 6651445|36-G/T 6651476|13-C/T 6651646|25-A/G 6651749|48-G/A 6651841|8-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652088|32-C/T 6652192|52-C/A 6652260|63-T/C 6652326|50-G/A 6652369|31-T/C 6652422|33-T/C 6652547|9-G/T 6652893|32-T/A 6652909|24-T/G 6652955|18-G/C 6653017|55-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004444444 0.000000000 0.000000000 0.000000000 0.000000000 0.004464286   
## 6653103|52-T/G 6653677|36-T/C 6653708|16-C/G 6653903|37-A/G 6653934|25-C/T 6654040|14-T/C 6654091|9-T/C 6657832|39-T/C 6661183|41-T/C 6661274|44-G/C 6661675|22-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6663998|37-C/T 6664011|37-G/C 100016463|53-T/C 100016812|38-G/A 100017567|49-A/C 100017961|50-G/T 100018143|16-G/A 100019099|54-T/G 100019383|33-G/T 100019940|39-C/T 100020427|36-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004166667 0.000000000 0.000000000   
## 100020660|8-T/A 100020677|22-A/G 100021361|48-T/C 100021511|43-C/T 100021828|33-C/A 100022057|11-A/G 100022783|26-C/T 100064616|40-A/G 100065171|45-C/G 100065966|15-C/G 100082527|51-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100082585|40-G/A 100106949|10-G/A 100117044|51-G/C 6650418|9-G/T 6650423|29-A/G 6650818|67-C/T 6651153|49-G/T 6651180|65-A/T 6651287|48-A/C 6651447|19-T/C 6651655|40-A/G   
## 0.000000000 0.009345794 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651717|7-T/C 6651971|61-A/G 6651981|50-T/G 6652195|35-T/C 6652270|30-C/T 6652411|8-G/A 6652419|17-C/T 6652451|65-G/A 6652920|22-G/A 6653067|56-T/C 6653377|17-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653583|28-T/C 6653636|14-A/G 6653697|13-T/C 6653731|66-C/T 6653767|20-G/C 6653770|20-C/G 6653784|35-T/C 6653810|62-C/A 6653854|42-T/C 6653892|54-G/A 6653910|50-T/C   
## 0.004830918 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6654022|30-A/G 6661470|52-C/A 100066269|13-T/C 6662979|27-T/C 6664013|56-T/C 6664771|32-C/T 6665036|59-T/C 100015387|20-A/C 100016289|59-C/A 100017196|51-G/T 100017527|6-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017670|46-C/A 100018265|14-C/T 100018491|67-A/C 100019232|26-T/C 100019318|16-T/A 100019703|50-G/A 100019708|6-A/G 100019897|65-G/A 100020477|33-C/T 100022633|31-A/G 100023423|28-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004115226 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100064644|53-C/T 100065127|11-C/T 100082124|16-C/G 6632526|27-G/T 6650445|31-C/T 6650584|38-A/G 6650848|20-G/A 6651173|50-C/A 6651298|24-T/G 6651530|41-T/C 6651782|31-G/A   
## 0.000000000 0.000000000 0.000000000 0.008733624 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651907|9-T/C 6652024|30-A/G 6652131|34-G/A 6652159|67-C/T 6652177|21-C/T 6652210|27-C/A 6652401|28-T/A 6652416|68-C/G 6652713|26-G/C 6652866|10-G/A 6652983|43-C/A   
## 0.000000000 0.000000000 0.004739336 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653039|43-G/C 6653044|17-A/G 6653092|18-T/C 6653202|68-T/A 6653253|13-C/G 6653255|39-G/T 6653445|25-C/G 6653487|29-C/T 6653527|21-G/A 6653922|36-T/C 6653930|13-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6654013|57-T/G 6657669|38-C/T 6658619|38-A/G 6661144|14-T/C 6661228|61-G/A 6661239|28-A/G 6661757|61-G/A 6661837|5-T/C 6663958|42-G/C 6664017|22-C/T 6665345|60-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.005617978 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6665563|37-A/C 6665563|41-G/A 6665563|7-C/T 6666102|24-A/G 100015848|14-C/A 100016751|21-G/A 100017832|10-T/C 100017856|21-A/G 100018301|7-A/G 100019450|10-C/A 100019818|16-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008064516   
## 100019983|13-A/G 100020502|50-G/A 100020602|47-A/G 100065169|68-T/C 100066267|15-G/A 100066657|20-C/G 6632946|54-T/A 6650395|54-T/C 6650450|36-T/C 6650539|5-T/C 6650675|13-G/T   
## 0.008510638 0.000000000 0.000000000 0.000000000 0.004484305 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650760|49-T/G 6650770|63-T/C 6650778|15-A/G 6650888|42-T/A 6650948|22-G/A 6651067|68-T/C 6651104|14-T/C 6651269|64-A/G 6651380|66-C/A 6651460|39-T/A 6651469|31-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651565|25-G/T 6651594|47-T/G 6651714|59-A/T 6651809|19-T/C 6651814|64-A/G 6652119|10-C/T 6652183|53-C/T 6652218|58-G/A 6652272|46-C/A 6652443|56-C/T 6652587|38-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004310345 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652614|24-T/A 6652643|8-A/T 6652647|54-C/A 6652695|37-C/T 6652702|52-A/C 6652729|55-C/G 6652886|48-T/A 6653028|14-A/G 6653065|44-C/T 6653124|7-G/C 6653205|17-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007874016   
## 6653210|45-C/A 6653524|37-T/G 6653532|60-C/T 6653787|34-A/G 6653818|55-C/T 6653820|23-G/A 6653825|25-G/A 6653908|59-C/G 6653938|33-G/A 6656975|12-C/G 6658434|32-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.006802721 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661131|30-C/A 6661170|60-C/T 6661460|63-C/T 100082330|10-C/T 6661516|30-G/T 6661542|10-A/G 6661650|9-G/A 6661787|54-G/C 6661807|10-G/A 6663931|44-A/G 6663966|33-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664887|16-T/G 6665234|5-T/A 6666170|37-C/T 100016216|6-C/A 100016431|13-A/G 100016980|14-G/C 100017035|18-A/G 100018089|20-C/A 100018299|18-A/G 100019103|66-G/A 100020260|22-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005988024 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020593|29-A/G 100021233|9-G/T 100022402|38-T/A 100022743|53-G/A 100064690|24-G/C 100065349|19-G/C 100065841|23-T/C 100074065|11-G/A 6650412|48-C/T 6650459|40-G/A 6650487|15-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650510|49-G/C 6650571|53-C/T 6650575|33-C/T 6650657|31-A/G 6650727|33-T/A 6650764|18-A/G 6650786|30-G/A 6650877|51-A/G 6650982|52-G/T 6650992|26-T/G 6651041|46-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651162|25-G/T 6651244|31-C/A 6651284|8-G/C 6651398|18-G/A 6651485|12-A/G 6651517|35-T/G 6651527|40-C/T 6651546|39-T/C 6651644|49-G/A 6651663|43-G/C 6651671|42-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651691|10-G/A 6651700|17-C/A 6651734|47-T/C 6651746|20-C/T 6651800|11-A/G 6651813|5-C/T 6651896|64-A/G 6651912|26-C/G 6651917|68-G/T 6652038|34-C/A 6652059|20-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652081|56-C/G 6652085|6-G/A 6652121|43-A/T 6652134|47-G/C 6652186|30-C/T 6652189|13-A/G 6652281|62-C/G 6652285|54-C/T 6652290|29-T/C 6652304|61-G/T 6652432|55-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652503|20-A/G 6652505|16-A/C 6652521|39-C/T 6652525|37-G/T 6652601|21-T/C 6652602|25-G/C 6652606|48-T/C 6652624|28-T/C 6652668|15-G/C 6652670|16-C/G 6652721|10-T/A   
## 0.000000000 0.008403361 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652733|37-A/G 6652745|53-A/G 6652752|31-C/T 6652791|49-C/A 6652818|11-T/C 6652862|15-A/G 6652881|22-C/A 6652972|10-T/C 6652998|52-A/T 6652999|57-A/G 6653082|48-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653098|9-A/G 6653162|29-G/A 6653274|28-A/G 6653325|64-G/C 6653332|57-G/A 6653357|42-C/T 6653362|53-G/C 6653412|42-A/G 6653426|18-C/T 6653440|10-T/C 6653465|26-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653468|58-T/C 6653470|47-G/C 6653503|52-C/T 6653589|18-G/A 6653681|55-A/G 6653716|66-G/A 6653721|50-T/C 6653756|39-T/C 6653768|57-T/C 6653772|52-C/T 6653912|41-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653970|10-G/T 6654035|9-A/T 6654089|34-G/C 6657074|8-C/T 6657427|36-T/G 6658142|19-G/A 6658487|31-A/T 6658567|11-A/G 6661106|67-C/A 6661340|59-C/T 6661404|52-G/C   
## 0.004219409 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661465|25-C/G 6661493|15-T/C 6661592|37-C/T 6661602|55-A/G 6661729|38-A/G 6661755|5-T/C 6661849|5-T/A 6662667|9-T/C 6663069|39-G/A 6663912|29-A/G 6663945|17-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004424779 0.000000000 0.000000000 0.000000000   
## 6665239|6-A/G 6665353|11-A/G 6665974|11-A/T 6666103|68-G/A 100016182|32-A/G 100017836|20-G/A 100017869|6-A/G 100018411|68-A/C 100020222|50-C/G 100021008|5-T/G 100021734|34-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021842|6-T/A 100045232|8-G/C 100065195|59-A/G 100074076|12-A/C 100114674|53-G/A 6650380|13-C/T 6650404|10-C/T 6650422|10-A/C 6650471|64-T/C 6650500|18-G/C 6650515|50-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650537|13-C/T 6650542|10-G/A 6650554|41-G/A 6650556|9-G/C 6650615|12-C/T 6650633|41-A/C 6650636|55-A/G 6650715|51-A/G 6650784|41-A/G 6650806|54-A/G 6650812|44-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650885|45-G/T 6650890|7-G/A 6650891|27-C/G 6650939|41-A/G 6651045|37-G/C 6651063|37-A/C 6651127|50-C/G 6651189|65-G/A 6651213|10-C/G 6651259|15-G/A 6651305|62-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651312|67-T/C 6651314|20-C/T 6651471|5-C/A 6651479|37-T/G 6651523|45-A/T 6651524|18-G/A 6651611|23-A/T 6651617|38-A/C 6651627|10-C/A 6651680|16-T/G 6651686|18-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651990|27-G/T 6652031|21-T/C 6652068|30-T/C 6652123|48-C/T 6652141|65-C/T 6652156|37-G/T 6652188|11-A/G 6652217|66-T/A 6652220|47-G/A 6652222|50-C/T 6652329|66-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004739336 0.005586592 0.000000000   
## 6652364|41-C/T 6652450|9-A/C 6652454|59-C/T 6652470|43-C/T 6652506|53-A/T 6652539|13-G/A 6652561|39-T/C 6652572|11-T/G 6652637|54-T/C 6652648|60-T/A 6652659|15-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652665|12-A/G 6652728|28-T/C 6652751|58-A/G 6652774|48-G/A 6652817|30-A/G 6652845|15-G/A 6652939|61-C/T 6652947|66-T/A 6653004|32-T/G 6653011|14-C/T 6653170|45-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653174|64-A/C 6653291|22-A/G 6653324|46-G/A 6653415|50-C/G 6653489|12-A/C 6653514|8-A/G 6653535|20-A/T 6653594|40-G/A 6653646|49-A/T 6653674|54-T/C 6653683|31-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653750|55-T/C 6653771|10-A/G 6653779|21-T/C 6653822|27-G/A 6653827|15-A/G 6653858|29-G/T 6653928|36-T/A 6653969|26-C/T 6654051|34-T/C 6654056|9-C/T 6654078|12-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657388|11-G/T 6657512|7-T/A 6657941|41-C/T 6658094|46-C/A 6658571|22-C/A 6658640|12-C/T 6661287|22-A/G 6661315|34-C/A 6661316|17-T/A 6661420|51-G/A 6661453|6-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661468|17-G/T 6661489|62-C/T 6661552|5-G/T 6661577|44-A/C 6661601|15-G/A 6661629|40-G/A 6661651|60-G/A 6661703|29-A/G 6661728|35-C/T 6662799|24-G/T 6662820|22-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007042254 0.000000000 0.000000000   
## 6662890|34-A/G 6662898|11-T/C 6662977|22-A/G 6664083|6-T/C 6664294|44-T/A 6664720|7-C/A 6665218|24-G/A 6665351|57-C/G 100109477|37-C/T 6665629|41-C/T 6665821|31-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005464481 0.000000000 0.000000000   
## 100016377|14-C/T 100016728|8-C/G 100017376|68-T/C 100018451|6-C/T 100019918|66-C/T 100022411|61-C/G 100064620|27-T/G 100064811|7-G/A 100065350|20-A/G 100109953|9-A/G 6650460|21-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650519|57-T/C 6650579|51-T/C 6650580|37-G/A 6650607|66-G/A 6650671|45-C/A 6650689|52-T/A 6650703|19-G/A 6650815|7-A/G 6650944|60-T/A 6650965|12-G/T 6651031|38-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651069|41-G/C 6651089|58-C/G 6651139|39-G/A 6651355|22-C/T 6651367|34-G/T 6651487|9-A/G 6651578|26-T/C 6651593|32-G/C 6651619|40-T/C 6651620|38-C/T 6651675|34-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651806|49-A/C 6651821|15-A/G 6651825|51-A/T 6651968|21-G/A 6651983|9-A/T 6652057|5-C/T 6652073|37-A/C 6652074|10-G/A 6652115|60-T/G 6652197|23-A/G 6652244|39-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652249|29-C/T 6652338|5-C/T 6652392|7-T/C 6652466|57-C/T 6652514|66-T/C 6652554|50-A/G 6652556|53-T/C 6652589|8-C/A 6652749|25-T/C 6652753|11-T/G 6652776|45-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652806|6-C/T 6652834|26-T/C 6652885|65-C/G 6652929|66-T/A 6652935|47-C/T 6653073|5-G/T 6653088|16-G/A 6653093|44-G/A 6653104|55-C/T 6653436|11-T/C 6653497|6-C/T   
## 0.000000000 0.000000000 0.004464286 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653639|65-G/T 6653645|43-C/G 6653769|16-G/C 6653927|44-C/T 6653953|41-C/T 6653987|61-A/G 6653993|15-A/G 6654009|23-C/T 6656879|21-T/C 6656932|34-C/G 6657077|25-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657152|47-T/C 6657200|7-T/C 6657228|8-C/T 6657447|9-A/T 6657510|13-A/G 6657518|14-A/C 6657616|11-A/G 6657889|17-C/G 6657989|13-T/G 6657992|32-T/C 6658007|29-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006060606 0.000000000 0.000000000 0.000000000 0.000000000   
## 6658058|7-C/G 6658330|11-C/G 6658349|12-A/C 6658401|16-G/T 6658424|11-A/T 6658451|54-A/G 6658473|36-A/C 6658548|12-C/A 6658667|17-A/G 6661128|54-T/A 6661132|53-C/T   
## 0.000000000 0.004672897 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006622517 0.000000000 0.000000000   
## 6661145|48-C/T 6661169|16-A/C 6661418|24-T/G 6661447|57-G/A 6661551|43-A/T 6661606|48-G/C 6661621|22-T/C 6661667|62-A/G 6661716|24-C/T 6661770|21-C/T 6662676|12-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6662737|6-A/T 6662747|22-A/G 6662778|8-A/G 6662831|7-G/C 6662962|22-T/G 6662984|35-A/G 6663913|23-G/A 6663996|47-G/T 6664080|40-C/A 6664712|24-G/A 6665849|24-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6665849|27-A/G 100019306|41-G/C 100023120|53-T/C 100045071|11-G/T 100073787|12-T/C 100073808|38-G/A 100082396|45-C/T 100082676|61-G/A 6650780|18-C/T 6651956|47-C/T 6652018|68-G/A   
## 0.000000000 0.000000000 0.000000000 0.004608295 0.000000000 0.000000000 0.000000000 0.000000000 0.013157895 0.000000000 0.000000000   
## 6652299|52-G/C 6652898|20-T/A 6653146|40-G/A 6657342|25-G/C 6657451|13-T/C 6657720|20-T/G 6657882|21-C/T 6658021|6-G/C 6658104|7-T/G 6658212|12-A/G 6658246|8-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661212|11-A/C 6661231|65-C/G 6661373|56-C/G 6661472|51-T/C 6662632|29-C/A 6662644|9-A/C 6662718|14-A/G 6662788|5-C/G 6663015|45-C/G 6663056|27-G/A 6663101|48-T/C   
## 0.000000000 0.000000000 0.011363636 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6663942|12-C/G 6663943|19-C/G 6664030|20-T/A 6664734|37-C/T 6665050|6-C/T 6665686|46-A/G 100064830|15-G/C 100073523|7-G/T 100073850|23-A/C 100074130|14-T/C 100085916|27-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100085918|17-C/T 100093520|12-T/C 100102104|19-G/T 100104847|9-C/T 100107045|42-G/A 100111102|5-T/C 100118833|7-G/A 100118214|9-G/A 6661395|67-G/A 6661549|61-G/A 6664299|8-G/C   
## 0.007874016 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005617978 0.000000000   
## 6661899|30-T/C 100117994|5-C/A 100118292|6-C/T 100120255|8-G/T 100122091|12-G/A 6658340|10-T/A 6662816|5-C/A 6662936|6-T/A 6662936|8-A/G 6662964|8-C/T 6662966|17-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006329114   
## 6664885|14-G/A 6661031|8-G/A 100066612|18-A/G 6652306|13-T/C 100085941|14-G/T 100018734|36-T/A 6661163|12-C/T 100065635|32-C/T 6661774|57-G/A 100082623|35-G/A 100065110|61-C/T   
## 0.000000000 0.000000000 0.000000000 0.011764706 0.000000000 0.008333333 0.000000000 0.000000000 0.006622517 0.011494253 0.000000000   
## 6661113|35-G/T 100118834|24-T/A 100065734|46-A/C 6663988|26-G/A 6661432|6-G/T 6661894|14-C/T 100025027|41-A/T 100065037|22-A/G 6661398|17-C/G 6661689|5-A/G 6664901|14-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661325|52-G/A 100024800|55-T/C 6661569|21-G/T 100015330|20-C/A 100017807|41-C/T 100021430|18-A/C 100021922|61-T/G 100024081|21-C/T 100044596|39-C/T 6651341|31-A/G 6652981|11-C/A   
## 0.000000000 0.005988024 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065893|67-C/T 100015238|36-T/C 100015491|32-C/T 100015884|7-G/A 100019050|23-G/A 100022813|55-A/C 6653072|57-C/T 100016062|38-A/G 100017135|23-C/G 100021766|9-T/A 100022076|54-G/A   
## 0.005988024 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004830918 0.000000000 0.000000000 0.000000000   
## 6661377|53-C/T 100015975|43-A/T 100016187|49-G/C 100024150|52-T/G 100018712|5-A/C 100021390|26-A/G 100045683|24-T/C 6661840|10-C/T 100016255|15-T/A 100020380|45-T/G 100021355|11-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021470|64-A/G 100023138|54-G/A 100023921|57-C/T 6650819|43-C/T 6653757|13-T/G 100015309|36-C/A 100015511|36-A/G 100015825|32-G/T 100016469|15-C/A 100019560|67-A/T 100021988|8-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022638|31-A/T 100022674|60-A/G 100023456|47-T/C 100023464|21-G/T 100023506|63-G/C 100121198|44-C/T 6664022|46-T/C 100017302|21-A/C 100017884|42-T/C 100020887|11-G/A 100022100|32-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.012820513 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022978|31-G/T 100064951|7-C/T 100108048|25-G/C 6653000|22-C/T 6661699|44-C/T 100015643|21-A/G 100016494|59-G/A 100017300|12-G/T 100017465|6-C/A 100019558|59-A/C 100021942|23-G/A   
## 0.004587156 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022249|52-T/C 100022694|55-C/G 100022788|12-C/T 100101046|61-C/A 6652314|37-T/C 100015332|7-C/A 100015389|56-T/A 100015557|20-C/G 100017329|58-G/T 100018963|60-A/C 100019082|25-A/G   
## 0.000000000 0.000000000 0.006578947 0.004524887 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019182|47-T/A 100020256|17-T/G 100020398|8-A/C 100021013|48-A/T 100021289|8-A/G 100023421|10-T/G 6653492|18-A/G 6661385|64-G/C 6661806|68-G/A 100017094|36-C/T 100017357|22-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.013513514 0.000000000 0.000000000   
## 100018276|13-A/G 100018426|49-A/T 100018952|47-A/T 100021643|42-A/T 100022068|8-T/C 100022755|51-G/A 100066666|24-G/A 6661519|31-A/T 100015745|7-C/T 100018424|55-T/A 100021037|43-A/C   
## 0.000000000 0.000000000 0.004219409 0.000000000 0.000000000 0.000000000 0.004484305 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021847|31-C/T 100022744|13-G/C 100023381|30-A/G 100023472|27-C/T 100023477|8-T/G 100024933|20-T/G 6651050|34-T/C 6652421|32-C/G 100082161|17-G/C 6661817|22-G/A 6665065|47-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005076142 0.000000000 0.008264463 0.000000000 0.000000000   
## 6666515|7-G/A 100015276|20-C/T 100016849|33-A/G 100018157|49-A/G 100018512|6-C/A 100019166|40-G/A 100019599|68-C/T 100020395|68-C/T 100020496|40-T/C 100022054|30-T/C 100022238|35-T/C   
## 0.000000000 0.000000000 0.000000000 0.004385965 0.000000000 0.000000000 0.004504505 0.004504505 0.000000000 0.000000000 0.000000000   
## 100022761|21-C/T 100064714|31-A/C 100082512|27-G/T 6635566|26-T/G 6651319|63-C/T 100101042|27-A/G 100015522|21-A/T 100015635|48-A/C 100016324|17-G/C 100017167|42-A/G 100017270|46-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018878|51-C/T 100019810|41-A/G 100020422|49-T/G 100021781|44-T/A 100022052|36-T/A 100022732|37-A/G 100023771|42-A/T 100064904|9-C/T 100066133|22-A/T 6635226|21-A/G 6661769|64-T/A   
## 0.004830918 0.004405286 0.004672897 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004237288   
## 100015503|66-A/T 100015669|26-A/G 100016926|66-A/G 100017163|47-A/G 100017930|44-G/A 100018643|57-G/A 100019627|11-G/A 100019775|26-T/C 100020011|13-C/A 100020180|30-T/A 100020794|35-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004830918 0.000000000 0.000000000 0.012048193 0.000000000 0.000000000 0.005747126   
## 100022441|55-A/G 100065577|55-T/C 100066375|31-C/T 100101063|14-G/A 6634311|8-T/C 6650564|10-C/G 6651449|21-G/A 100015590|56-T/C 100015813|59-T/A 100015865|6-C/T 100015966|35-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016299|67-G/A 100017046|59-A/G 100017306|20-C/T 100017681|59-G/A 100018541|45-C/T 100019001|52-T/C 100019248|51-C/A 100019357|10-A/C 100020167|8-T/C 100020584|49-G/A 100020830|34-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021518|64-T/G 100023323|17-A/G 100065274|22-T/A 100066055|6-T/C 6652294|28-T/C 6661350|27-G/A 100015979|10-G/A 100016232|12-A/G 100016804|11-G/T 100016918|64-T/A 100017355|38-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018239|64-C/A 100018653|43-T/C 100019075|38-G/C 100020739|29-A/G 100022196|19-G/A 100022506|24-C/G 100022716|15-T/C 100065001|58-T/A 6661682|7-T/C 100016459|9-T/C 100016800|17-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004329004 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016857|32-A/T 100016901|25-G/A 100017304|40-T/G 100018018|24-G/T 100018056|56-G/C 100018188|36-G/T 100018521|14-G/A 100019406|13-G/A 100019617|68-C/A 100020206|45-C/G 100021877|23-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022598|56-C/T 100022715|29-C/T 100022769|37-G/A 100023124|68-T/G 100045390|32-G/A 100064869|18-A/G 100066159|27-C/T 6651348|40-T/G 6651910|25-A/T 6661267|31-G/A 6661407|12-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005025126 0.000000000 0.000000000 0.000000000   
## 6661471|46-G/T 100015328|40-A/C 100015329|5-T/A 100015695|23-C/T 100015994|62-A/T 100016280|42-G/C 100016310|50-G/A 100017976|8-T/G 100018090|15-T/C 100018376|15-G/A 100019811|9-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019879|32-T/C 100020836|42-T/G 100020897|56-T/C 100020918|25-A/G 100022084|40-A/G 100022253|28-T/C 100022347|11-T/G 100022822|20-C/T 100022863|16-C/G 100064727|32-C/G 100064762|17-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065060|19-C/T 100065198|28-C/T 100065497|6-G/A 100066169|37-C/A 100066413|57-T/G 100066518|25-A/C 6650606|12-A/G 6650782|37-G/A 6651161|26-A/T 6651343|64-C/T 6651987|65-G/C   
## 0.010526316 0.005988024 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652583|9-C/G 6653986|35-G/A 100017405|46-T/C 100018360|48-T/C 100020046|11-T/G 100020184|33-A/T 100020356|17-C/T 100021172|11-C/T 100021739|23-A/G 100022407|43-A/G 100022586|32-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100023347|40-A/G 6630669|54-A/C 6651087|52-A/G 6653823|53-T/C 6661427|45-A/T 6664050|11-T/C 100015339|30-G/A 100015780|53-A/C 100016477|49-C/T 100016846|6-A/G 100017534|5-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018524|64-G/T 100018715|45-A/C 100019637|34-T/C 100019730|38-A/G 100020004|34-G/C 100020093|64-G/T 100020177|61-C/T 100020736|62-T/C 100021876|36-T/C 100022251|18-A/C 100022479|48-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009433962 0.000000000 0.000000000 0.000000000   
## 100023192|44-C/T 100065374|28-T/A 100065413|68-G/T 100065460|57-T/A 100065786|62-T/C 100065981|32-G/A 100093548|6-T/C 6635925|28-G/A 6651303|15-G/A 6652226|61-A/C 6652595|25-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004716981 0.000000000 0.011627907 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652880|30-G/A 6653288|5-T/C 6661743|26-G/A 100015258|11-G/A 100015334|11-A/C 100015520|48-T/A 100016206|60-T/G 100016803|55-T/A 100016999|24-T/C 100017691|42-G/C 100018254|14-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018691|53-C/T 100018832|49-T/A 100018836|30-T/A 100018972|63-T/C 100018993|58-G/A 100019968|28-T/C 100019971|65-T/G 100020134|53-C/T 100020237|19-C/T 100020353|50-A/G 100021532|8-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022232|46-T/C 100022564|55-G/A 100064590|10-C/G 100064752|47-G/T 100066482|40-C/G 100066499|21-A/C 100082126|5-A/G 100082673|16-C/G 100118390|28-A/G 100118390|5-C/G 6650749|8-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009009009 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650993|48-A/G 6651187|10-A/T 6652437|24-T/C 6652887|56-G/A 6653102|62-A/C 6653358|49-T/A 6661200|10-A/G 6661277|39-G/A 6661479|25-C/A 6665776|10-G/A 100116183|6-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004291845 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007751938   
## 100065388|52-T/C 100015585|60-A/G 100016513|5-C/A 100016711|48-G/A 100017104|21-C/A 100017773|59-C/T 100017895|25-A/T 100018069|40-A/G 100018279|30-C/A 100018386|10-G/C 100018698|26-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009090909 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021026|29-A/G 100021644|9-C/A 100022215|30-A/G 100023511|29-G/A 100065011|9-G/T 100065481|45-G/C 100065665|18-T/G 100082041|35-T/G 100082540|39-C/T 6635352|11-C/T 6651637|46-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004444444 0.000000000 0.000000000 0.000000000   
## 6652697|44-G/A 6652848|23-G/T 6661188|24-G/C 6661506|68-A/T 6661846|36-C/G 100121512|16-T/C 100015223|24-C/T 100015336|36-G/A 100016018|57-G/C 100016257|18-G/A 100016363|39-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016533|62-C/T 100017334|62-C/T 100017905|42-A/G 100018782|32-C/A 100018840|12-A/G 100018918|28-G/A 100018973|26-T/G 100019583|32-G/T 100020635|19-T/C 100020952|67-A/G 100021607|12-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021759|51-G/A 100022391|27-T/C 100022668|57-T/C 100065738|47-G/C 100066164|11-G/A 100066550|5-T/C 6633324|49-T/G 6634529|30-T/C 6651763|8-A/T 6651994|28-A/G 6652616|33-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005617978 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653336|20-T/C 6653857|60-T/A 6661332|57-A/T 6661613|21-G/A 100015558|12-T/G 100016614|13-A/G 100016893|9-G/A 100016974|14-T/C 100017016|14-G/C 100018076|32-A/G 100019206|6-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019217|46-A/T 100019384|38-C/T 100019646|24-T/A 100019874|10-C/G 100019964|12-C/A 100020293|37-A/G 100020842|17-G/A 100021693|26-T/C 100022050|68-A/T 100022979|40-A/G 100023492|66-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100045668|41-G/A 100065160|26-C/T 100066259|47-G/A 6630074|25-T/C 6651026|5-A/G 6651431|37-C/G 6651540|51-T/C 6651708|27-C/T 6652397|25-T/C 6653258|20-A/C 6661295|56-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006134969 0.000000000 0.000000000   
## 100016658|9-C/T 100016823|19-A/C 100017190|25-A/G 100017629|18-T/C 100018573|66-T/A 100019552|33-T/G 100021046|26-A/G 100022548|38-A/C 100065206|29-C/A 100065846|12-T/A 6651279|28-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004219409 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652199|28-G/A 6652400|17-C/T 6652445|11-A/T 6653155|9-C/G 6653256|29-G/A 6661317|35-T/C 6663970|38-G/C 6665305|7-T/C 100015212|40-T/C 100015773|62-T/C 100016229|66-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006172840 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017966|44-G/A 100018540|41-C/G 100019145|8-G/A 100020607|26-G/A 100021569|14-G/A 100023034|23-C/T 100023386|11-T/C 100065690|24-C/G 6650623|27-T/C 6650909|20-C/G 6651336|17-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651419|53-T/C 6652696|7-A/G 6652736|50-T/A 6653280|14-G/T 6653295|57-T/C 6653940|33-C/G 6661206|18-A/G 6661327|42-G/C 6664003|47-C/T 100015464|37-A/T 100015704|41-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007936508 0.000000000 0.000000000   
## 100016862|45-C/T 100019871|11-C/T 100020987|40-T/C 100021296|8-G/A 100065560|20-C/G 100066263|36-C/T 100066672|61-G/C 100082462|27-A/G 6632122|60-C/T 6650958|39-G/T 6651020|25-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651285|11-A/G 6651625|35-A/G 6651661|21-C/A 6651716|31-A/G 6651796|30-T/G 6651885|10-A/T 6652069|22-A/G 6652117|17-A/G 6652234|42-G/A 6653188|36-T/C 6653368|52-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661580|47-C/T 6661803|14-T/C 6661812|53-C/T 6661866|32-G/C 100015736|43-G/A 100016141|36-G/A 100017142|64-C/T 100019476|8-T/C 100022055|56-G/A 100022078|12-T/C 100022886|24-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6631211|9-C/T 6651047|34-T/G 6651407|46-C/T 6651481|28-G/C 6652585|52-T/G 6653252|68-G/A 6653882|52-A/T 6653901|21-A/T 6654029|48-A/G 100015720|28-G/T 100016789|20-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016796|38-G/A 100017412|8-A/G 100017613|42-T/G 100017642|45-C/A 100017690|28-G/T 100018660|67-C/T 100020040|40-T/A 100021191|5-G/C 100023009|12-A/G 100065757|7-G/C 100066245|18-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100074042|5-T/C 100082359|43-C/T 6635615|63-A/T 6650495|22-G/C 6650509|12-C/A 6651034|16-A/T 6651369|18-C/G 6651472|63-T/C 6651525|65-T/G 6651657|19-G/A 6651750|54-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652293|6-T/G 6652474|14-G/A 6653662|55-G/C 6661543|6-A/G 100017915|15-G/A 100020329|6-T/C 100021269|67-C/T 100021647|7-C/G 100065434|44-T/G 100091128|19-C/T 6630649|30-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6631485|63-C/T 6634232|23-C/T 6650379|29-C/T 6650507|19-A/C 6650854|20-G/A 6651417|34-C/T 6651649|55-G/A 6651797|46-C/T 6652137|50-T/C 6652171|14-G/C 6652353|59-C/T   
## 0.000000000 0.004255319 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652439|17-A/C 6652481|49-A/G 6652592|44-C/T 6652631|8-T/C 6652759|5-G/C 6653033|21-C/A 6653086|60-T/C 6653403|58-C/G 6653441|17-C/A 6653651|15-A/G 6653652|24-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653717|62-T/A 6653911|22-G/C 6657418|43-C/G 6658319|40-G/A 6661213|21-C/T 6661527|23-T/C 6664003|60-C/T 100017332|29-G/A 100018422|17-T/C 100019803|28-C/T 100020227|22-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021230|36-G/A 100045732|32-A/G 100065400|55-A/G 100065695|10-T/A 6650641|39-G/C 6650730|37-C/T 6651079|5-A/T 6651096|56-T/C 6651302|27-C/G 6651575|42-A/G 6651609|46-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651712|16-T/C 6651755|6-C/G 6651927|7-C/T 6652423|26-A/G 6653022|23-G/C 6653024|17-C/T 6653143|11-A/G 6653233|66-T/A 6653287|46-C/T 6653308|9-A/G 6653555|27-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653600|5-T/C 6653915|45-T/G 6653995|60-T/C 6657836|14-A/G 6661227|16-C/A 6661262|58-G/T 6661434|38-G/T 6661641|45-A/G 6661702|15-A/G 6662581|37-A/T 100114018|47-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004608295 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016369|9-A/G 100017864|12-A/C 100018488|65-A/G 100018874|30-C/T 100022833|43-A/C 100045516|20-A/G 100065233|14-C/G 100065518|13-T/G 100065693|58-C/T 100066101|12-T/C 6633196|52-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004464286   
## 6633443|50-C/G 6650488|44-T/C 6650661|48-G/C 6650800|48-C/T 6650825|39-G/A 6650845|36-C/T 6650876|20-T/G 6651093|21-T/C 6651267|9-G/A 6651306|19-G/A 6651379|44-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651554|67-T/C 6651736|43-T/C 6651932|30-T/C 6651941|51-C/T 6652116|48-C/T 6652661|48-C/T 6652756|60-T/C 6652829|67-A/G 6653016|28-G/A 6653035|59-T/C 6653400|19-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653480|48-C/A 6653764|58-T/G 6654093|42-A/G 6661397|22-T/G 6663931|67-C/G 6663957|68-G/A 6663967|43-G/C 6665630|56-C/T 100017995|7-C/G 100020113|15-A/T 100022566|30-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100044990|7-T/C 100065049|7-G/T 100066339|40-A/G 100082461|32-T/A 6632579|11-G/A 6650828|56-C/T 6650907|12-G/C 6650924|57-A/T 6651078|6-G/A 6651186|45-G/A 6651357|21-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007751938 0.000000000 0.000000000   
## 6651533|11-T/C 6651835|18-A/G 6651845|5-C/T 6652615|62-G/A 6652654|38-A/G 6652959|31-C/A 6652967|19-C/T 6653003|36-G/C 6653135|53-G/T 6653227|62-A/G 6653345|29-G/T   
## 0.000000000 0.000000000 0.000000000 0.004291845 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653424|16-A/C 6653449|26-T/C 6653581|57-G/C 6653676|29-A/G 6653712|15-T/C 6653723|10-C/T 6653956|18-A/G 6654001|23-C/A 6658504|15-C/A 6658614|43-T/G 6661202|35-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661234|44-T/C 6661397|27-C/T 6661731|51-C/A 6661793|54-A/G 6663947|19-T/G 6664041|32-A/G 6664042|66-G/A 6664043|13-T/A 100017392|44-T/G 100020618|50-C/T 100022663|33-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6630289|20-G/C 6650619|36-T/C 6650638|22-A/C 6650699|38-T/C 6650728|58-T/C 6650755|23-T/A 6650783|14-G/A 6650849|14-T/C 6650880|67-A/G 6651095|41-C/T 6651245|18-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651292|26-C/G 6651352|20-T/C 6651467|62-G/C 6651557|42-C/T 6651631|26-C/T 6651664|24-T/C 6651688|48-C/T 6651718|35-C/T 6651795|51-C/T 6651923|42-T/C 6651965|39-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652219|19-T/C 6652378|63-C/T 6652434|66-A/C 6652655|53-T/G 6652722|31-C/A 6652830|22-T/C 6652882|43-C/A 6653040|42-C/T 6653271|6-A/G 6653385|63-G/T 6653386|12-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653418|27-T/A 6653450|16-A/G 6653476|17-G/C 6653520|26-A/G 6653763|12-G/A 6653916|15-T/C 6654026|50-T/C 6654061|33-A/G 6657577|47-G/A 6657800|39-C/A 6658145|22-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.010101010 0.000000000   
## 6658508|25-A/G 6661100|58-G/C 6661185|17-G/C 6661209|14-C/T 6661230|12-C/T 6661236|16-T/C 6661314|22-A/C 6661446|29-G/A 6661535|11-G/A 6661559|28-T/C 6661597|46-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661642|45-G/T 6661657|60-G/A 6661731|68-A/G 6661796|25-A/G 6662683|15-T/C 6664747|36-A/C 6665469|54-T/A 6665629|23-C/G 100023210|29-C/A 100065681|26-G/T 100114697|13-C/G   
## 0.000000000 0.000000000 0.004484305 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6630523|63-G/A 6650409|45-T/C 6650528|28-G/T 6650721|49-C/T 6651065|27-G/T 6651098|23-T/C 6651125|47-G/A 6651426|10-G/A 6651605|61-C/A 6651634|10-G/C 6651759|12-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651815|20-A/C 6652098|62-G/A 6652125|13-C/T 6652182|12-A/G 6652205|23-G/T 6652340|36-A/G 6652361|22-A/G 6652367|17-C/A 6652519|22-A/T 6652681|7-T/C 6652787|16-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653095|8-G/T 6653128|9-G/T 6653131|30-G/A 6653340|41-C/T 6653516|66-C/G 6653855|60-C/A 6654020|41-T/C 6654087|18-G/A 6657400|14-C/T 6658359|12-G/A 6661176|55-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661182|18-C/T 6661371|21-A/G 6661403|66-A/C 100065611|31-A/C 6661497|12-G/A 6661654|59-A/G 6662907|21-A/G 6663946|23-C/G 6665056|53-C/T 6665628|28-C/A 100019769|39-T/C   
## 0.000000000 0.000000000 0.000000000 0.006024096 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006451613 0.000000000   
## 100082375|66-T/G 100082404|55-T/C 6650592|12-C/A 6651184|37-G/A 6652576|37-G/T 6652672|55-C/T 6653304|23-A/T 6656915|10-G/T 6657307|34-A/T 6657558|38-C/T 6658381|25-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6658521|6-G/C 6661752|23-A/C 6664327|23-G/A 100044751|5-A/G 100085984|13-G/A 100115531|5-T/A 6643578|12-A/G 100106109|11-G/A 100113138|5-T/G 100117994|11-T/A 6662821|6-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664383|8-A/G 6665284|5-C/G 6665328|8-T/A 6665629|20-C/G 100118214|11-C/A 6663102|10-G/A 100021042|56-T/C 100090841|7-C/A 100103683|13-G/A 100103683|6-A/T 100106227|13-C/A   
## 0.000000000 0.004115226 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100106247|9-T/A 100111488|6-C/G 100112338|6-T/G 100114623|5-C/G 6644428|5-T/A 6647555|5-C/A 6648501|8-A/G 6648560|7-T/C 6658337|6-C/G 6664325|9-C/T 6664355|7-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664406|5-G/T 6664885|10-C/T 6665134|5-A/G 6665147|13-C/T 100065344|49-T/C 6661457|44-C/T 6661867|13-G/A 6661122|26-C/T 100064630|57-A/G 100025554|68-T/A 6658677|32-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.006451613 0.000000000 0.000000000 0.000000000 0.007633588 0.000000000 0.000000000   
## 6635413|16-T/A 6661764|43-C/A 6652801|27-G/A 100024646|8-G/C 100066569|63-G/A 6652374|43-T/C 6661449|54-A/C 6661688|9-G/T 6661583|7-C/T 6661219|45-G/A 100016118|67-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004901961 0.000000000 0.000000000 0.005050505 0.000000000 0.000000000   
## 100065968|17-C/T 6664008|7-T/G 100019909|40-A/G 100024919|19-A/C 100021772|52-T/C 100066372|27-A/G 100091350|43-A/C 100017975|34-A/G 100045781|34-C/A 6652884|53-G/A 100017252|27-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017894|53-G/A 100022254|26-T/A 6632275|61-T/C 100065115|49-T/C 100065825|30-T/C 6654008|51-C/T 6653230|18-T/G 100020850|15-T/A 100024608|28-A/G 100065720|36-C/T 100019004|19-T/C   
## 0.000000000 0.000000000 0.004854369 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022949|21-T/C 100024718|58-G/A 100065076|9-G/C 6650868|53-G/A 100017101|27-T/G 100017766|10-C/A 100019793|62-T/A 100021136|57-G/A 100021706|33-T/C 100025017|58-T/C 6652036|20-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015261|30-G/A 100015698|55-A/C 100016039|28-T/C 100021704|31-A/T 100021798|6-G/A 100022137|6-T/C 100022883|14-A/G 100023375|24-A/C 100064876|34-G/A 100022317|10-A/G 100065186|8-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653805|57-G/C 100021710|10-A/G 100023305|24-G/A 6634600|17-T/C 6650598|62-C/A 100017818|14-T/G 100020277|67-T/G 100020322|14-C/T 100021252|30-G/A 100022007|39-C/T 100022967|55-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004587156 0.000000000 0.000000000   
## 100023231|52-G/C 100024979|12-A/T 6651448|5-C/A 6661619|36-C/T 100101013|46-C/T 100015916|40-T/G 100019381|29-T/C 100021309|54-A/G 100022531|25-T/C 100022877|17-A/C 100023365|32-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100023869|51-T/A 100066103|5-G/A 100066389|65-G/C 6652703|57-T/C 100019288|33-T/C 100020549|44-T/G 100020551|60-A/T 100023117|6-G/T 100023343|62-G/A 100065070|10-C/T 100119322|60-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653215|23-A/C 100015905|30-T/A 100018538|19-A/G 100020139|46-T/C 100020548|9-A/C 100065378|43-C/T 100065666|20-A/T 100065687|58-C/T 6651010|63-C/T 6651023|13-C/T 6651465|19-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004385965 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653507|50-C/G 6661164|56-C/G 100015555|49-G/A 100017215|20-C/T 100018040|51-T/A 100018557|8-A/C 100019185|63-C/G 100019688|44-C/T 100023075|63-C/G 6630180|30-A/G 100015432|27-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017493|63-A/G 100020399|26-G/A 100020528|67-A/G 100021151|33-C/G 100021753|16-G/A 100021795|51-G/A 100062072|14-A/C 100066634|26-T/A 6661693|17-A/G 100015331|61-T/C 100015609|28-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017169|13-G/A 100017928|37-T/A 100019505|12-C/A 100020075|44-G/T 100020413|29-G/A 100021373|46-G/A 100021417|26-A/C 100022461|56-A/G 100022969|9-G/A 100023275|19-T/C 100082212|44-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004219409 0.000000000 0.000000000   
## 6652622|54-G/A 6653084|57-C/G 6653710|21-C/T 6653840|32-A/T 100021632|19-T/C 100022984|17-G/C 100064905|26-T/A 100015960|29-G/A 100016761|32-C/T 100017811|61-T/C 100019007|29-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020970|16-G/A 100065097|13-T/C 6651396|51-T/G 6651430|31-C/T 100015246|12-A/G 100017606|48-T/C 100018953|27-G/C 100019018|13-A/G 100020129|19-G/A 100020404|28-A/G 100020733|17-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.012658228   
## 100021724|12-A/C 100066663|43-G/A 100122660|5-A/G 6630550|32-T/C 6652105|37-A/G 100015837|30-T/C 100016214|35-G/T 100017908|21-G/A 100019267|32-G/A 100023141|5-C/T 100023174|41-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100064755|8-G/A 6651656|34-G/A 6651767|59-G/C 6664728|67-C/T 100018065|63-T/A 100019510|9-G/A 100019632|22-T/C 100019754|7-A/T 100020251|60-G/A 100021712|18-T/A 100044571|14-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.007299270 0.000000000 0.000000000 0.000000000 0.004347826 0.000000000 0.000000000   
## 6661691|15-C/T 6663917|15-C/T 100018085|21-A/G 100019876|24-A/C 100020554|42-G/T 100022262|60-C/A 100023321|57-A/G 100065480|65-T/A 6652163|42-T/G 6661278|34-C/G 6661299|21-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016113|5-T/A 100018753|18-C/A 100022995|26-G/A 100045005|36-T/A 100065425|18-T/G 100065813|42-A/C 100066450|34-C/G 6652607|6-A/G 6653544|67-T/C 6661463|59-T/G 6661534|24-C/T   
## 0.000000000 0.000000000 0.000000000 0.008333333 0.000000000 0.000000000 0.009132420 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020053|13-A/T 100020534|56-C/G 100020747|66-T/A 100022664|19-A/G 100023314|12-C/T 100024345|29-C/T 100065655|8-A/T 100082306|16-G/C 6632614|14-G/C 6650544|61-G/A 6661521|5-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661754|5-A/T 100017623|23-C/T 100019111|65-T/A 100020626|26-A/C 100022838|5-C/T 6661655|44-C/A 100015424|32-C/A 100017638|47-T/C 100019862|5-A/G 100064626|46-C/T 100066576|33-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100082421|35-G/T 100082421|56-A/T 6661595|45-G/A 100018565|14-C/T 100019547|16-A/T 100021316|68-A/T 100066021|13-T/C 100066577|66-T/C 6635995|53-T/G 6650794|31-T/C 6651294|52-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661643|39-A/C 6665642|53-T/C 100017091|53-T/C 100018288|5-C/T 100019411|13-C/T 100022970|53-A/G 100044935|38-C/G 100065133|26-G/A 100065604|17-G/A 6653270|12-C/T 100082437|5-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004878049 0.000000000 0.004201681 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017079|68-T/A 100018306|21-T/A 100065207|61-C/A 6651674|58-G/A 6661762|25-C/T 100016541|14-A/T 100019240|64-C/A 100022760|39-A/C 6661631|14-G/T 100015984|25-C/T 100020169|39-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020171|37-C/T 100020514|46-G/A 100093365|13-T/C 6631375|67-A/T 6651160|63-T/G 6651417|40-A/G 6653272|47-T/C 6661637|58-G/T 6661875|62-G/A 100016327|11-G/T 100017411|17-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.016260163 0.000000000 0.000000000 0.000000000   
## 100021938|40-C/A 100104022|29-G/C 6653086|61-G/A 6654063|52-T/C 6661270|57-C/T 6661413|37-C/T 6661571|64-G/A 6662928|6-G/T 6665563|11-G/C 100015347|8-A/G 100015697|17-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6630379|34-A/G 6651111|37-G/A 6651135|63-T/A 6652080|40-C/G 6653891|42-G/A 6661255|43-T/G 6661262|56-A/G 6661441|11-A/G 100019678|23-G/T 100065386|6-G/C 100082362|41-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008658009   
## 100119892|9-C/T 6650706|34-C/G 6651084|9-T/C 6652828|42-G/A 6653640|66-C/T 6661213|29-A/C 6661501|61-G/T 100020312|34-A/G 100066078|57-C/T 6651216|56-G/C 6651663|16-T/G   
## 0.000000000 0.004566210 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652291|30-C/A 6661623|16-C/T 6664064|11-C/A 100019069|65-C/T 6629913|31-T/G 6650658|32-T/C 6651643|7-G/A 6651651|36-T/C 6652652|32-C/T 6652781|24-G/A 6652781|64-C/G   
## 0.000000000 0.000000000 0.000000000 0.006756757 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652958|54-G/C 6661185|61-C/T 6661218|12-C/T 6661232|58-C/T 6662683|28-G/C 6662714|21-A/C 6663024|21-C/T 100016570|44-C/T 100017965|14-G/A 100018649|23-G/A 100021210|28-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004878049 0.000000000 0.000000000   
## 100044629|5-T/A 100065997|37-G/A 100066075|25-C/G 100119599|31-T/C 6633592|39-A/T 6650534|49-T/C 6650535|67-A/T 6651337|9-A/G 6653918|11-A/G 6657564|24-C/T 6661126|11-C/T   
## 0.007812500 0.000000000 0.000000000 0.000000000 0.000000000 0.012903226 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661428|5-C/T 6661666|46-C/T 6661783|8-T/C 6661798|20-C/T 6661798|28-T/C 6661836|10-G/A 6661836|20-G/C 6661863|56-C/T 6662849|35-T/C 6665679|46-T/G 100093359|29-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6629858|37-A/T 6643954|6-G/T 6652019|59-G/C 6652746|56-G/T 6652810|45-C/G 6653160|44-G/A 6653239|27-C/T 6653352|54-C/G 6653632|19-G/A 6662822|7-G/A 6664724|62-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008264463   
## 100044710|9-T/G 100093660|28-C/A 6633718|59-C/T 6641748|42-C/A 6658299|7-T/C 6661450|36-G/A 6643586|10-T/G 6643586|9-C/A 6648203|14-A/T 6664350|5-C/T 100106226|9-C/A   
## 0.004166667 0.000000000 0.000000000 0.000000000 0.006535948 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100111464|9-T/C 6643578|11-A/T 6664414|23-C/A 6664432|8-G/T 6643814|11-C/G 6643814|5-G/A 100100648|8-G/T 100103657|7-G/C 100106110|9-A/G 100106239|8-T/G 100109437|5-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100109437|9-C/G 100110529|5-C/T 100111487|5-T/G 100122090|8-T/A 6649192|5-T/C 6657874|5-G/C 6658144|18-A/T 6662919|11-A/C 6663018|25-T/C 6664273|5-C/A 6664306|8-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664893|38-G/C 6664910|11-C/G 6665153|7-A/G 100082484|50-G/T 100118470|9-C/T 6664010|54-C/T 100046106|24-G/T 6666102|8-G/A 6657032|15-C/T 6665215|57-C/T 100018359|44-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100023139|68-G/T 6664085|47-C/T 6661211|58-C/T 100066559|31-T/C 6663985|50-C/T 6665628|45-T/C 100097039|23-C/G 6665040|44-A/G 100093411|9-A/C 100093413|26-G/C 6634480|31-T/A   
## 0.000000000 0.000000000 0.006250000 0.000000000 0.005586592 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065820|27-T/C 100065626|5-A/C 100017456|5-A/C 100065031|12-G/A 100090339|7-T/C 6654096|11-C/A 100045278|30-G/C 6650722|8-G/C 100023932|52-G/T 6661186|27-A/G 100066349|48-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005464481 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664781|12-G/A 100018124|53-C/G 100064999|21-G/A 100074314|17-G/A 6661474|58-C/G 6664089|39-C/A 100074315|18-C/T 100109510|37-A/G 100106299|29-A/C 6652532|17-A/G 6666146|37-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020687|19-G/A 100017102|43-A/G 100016103|11-C/T 100016936|24-G/C 100065009|15-G/C 100021792|22-G/A 100065064|48-C/T 6651486|23-C/A 100022395|5-G/T 6635620|7-T/G 100021158|56-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100024001|29-C/A 100065225|30-T/C 100065766|32-C/A 100065871|7-G/C 6657554|17-A/G 100021381|48-A/G 100065073|30-T/C 100065186|6-A/G 100082387|67-G/T 100022890|66-G/A 100023224|41-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100066151|44-C/A 100065712|39-A/G 100016548|22-A/C 100018316|52-G/A 100018669|51-A/G 100020096|10-G/A 100021832|59-T/C 100045940|24-C/A 100066650|24-A/G 100045116|6-C/T 100112452|57-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653883|52-C/G 100021186|32-G/C 100021930|67-G/A 100065300|66-G/T 100082101|62-A/G 100119315|9-G/T 6650840|6-C/G 6664036|6-A/T 100015791|35-A/G 100021993|35-A/T 100065071|26-C/T   
## 0.000000000 0.000000000 0.005952381 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100106305|20-G/C 100020586|49-T/G 100022366|24-T/C 100022982|18-T/C 100102365|9-C/G 100016200|62-T/G 100017620|16-C/T 100018736|57-T/C 100020340|6-T/C 100066082|8-G/T 6663098|31-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018726|57-G/T 100019037|42-G/A 100021366|54-C/T 100022220|45-A/G 100066146|14-T/C 100066266|57-C/G 100066574|19-T/C 100016560|7-T/C 100066037|49-C/G 100121195|35-C/G 100018616|49-T/G   
## 0.000000000 0.000000000 0.008620690 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100066663|58-T/C 100118142|5-T/C 6665806|57-G/A 100018844|30-C/T 100091301|63-G/T 100096922|11-G/T 6651543|26-C/T 100016510|41-T/A 100018353|22-G/T 100019853|68-A/T 100021078|39-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021925|13-A/G 100065479|51-A/G 100066412|14-T/C 100091301|22-C/G 100019195|66-T/A 100023208|34-G/A 100065057|21-C/T 100065426|35-C/A 100073631|7-G/C 100016006|34-T/G 100017176|29-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005102041   
## 100018612|5-A/C 100020218|34-A/C 100065408|22-T/G 100065476|64-G/A 100065761|7-G/A 6632042|19-G/C 100015587|20-C/A 100016037|24-A/G 100021787|68-A/C 100022942|14-C/G 100066550|58-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004444444 0.000000000 0.000000000   
## 100082539|7-G/A 6650594|30-T/G 6653546|21-T/C 6664281|14-A/T 100016076|49-A/C 100022081|49-G/A 100022274|36-C/A 100116482|57-T/A 100121512|34-G/C 100017777|61-G/A 100064625|41-A/G   
## 0.000000000 0.004115226 0.000000000 0.004237288 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100064874|12-T/C 100106306|45-G/A 100106306|65-G/A 100021587|57-C/T 100065160|65-G/T 100073403|34-A/C 100082633|51-A/G 100097045|48-T/C 6652651|47-T/A 6661761|37-C/T 100017728|53-A/C   
## 0.000000000 0.000000000 0.000000000 0.009708738 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065286|5-A/C 100082197|10-C/T 6633952|10-G/C 6657904|18-T/C 100065579|38-A/C 6661858|20-C/A 100019471|14-G/A 100044832|16-G/T 100065848|33-G/A 100066117|37-G/T 100112452|34-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6630404|40-A/C 100103994|35-G/T 100017343|6-T/C 100064738|40-C/G 100064746|17-G/A 100074010|27-G/C 6631936|55-T/C 6661620|58-C/G 100016884|51-C/A 100065351|47-C/G 6631698|7-C/G   
## 0.000000000 0.000000000 0.000000000 0.004201681 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652538|34-T/C 6657259|24-G/A 100016745|16-T/C 100065233|43-G/A 6630611|19-A/C 6652270|62-C/G 6652729|29-T/G 100020530|29-C/A 6630408|13-G/T 6630626|34-A/T 6631766|58-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6633539|7-G/A 6634322|14-T/G 6652458|12-A/T 6653006|66-G/A 6653115|48-T/A 6663957|45-C/T 100066473|39-A/G 6650554|32-A/G 6657465|23-T/A 6663949|9-G/A 100020033|33-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100082315|13-G/A 6629848|65-C/G 6630880|24-C/G 6650849|38-G/A 6650881|15-G/A 6651487|20-C/T 6651826|47-T/A 6652855|33-G/T 6657563|28-T/G 6657811|15-G/A 6658667|25-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6662907|9-T/A 6665143|45-A/G 100021831|19-T/A 100045184|5-G/C 100065651|20-A/C 100066434|64-T/A 100066660|33-T/C 6633749|29-T/A 6635481|20-A/G 6650535|47-C/A 6652320|27-G/C   
## 0.000000000 0.000000000 0.000000000 0.006250000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652796|29-G/C 6654065|42-C/G 6657294|51-C/A 6658085|11-A/G 6661346|29-T/A 6661679|17-C/T 6662799|12-C/A 6662831|22-C/T 6663021|23-A/G 100085932|36-G/C 6630269|58-C/T   
## 0.004566210 0.000000000 0.000000000 0.000000000 0.004405286 0.000000000 0.000000000 0.000000000 0.000000000 0.004761905 0.000000000   
## 6630995|13-C/T 6633153|34-C/T 6644233|38-G/T 6650943|57-C/G 6650961|27-T/G 6651177|55-C/G 6651864|18-T/C 6652465|10-A/T 6652776|7-C/T 6654017|47-C/T 6657683|10-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657925|11-T/C 6658404|12-T/G 6664915|43-G/T 100045721|8-T/A 100082404|10-G/T 100093333|22-G/A 6633054|40-T/A 6642765|20-C/T 6643196|21-C/G 6653359|24-C/T 6658471|31-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004424779 0.000000000 0.000000000 0.000000000 0.004115226   
## 100065416|12-T/C 6661414|26-T/C 6664306|12-G/A 6665409|5-T/A 6642901|10-G/A 100108705|8-G/A 6665151|5-A/T 100122090|6-T/A 6662690|20-C/T 100016003|7-T/A 100016649|43-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019431|29-C/T 100023959|16-T/C 100024997|62-T/G 100044851|16-G/C 100064658|7-C/T 100064682|49-G/A 100064707|51-G/A 100064714|52-G/A 100064753|29-A/G 100064840|30-G/A 100065000|48-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065025|5-A/G 100065087|14-G/A 100065157|40-T/G 100065238|55-G/T 100065368|11-G/C 100065400|61-A/G 100065428|33-G/C 100065497|38-G/T 100065538|49-T/G 100065597|12-A/T 100065605|63-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065647|9-T/C 100065669|36-A/C 100065706|45-G/A 100065736|5-A/G 100065739|9-C/T 100065933|35-G/A 100066025|19-T/C 100066134|25-T/C 100066259|18-C/T 100066274|66-A/G 100066332|57-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100066410|32-G/A 100066624|60-C/G 100082151|41-C/A 100082232|23-T/G 100082297|57-C/T 100082311|43-C/T 100082409|16-T/A 100082418|7-T/C 100082564|6-T/C 100082633|21-G/A 100086276|23-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100086585|5-G/T 100091075|52-C/T 100091130|54-T/C 100093549|30-T/C 100098502|34-A/T 100101042|48-T/G 100121195|12-A/G 100121196|29-T/C 100121197|43-C/G 100121199|47-T/A 100121200|51-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100122496|35-G/A 6630263|32-T/A 6630513|10-G/C 6631038|8-T/C 6631621|56-C/G 6633643|35-C/T 6634127|43-A/G 6635254|35-A/C 6641856|17-G/T 6642355|17-A/G 6650389|35-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650444|8-A/G 6650519|63-A/G 6650553|61-C/G 6650587|17-C/A 6650591|24-A/G 6650676|68-C/T 6650899|7-G/A 6650902|63-C/T 6650919|10-A/G 6651039|12-G/A 6651054|54-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651207|33-A/G 6651431|65-C/G 6651512|39-C/A 6651635|32-C/T 100065262|63-T/A 6651763|26-G/A 6651874|8-T/A 6651879|12-C/T 6652022|6-C/T 100065511|46-G/C 6652174|20-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652193|50-G/A 6652287|47-C/A 6652538|35-G/A 6652743|25-G/A 100065924|8-G/T 6652898|57-G/T 6653034|66-G/A 6653037|45-C/G 6653161|37-C/T 6653161|51-C/G 6653240|43-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653383|7-T/C 6653394|26-G/A 6653420|30-G/T 6653514|60-C/G 6653521|20-A/T 6653525|7-A/G 6653571|21-G/T 6653574|48-G/T 6653793|20-C/T 6653861|28-C/G 6653990|38-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6654094|56-G/T 6654108|11-A/G 6657811|16-C/T 6658021|8-T/G 6658173|44-C/A 6658487|25-C/A 6658616|17-G/T 6661180|50-T/C 6661214|14-C/G 6661229|60-G/A 6661236|33-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661487|18-A/G 6661524|9-G/A 6661550|30-T/C 100082471|28-C/T 6661631|29-G/C 100082491|60-C/T 6661651|25-G/A 100082562|68-C/A 6661778|27-A/G 6661827|57-C/G 6661838|61-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661845|30-A/G 6662631|42-G/A 6662646|5-A/C 6662657|27-G/A 6662765|9-A/G 6662767|43-T/A 6662797|33-T/C 6663018|35-C/G 6663941|10-G/C 6663953|25-A/G 6663990|56-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664007|22-C/A 6664018|43-T/C 100091330|60-C/T 6664739|19-C/T 6665051|50-C/A 6665130|20-T/A 6665130|26-T/A 6665131|16-G/T 100109477|22-G/A 6665563|54-C/T 6665566|58-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6665567|59-A/G 6665600|6-T/C 6665637|6-G/C 6665638|50-G/C 6665992|26-C/T 6666146|48-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
##   
## # Expected heterozygosity:   
## 6661549|60-C/T 6650588|15-C/T 6661794|21-A/G 6664081|63-G/A 6653885|30-A/G 6661177|64-C/T 6661457|52-C/T 6653401|39-G/A 6657572|30-T/A 6661566|34-A/G 6663962|65-C/T   
## 0.499782986 0.499274376 0.495550018 0.498614958 0.490977946 0.496683115 0.500000000 0.499003508 0.455548775 0.468463960 0.470416362   
## 6665217|18-A/G 6661207|60-A/C 6661398|51-C/T 6651899|27-T/A 6653020|28-A/C 6653704|64-T/G 6650504|59-T/C 6652003|38-G/C 6661105|11-G/T 6661432|29-C/A 6652162|44-A/T   
## 0.497418337 0.489709626 0.468043808 0.456294896 0.497471605 0.495542375 0.494665961 0.446483006 0.492822103 0.467790976 0.483471074   
## 6653798|57-C/T 6653191|40-A/G 6664876|31-G/A 6661163|31-T/C 6652675|16-G/T 6652288|45-C/T 6650933|66-G/A 6653948|58-T/C 6663083|49-G/A 6662726|45-A/G 6664756|9-C/T   
## 0.493213309 0.480358737 0.466557669 0.482229239 0.500000000 0.477040816 0.499415589 0.499626743 0.490337630 0.461419753 0.454734122   
## 6661688|18-A/G 6666128|43-C/G 6652433|13-A/G 6652352|5-T/C 6664270|14-C/A 6651416|17-C/T 6664751|11-T/A 6657734|47-A/G 6663081|18-A/G 6651148|64-A/T 6656916|22-T/C   
## 0.472125772 0.431412894 0.461747397 0.492362075 0.483053518 0.499720999 0.478116630 0.435955679 0.437591882 0.491862690 0.449130499   
## 6653573|49-T/C 6661198|22-T/G 6665027|17-A/T 6664900|6-C/T 6650826|66-G/A 6653766|40-A/C 6665588|8-C/T 6652573|8-C/A 6652700|14-C/G 6664334|9-A/G 6651772|17-A/T   
## 0.486992716 0.492254416 0.486111111 0.490903191 0.497662357 0.498949653 0.448532986 0.458509035 0.483471074 0.455636034 0.473741319   
## 6651828|36-G/A 6650476|13-A/C 6651474|15-T/C 6652836|30-C/T 6653346|25-C/A 6658563|22-C/T 6661870|10-G/T 6657169|37-T/C 6661569|7-A/G 6652342|46-G/A 6656937|18-C/T   
## 0.497819509 0.489002801 0.468027481 0.487643256 0.474311111 0.429256797 0.499991098 0.448425595 0.434963719 0.466766357 0.436894044   
## 6661537|56-G/A 6664008|14-G/A 6651473|53-G/A 6661884|29-T/A 6662691|24-C/T 6661181|61-C/T 6651798|39-C/A 6661610|46-T/C 6653512|60-C/G 6651413|19-C/A 6651436|18-C/T   
## 0.444444444 0.475580721 0.467126890 0.496497118 0.424561164 0.464076948 0.483471074 0.499917817 0.471078353 0.498750000 0.495758310   
## 6663093|22-C/A 6652854|20-T/C 6657907|22-C/T 6664719|5-A/G 6651857|34-G/T 6658182|11-G/A 6661203|33-G/T 100066381|65-T/C 6661291|28-A/C 6651404|67-A/G 6661583|6-T/C   
## 0.437044745 0.440151838 0.420366552 0.431020408 0.443029073 0.438412999 0.468750000 0.492881586 0.494311111 0.466745152 0.433884298   
## 6653019|13-C/T 6661633|39-G/T 6653539|14-G/C 6652507|49-A/G 6662661|7-T/C 6661859|57-A/G 6661395|60-C/T 6661690|43-G/A 6653303|26-C/T 6650697|6-C/A 6661748|26-C/T   
## 0.441701368 0.445699897 0.473261719 0.416810942 0.444444444 0.499533827 0.476739715 0.479655179 0.494842529 0.498715199 0.485229492   
## 6661276|34-A/G 6651590|59-C/G 6661435|48-G/A 6664012|53-A/G 6651071|8-C/T 6661174|27-G/A 6657901|34-G/A 6661288|56-T/C 6664895|15-G/A 6665065|54-A/G 6653483|52-C/T   
## 0.487229207 0.444969790 0.461656805 0.457045184 0.486796875 0.458316802 0.459569641 0.400350765 0.499885216 0.445976938 0.483176359   
## 6652822|57-G/A 100065688|55-A/G 6661405|37-G/T 6661817|33-A/G 6651443|47-G/T 6651921|15-T/A 6654090|16-G/A 6653899|53-A/G 6661211|62-G/A 6652984|32-G/A 6661495|42-T/C   
## 0.438401824 0.467559630 0.450421005 0.413887500 0.443064235 0.482015458 0.499967482 0.461950059 0.498765480 0.464369075 0.464898824   
## 6650679|43-C/T 6661246|33-G/A 6653043|54-C/G 6651254|12-A/T 6653789|32-G/T 6650988|24-G/A 6650862|68-C/A 6653541|8-A/G 6662900|30-G/A 6653618|37-G/A 6664721|14-C/T   
## 0.452441261 0.423210373 0.432928585 0.469836873 0.451171875 0.422137988 0.497814357 0.434032456 0.427520832 0.494238565 0.425361570   
## 6652395|48-C/T 6661842|33-T/A 6661739|54-G/A 6652644|26-G/A 6652332|20-T/C 6651976|25-G/A 6661113|14-C/T 6661301|20-G/A 6662986|27-C/T 6653529|7-G/A 6651972|24-A/G   
## 0.433574985 0.476214669 0.448616103 0.456525312 0.420756497 0.454207064 0.455279937 0.433884298 0.399713952 0.450527893 0.420000000   
## 6652901|58-C/T 6653167|32-C/T 6652763|59-G/A 6651610|56-G/C 6661486|27-C/T 6664344|37-A/G 6661743|17-G/A 6651212|18-A/G 6651054|64-T/A 6653313|42-A/G 6652640|45-C/A   
## 0.429687500 0.463667297 0.448291253 0.482887500 0.439156301 0.405937001 0.402852320 0.497418337 0.444444444 0.447923554 0.423210373   
## 6653127|48-G/A 6652179|62-G/A 6664422|18-A/G 6661732|8-C/T 6658587|26-G/A 6661161|53-A/C 6657089|25-C/T 6650998|9-A/T 6652379|23-G/C 6652823|50-C/A 6653209|28-G/C   
## 0.427692918 0.476044871 0.431083940 0.416631944 0.481508876 0.492901766 0.466587996 0.495520669 0.440646847 0.418754883 0.486111111   
## 6664750|24-C/T 6666098|18-G/A 6664416|28-A/G 6661208|26-A/T 100017494|26-T/C 6657426|10-G/T 6650467|17-T/C 6661591|23-T/C 6661615|53-A/G 6651689|52-C/T 100093282|6-C/T   
## 0.390322064 0.428414901 0.417480469 0.462615967 0.434678473 0.371815414 0.408163265 0.437374045 0.482015458 0.430517139 0.398226068   
## 6651044|31-C/T 6663926|8-G/A 6661122|39-C/T 6653015|45-G/T 6651960|46-A/G 6658395|10-A/G 6664288|7-C/G 6651937|12-G/T 6661119|32-T/C 6653567|68-C/T 6657105|21-A/G   
## 0.406809758 0.488165680 0.474311111 0.405306927 0.399876983 0.368703745 0.391374605 0.427437642 0.481440956 0.442932798 0.447034087   
## 6653958|12-C/T 6664417|17-G/A 6653929|22-G/A 6653560|40-C/T 6651307|58-C/T 6651918|7-T/C 6652335|27-T/C 6652403|61-A/C 6661676|25-C/T 6657686|15-A/G 6661180|15-G/A   
## 0.408565616 0.396170485 0.408565616 0.446273308 0.398750000 0.450788158 0.428916958 0.424292292 0.453144523 0.404793388 0.412857008   
## 6664065|56-A/T 6662654|14-C/T 6661258|19-T/G 6661326|21-G/T 6661503|51-G/A 6665677|54-T/C 6651345|67-A/G 6653158|39-C/T 6661434|33-C/T 6650700|61-G/A 6665573|50-G/T   
## 0.404296875 0.405337684 0.457413104 0.394688324 0.414577778 0.355377445 0.392742382 0.403200000 0.367506988 0.435361697 0.371063232   
## 100103686|15-C/T 6661407|28-A/T 6662956|24-T/G 6653198|44-C/T 100119886|12-A/G 6653976|22-T/C 6661123|44-T/C 6661423|44-C/T 6661694|9-T/C 6653208|48-G/A 6661587|35-T/C   
## 0.437913832 0.382793145 0.381121508 0.432132964 0.350802461 0.421373365 0.366230678 0.436224490 0.456055682 0.416584011 0.441701368   
## 6653932|10-C/T 6657861|14-G/A 6664287|35-C/T 6653108|33-A/G 6650863|33-C/T 6653166|35-T/C 6652001|24-A/G 6657913|25-C/G 100109898|15-G/A 6661240|65-T/A 6661268|13-G/A   
## 0.391412951 0.373777513 0.410731998 0.431219555 0.402465278 0.416548929 0.380262562 0.365156846 0.355215267 0.364630841 0.391344904   
## 6653580|43-G/T 6657145|22-C/A 6661660|20-C/T 6652645|41-C/T 6651100|28-C/T 6661548|20-A/G 6657725|32-C/T 6652908|9-A/T 6661838|60-T/G 6652562|28-G/A 6654077|33-C/T   
## 0.406645328 0.366805411 0.392721276 0.408438844 0.367402919 0.429182564 0.397769376 0.395671392 0.369577631 0.423440454 0.385199653   
## 6661761|38-G/A 6658102|52-C/T 6657350|31-T/A 6651178|33-C/T 6661253|38-T/C 100104030|16-C/A 6664895|24-C/A 6653522|21-A/G 6661899|11-A/G 6650883|48-C/T 6661607|53-C/G   
## 0.424822990 0.393491124 0.394859742 0.353298611 0.421117565 0.444955297 0.486111111 0.379672481 0.427307075 0.365479518 0.351000023   
## 6654004|30-T/A 6653722|5-T/G 6654003|26-C/A 6652045|5-C/T 6658305|27-T/C 6657714|46-T/C 6661603|40-G/C 6650949|5-A/T 6664725|29-A/G 6657697|38-A/G 6661471|62-C/G   
## 0.381786045 0.386923457 0.387351611 0.406501096 0.409164203 0.368507561 0.366230678 0.328851087 0.499288003 0.337522463 0.366074177   
## 6661765|40-G/A 6661481|66-A/C 6653282|53-T/C 6652110|26-C/T 6652196|51-C/T 6652944|56-G/A 6658191|17-C/G 6661286|15-G/A 6653684|7-T/C 6653203|66-A/G 6661751|44-T/G   
## 0.367241281 0.469320764 0.373915406 0.407684326 0.417664356 0.401234568 0.394017743 0.326666084 0.373360673 0.363044807 0.452353497   
## 6661711|66-G/A 6650674|36-C/T 6653554|14-G/A 6651804|55-G/C 6664076|29-C/A 6663980|50-G/A 100102214|5-C/T 6653379|50-A/G 6651865|33-T/G 6661260|22-A/T 6651954|62-T/C   
## 0.355029586 0.348750000 0.361225461 0.378105469 0.352582871 0.330876560 0.384929693 0.355377445 0.366598934 0.346479639 0.342459505   
## 6656942|42-G/A 6652635|57-G/A 6661149|41-C/T 6650632|65-G/A 6650568|31-G/C 6650938|6-C/T 6658511|21-A/C 6654094|65-T/C 6653106|31-C/T 6661381|44-A/G 6652779|66-A/G   
## 0.337428701 0.348932064 0.410356302 0.375000000 0.361267761 0.354451055 0.359729604 0.298200692 0.355576472 0.333579882 0.334821818   
## 6650898|47-G/A 6657805|7-A/G 6661727|46-C/T 6662592|9-C/T 6661085|13-C/T 6661239|45-A/G 6665990|9-G/C 6650977|39-G/A 6652000|22-C/T 6658391|30-C/T 6661184|41-C/G   
## 0.343624357 0.335489191 0.341986852 0.359033597 0.334687500 0.358109879 0.488560130 0.315688776 0.313894032 0.313123320 0.497601244   
## 6651519|67-C/G 6652011|54-C/T 6661376|29-C/T 6650669|9-A/G 100073501|45-A/G 6651742|50-G/A 6653416|29-C/T 6661643|49-G/A 6650635|62-G/A 6651529|9-C/T 6652878|58-G/T   
## 0.346449653 0.338139120 0.286242604 0.342245360 0.365569273 0.329260445 0.388750445 0.310431670 0.349103870 0.324222727 0.351642541   
## 6665222|67-C/A 6661481|18-C/T 6665990|48-C/G 6661216|67-C/T 6663955|62-T/C 6652246|10-G/A 6661167|12-T/A 6661710|53-G/A 6664085|17-G/T 6661652|62-A/C 6657045|15-A/G   
## 0.329452369 0.498413013 0.494289377 0.302341425 0.499288003 0.315486069 0.359091602 0.307730720 0.351536448 0.436552524 0.360991736   
## 6661805|6-C/G 6652339|26-G/T 6661277|47-G/A 6661335|49-T/G 6652597|28-C/T 6661737|51-G/T 6664079|62-A/T 6661334|49-G/T 6661187|52-C/T 6653800|24-G/A 6665242|22-G/A   
## 0.481269511 0.369318899 0.304687500 0.329406498 0.306088422 0.290985434 0.293933852 0.332564611 0.313474847 0.302931891 0.499913435   
## 6651247|35-C/G 6653693|39-C/A 6661436|12-T/C 6650629|61-C/A 6653328|49-C/T 6650603|26-A/G 6651494|48-G/A 6652060|23-C/T 6657933|10-C/T 6651038|40-T/C 6664362|28-C/T   
## 0.336734694 0.418375676 0.307176664 0.305040847 0.386007629 0.340790816 0.325034715 0.298995020 0.372561033 0.274027258 0.290885295   
## 6651571|67-C/T 6664050|15-A/G 6652084|30-C/T 6661846|32-C/T 6653638|33-A/C 6657305|12-A/C 6663909|36-C/T 6661305|58-A/G 6657606|35-G/A 6661206|19-A/C 6657339|6-G/A   
## 0.306088422 0.343405437 0.310444118 0.300554017 0.322962912 0.289027686 0.302223013 0.263671875 0.314440481 0.270258096 0.317198486   
## 6657292|22-T/A 6661485|59-A/G 6650475|43-C/T 6652083|41-G/A 6663998|25-T/C 6661115|22-T/G 100102214|35-G/A 6651822|26-T/C 6653698|49-A/T 6651072|34-A/C 6661221|40-G/A   
## 0.325413223 0.287491224 0.326666084 0.296796875 0.283264535 0.303680304 0.324795217 0.296124256 0.340894149 0.290487484 0.285473198   
## 6664084|45-C/T 6664046|47-A/G 6664412|13-G/A 6652764|38-C/T 6652859|41-C/T 6662842|43-C/T 6653459|28-T/C 6652467|20-G/T 6658444|32-T/G 6663948|54-G/A 6661848|65-T/G   
## 0.490898211 0.290657439 0.369845898 0.283439258 0.341479994 0.363044807 0.293589115 0.287929878 0.276854737 0.294464412 0.277777778   
## 6661692|19-C/T 6661666|47-C/A 6657189|5-T/A 6663931|25-C/T 6661747|23-A/G 6664777|21-T/G 6657196|41-G/A 6662626|20-G/C 6661431|59-G/A 6651183|67-C/T 100020564|19-A/G   
## 0.322544138 0.230897580 0.319061279 0.322457309 0.270747451 0.267561983 0.294131944 0.262187872 0.287459489 0.271074617 0.243472147   
## 6658409|20-A/C 6661097|28-C/T 6657230|7-A/G 6661119|56-G/A 6661554|36-A/G 6650618|9-G/C 6653999|19-C/T 6663991|5-C/T 6652381|42-A/T 6651915|13-C/T 6662884|19-C/T   
## 0.255287981 0.290885295 0.272101832 0.432464022 0.266295294 0.252515859 0.220720222 0.271731191 0.258171488 0.320000000 0.238343142   
## 6664330|6-A/G 6658057|21-T/G 6664271|29-T/G 6658345|31-A/G 6664281|18-T/A 6651466|33-G/A 6651085|26-C/T 6653605|24-T/C 100044679|44-A/G 100115090|8-A/G 6661464|30-G/T   
## 0.235828368 0.256155659 0.320000000 0.275059488 0.238676187 0.256259638 0.252807617 0.257878095 0.264143823 0.222938326 0.243517166   
## 6650884|45-C/T 6661861|5-T/C 6651870|51-T/C 6650549|15-C/T 6662909|15-A/C 6661345|10-T/C 100096951|40-T/A 6651934|39-C/A 6653561|20-A/G 6663982|40-G/A 6661677|22-C/T   
## 0.272455278 0.229185078 0.286463143 0.238049887 0.284081633 0.220406845 0.258702718 0.310172431 0.244112426 0.238140582 0.272651713   
## 6661705|29-C/G 6661413|63-C/T 100065757|18-C/G 6661266|30-A/G 6661310|64-T/C 6661349|63-A/G 100116458|50-G/A 6665749|7-G/A 6652731|67-C/G 6653078|31-C/T 6653889|13-C/T   
## 0.297520661 0.231111111 0.209750567 0.271094775 0.268372578 0.246856509 0.237709360 0.225780972 0.234157986 0.226134798 0.246389054   
## 6650390|62-T/A 6665512|36-G/A 6653694|33-C/T 6661130|57-A/C 6650397|43-A/G 6652725|65-G/A 6664898|31-T/A 6664740|45-G/A 6661717|60-G/A 6661866|27-T/C 6661803|57-G/C   
## 0.215450908 0.249688501 0.252074653 0.219521076 0.264105703 0.226351000 0.230029608 0.224519077 0.214641216 0.253261389 0.201084068   
## 6653812|35-T/C 6653634|39-G/A 6653421|13-A/G 6653117|34-C/G 6652078|22-T/A 6663918|8-C/G 6651738|38-G/C 100073717|6-G/A 6662614|36-C/T 6663009|7-C/T 6665630|52-T/C   
## 0.223304581 0.225406569 0.203386148 0.298575926 0.214082030 0.213322834 0.261012041 0.187398594 0.228046875 0.224403122 0.216813689   
## 6661118|33-G/A 6651890|7-G/A 6650967|42-C/A 6661605|18-C/T 6651286|19-T/A 6653631|43-C/T 6661436|18-C/T 6661386|46-C/T 6656991|15-A/G 6658489|9-C/T 100018527|6-C/T   
## 0.217900944 0.217869030 0.210198310 0.247576177 0.194504300 0.227443445 0.240800000 0.293119065 0.248595041 0.223705850 0.191065441   
## 6663957|56-G/A 6653138|31-G/A 6653361|55-G/A 6662597|30-A/G 6653013|37-T/C 6664770|35-T/G 100018912|62-G/T 6650463|42-T/A 6664775|59-A/G 6651694|29-A/T 6664064|49-A/G   
## 0.217145153 0.192293401 0.191326531 0.175206059 0.217379722 0.197530864 0.178021643 0.203898457 0.399865694 0.171799983 0.185613926   
## 6652918|18-G/A 6651840|35-G/A 6651055|13-G/A 6653477|22-A/T 6661719|26-T/A 6661828|67-T/A 6654030|47-G/A 6665066|58-G/C 6653260|47-G/T 6650860|49-G/A 6654039|20-G/A   
## 0.203341855 0.199019025 0.213367347 0.177316574 0.201037723 0.379347492 0.175434065 0.486111111 0.181315518 0.177843914 0.209200592   
## 6665336|52-C/T 6650985|20-G/A 6665243|28-G/C 6662888|44-A/C 6665236|63-T/C 6663983|17-C/T 100066027|14-A/T 6653607|5-T/C 6661170|39-C/T 6661781|60-G/A 100073694|44-G/A   
## 0.213175309 0.173502704 0.459861111 0.181980398 0.191095531 0.164703329 0.165604352 0.177297690 0.233550000 0.160049246 0.174566501   
## 6663947|55-T/C 6661831|54-T/C 6652266|47-T/C 6663080|20-G/A 6665672|66-T/A 6658491|28-C/A 6661680|19-G/T 6662595|39-C/T 6665990|6-A/T 6657377|47-C/T 6661828|68-T/A   
## 0.173258274 0.158637963 0.181110147 0.156973778 0.168420303 0.245812303 0.144042969 0.203550000 0.430429579 0.138415277 0.355795610   
## 6651958|27-A/G 6653919|17-C/T 100021874|46-A/G 100016068|62-T/A 6665489|31-C/T 100082278|57-C/T 6651291|51-G/T 6653890|21-C/T 6663954|56-C/A 100021943|40-T/C 6652214|62-T/A   
## 0.174190739 0.196168392 0.127603678 0.141726300 0.142298512 0.269064002 0.157550535 0.146337936 0.299596294 0.139820634 0.167243767   
## 100022950|33-A/C 6651253|68-C/T 6650643|36-C/A 6652860|42-G/A 6664014|62-G/A 6661808|48-C/T 6658138|27-A/C 100017513|60-C/T 6661261|32-C/T 6652821|67-C/T 6666304|10-A/T   
## 0.165289256 0.185739794 0.293367347 0.137845179 0.146189836 0.154074592 0.144151467 0.157550535 0.193761815 0.128240525 0.340598825   
## 6665455|61-G/T 100082682|51-T/C 6653384|6-A/G 100023325|25-A/G 100101067|36-C/T 6651685|49-T/A 6653586|60-T/C 6666177|13-A/T 6652540|8-G/T 6651209|49-A/G 100066244|11-A/T   
## 0.259266972 0.130501693 0.142298512 0.056290695 0.154511719 0.145229689 0.133201955 0.347648000 0.154911243 0.126721684 0.137695513   
## 6652377|20-G/A 6661200|23-T/G 100064741|45-G/C 6658040|18-T/A 6653702|48-T/C 6652310|50-C/T 100080867|16-C/T 6665067|64-C/A 6653076|28-C/T 6653648|6-G/A 6651991|67-A/T   
## 0.228139986 0.119894474 0.336734694 0.119986851 0.116569313 0.148887363 0.135026864 0.358350676 0.112589193 0.168739859 0.126721684   
## 6661634|15-T/G 6664050|24-G/C 6652868|58-A/G 6661564|13-A/G 6650547|43-C/G 100064827|8-G/C 6650552|61-G/A 6661602|25-T/C 6661456|61-G/A 6651197|66-T/A 6652994|27-C/T   
## 0.109335140 0.120842014 0.129799892 0.100724310 0.119434707 0.117842160 0.111018180 0.110406188 0.115957581 0.088518578 0.093341865   
## 6661887|13-A/T 6661310|58-T/C 6650745|19-T/G 100017712|8-T/A 6651911|52-G/A 6650417|11-A/C 6652308|53-T/G 6661174|36-C/T 6651243|32-G/A 6662595|43-G/A 6661238|17-G/T   
## 0.160512000 0.128582766 0.109165761 0.099525104 0.088479116 0.097588443 0.075730445 0.189921875 0.130054223 0.101539907 0.098829766   
## 6653091|46-C/G 6651733|50-G/A 6661209|58-G/A 6662998|47-T/C 6650989|12-C/T 6661260|32-A/C 6664754|18-T/C 6653705|22-C/A 6651897|14-A/G 6661468|27-G/A 6662877|32-C/T   
## 0.109518659 0.104938272 0.129243827 0.117187500 0.111409280 0.138386661 0.084938272 0.092091571 0.090120526 0.077949219 0.067145558   
## 6652769|52-G/A 6657468|35-T/C 6664040|37-G/T 6654036|20-C/G 6652581|49-T/C 6663926|28-C/T 6650558|18-A/C 6650767|11-C/T 6650470|54-G/A 6652008|64-T/A 100066158|21-G/A   
## 0.079073228 0.064823766 0.078220266 0.090331451 0.062434964 0.271074617 0.082415696 0.064444444 0.078031638 0.049554726 0.076474274   
## 6661900|39-T/C 100022191|13-A/T 6665045|39-A/T 6652766|56-A/G 6652767|24-T/A 6651271|49-G/A 6661314|26-G/A 6653619|65-T/C 100116986|5-T/C 100116987|6-T/G 6653081|42-A/G   
## 0.471748186 0.091392000 0.068877551 0.082634298 0.061695021 0.069174928 0.062047995 0.049828900 0.065143290 0.064444444 0.053057851   
## 6664720|40-A/G 6652605|24-T/C 6661530|52-T/G 6653380|28-A/G 6661534|38-G/A 100100705|17-C/A 6661784|26-C/G 6653485|62-T/C 6658269|15-G/A 6657310|18-C/G 6653319|56-C/A   
## 0.056844006 0.040386864 0.043082536 0.030761719 0.039200000 0.037023852 0.059440637 0.032473745 0.030897464 0.026105092 0.042233839   
## 6662895|13-G/A 6650569|12-C/A 100018011|33-A/T 6653025|64-G/A 100020592|58-C/G 6651157|23-G/A 6652995|7-T/C 6664385|5-T/G 100080823|15-G/A 100098565|15-A/G 6662594|6-A/G   
## 0.033435143 0.051911111 0.053599107 0.024386526 0.037195930 0.019228957 0.019415609 0.017619753 0.017776348 0.035702479 0.026082400   
## 6662608|14-T/C 100111015|17-T/A 6651630|13-G/A 100015677|15-G/A 100021199|37-T/C 6651723|7-T/C 6651946|25-T/C 6652107|59-C/T 6662703|23-A/G 6656926|24-G/A 6662639|8-G/T   
## 0.027901388 0.035386738 0.020199917 0.022170162 0.007272630 0.012986458 0.024238775 0.018016529 0.021975309 0.022170162 0.022810651   
## 6644134|13-A/C 100015999|30-C/T 6651264|67-C/T 100082192|45-T/C 6658187|20-A/G 6658030|16-T/G 6664447|43-A/G 6657081|38-A/G 6657519|27-C/A 6657646|21-G/A 6658294|22-A/G   
## 0.037408431 0.038529014 0.023665244 0.017389966 0.015266272 0.012421875 0.029843893 0.004819249 0.012525598 0.034771713 0.018866213   
## 6663106|39-T/C 6665877|8-T/C 6657134|12-C/T 6662930|5-G/T 100073664|24-C/A 100093267|33-A/T 6665045|33-A/T 6653064|39-T/C 6652028|11-T/C 6652053|54-A/G 6661327|40-C/T   
## 0.016259070 0.013792438 0.025969529 0.018347051 0.010049995 0.031000062 0.031737773 0.008163128 0.013362424 0.016805516 0.028623818   
## 100020810|55-A/G 6661141|23-C/T 100018274|35-A/G 100020489|64-T/C 100021048|30-T/C 100021494|48-T/C 100015195|36-C/T 6652099|5-C/T 100019298|65-T/C 100020731|53-A/G 100065190|44-T/C   
## 0.037023852 0.012684473 0.027644336 0.015112474 0.016259070 0.011235596 0.012421875 0.013422206 0.016900181 0.021319486 0.012473521   
## 6651997|59-A/G 6658436|20-C/T 6650975|51-G/A 6657565|7-G/A 6658077|34-T/C 6652620|41-C/T 6657312|42-G/A 6657368|39-G/A 6657412|9-T/G 6657526|48-C/T 6658588|11-C/T   
## 0.005509600 0.012902682 0.013244444 0.013985320 0.005063259 0.013422206 0.008474423 0.008888712 0.016527778 0.009302122 0.009478458   
## 6662668|7-A/T 6662868|15-G/A 6663029|17-G/A 6664446|24-T/C 100086116|7-C/A 100093344|14-G/C 100098451|30-G/T 100104877|27-G/A 6656935|13-T/G 6657240|11-C/T 6657387|17-A/T   
## 0.012421875 0.017776348 0.018807082 0.020405994 0.012525598 0.006230469 0.012421875 0.012421875 0.010256138 0.014183673 0.012421875   
## 6658126|24-C/G 6662893|11-C/G 100098564|20-T/C 100108662|16-G/A 100090375|13-A/C 6654111|67-T/C 100018022|29-C/T 100018793|30-G/A 100019919|22-G/A 100020224|39-A/G 100021950|26-G/A   
## 0.012902682 0.013920430 0.004728106 0.008031998 0.025100546 0.000000000 0.018689925 0.022672755 0.019542071 0.008771760 0.025312295   
## 100065898|33-G/A 100016342|65-A/G 6653141|47-T/A 100020182|5-A/G 100017739|16-A/G 100019425|22-T/C 100019993|60-T/C 100020111|24-T/C 100022090|7-C/A 100020509|41-C/T 100019969|57-T/C   
## 0.017855694 0.029261837 0.021050249 0.008968428 0.004414989 0.008583532 0.008928392 0.010256138 0.004192854 0.008968428 0.014284975   
## 100021750|68-T/G 6650682|7-C/T 100073640|6-A/G 6658242|13-G/A 6661085|49-C/T 6650645|14-C/G 100022464|43-T/A 100065437|41-T/C 6652497|42-C/A 6653265|58-G/C 6653475|24-G/A   
## 0.004282636 0.005037751 0.008771760 0.013512888 0.017855694 0.005037751 0.012370655 0.013186232 0.008196582 0.019415609 0.004474250   
## 100021941|30-C/T 6658496|17-G/A 6661755|16-A/C 6661423|60-C/T 100015613|67-G/A 6652888|64-A/G 6657111|13-T/C 6658119|34-T/A 6661367|26-G/T 100111976|26-A/G 100016385|11-T/C   
## 0.008695486 0.000000000 0.024892310 0.033888228 0.017697704 0.008583532 0.023252595 0.008403212 0.011172832 0.007117347 0.017776348   
## 100073644|37-C/T 6650454|46-A/G 6650627|13-T/C 6651042|67-C/T 6652424|44-T/C 6653438|30-C/T 6653954|43-A/G 6657314|43-G/A 6657355|38-G/A 6657359|15-A/G 6657460|29-G/A   
## 0.010869241 0.009090720 0.011695502 0.005970096 0.012473521 0.008695486 0.010049995 0.004282636 0.019800000 0.009049587 0.005089025   
## 6657482|8-A/G 6657781|17-C/A 6661090|62-A/T 6661394|35-A/G 6662671|17-A/G 6662872|17-G/T 6663077|27-G/T 100080773|11-T/C 6650529|9-A/G 6651847|21-G/A 6652313|42-C/T   
## 0.008928392 0.009389462 0.004106759 0.000000000 0.006600588 0.009345588 0.008695486 0.008928392 0.008474423 0.008810400 0.012421875   
## 6656897|6-A/T 6657147|18-G/A 6657176|29-T/G 6657326|12-G/A 6657353|6-A/G 6657411|13-G/A 6657545|31-T/C 6657603|29-G/A 6657689|26-G/A 6657743|8-C/G 6657998|8-A/G   
## 0.015502930 0.013422206 0.008657845 0.012819979 0.013128530 0.006779583 0.013604804 0.010152020 0.012738330 0.008196582 0.017776348   
## 6658208|29-C/T 6658287|13-A/G 6658348|17-A/T 6658475|20-C/A 6658498|16-G/A 6658580|46-G/C 6661448|44-G/T 6661799|23-C/T 6662617|41-T/G 6662633|33-G/C 6662813|9-G/T   
## 0.000000000 0.008474423 0.008298611 0.009049587 0.015998959 0.008888712 0.008298611 0.012684473 0.008403212 0.004140769 0.010100750   
## 6662843|9-A/G 6662968|7-T/C 6662976|12-A/C 6664360|25-T/C 6664442|16-C/T 6664875|15-A/G 100021224|39-C/T 100073899|13-T/C 100098800|29-G/T 100100663|9-T/A 6650431|37-G/A   
## 0.008474423 0.012986458 0.008510483 0.006116150 0.009661608 0.026900826 0.019800000 0.023252595 0.010152020 0.008657845 0.005633758   
## 6656974|5-A/T 6657112|32-C/T 6657945|33-T/A 6658433|38-T/A 6664304|20-G/T 6664309|9-T/C 100116189|14-C/A 100045177|15-A/G 100073820|20-A/G 100086048|24-A/T 100098455|12-T/G   
## 0.008264321 0.017240076 0.008196582 0.004192854 0.008368053 0.017542486 0.012473521 0.009049587 0.007662722 0.012269471 0.008657845   
## 100098486|16-T/A 100098772|34-A/T 100112391|7-C/G 6651055|18-T/C 100086270|5-G/C 100112446|22-G/C 6661857|31-C/T 6658676|11-C/G 100016220|5-A/G 100021127|7-A/G 6665873|25-A/G   
## 0.005167924 0.008196582 0.016459772 0.021975309 0.030761719 0.111605860 0.008771760 0.009302122 0.008968428 0.005063259 0.014387734   
## 6654134|52-T/A 100016595|6-G/A 100021410|63-C/T 100023315|21-T/C 6653760|49-C/A 100021585|32-T/G 100023219|12-A/G 6658683|43-C/T 100064732|20-A/G 100016355|33-T/C 100019393|16-C/T   
## 0.142540816 0.007721892 0.012958412 0.008888712 0.018689925 0.008264321 0.017465893 0.018516901 0.073964497 0.008849383 0.014457065   
## 100020119|15-A/G 100022894|28-G/A 100082537|56-C/T 100016273|19-A/G 100023327|12-C/T 100015858|19-C/T 100022410|6-G/A 100017258|51-G/T 100019095|48-C/T 100020063|20-G/A 100015954|31-A/G   
## 0.000000000 0.014387734 0.009389462 0.009259059 0.006557306 0.000000000 0.000000000 0.012847429 0.004661979 0.005037751 0.006078971   
## 100021964|13-G/C 100085852|36-T/C 6651226|18-G/C 100021819|62-A/C 100022277|8-T/G 100064827|60-G/T 100018209|24-G/C 100022569|31-G/A 6653298|40-A/G 100015576|20-G/A 100016155|45-A/G   
## 0.005305002 0.012902682 0.006005952 0.004282636 0.004264373 0.004246265 0.004728106 0.008583532 0.004494359 0.005037751 0.000000000   
## 100018361|5-C/T 100018644|13-A/G 100065285|54-G/A 100066085|48-C/G 100066350|63-A/G 100082653|31-C/G 100019242|15-T/C 100065918|65-C/T 100082574|16-T/C 100112503|22-T/C 6651116|23-G/A   
## 0.006733930 0.012684473 0.009523591 0.004357278 0.009478458 0.000000000 0.005730612 0.000000000 0.000000000 0.004301055 0.000000000   
## 6664424|11-C/T 100017539|66-C/A 100019104|53-C/T 100020067|42-A/C 100020868|41-A/G 100064882|50-T/C 6658317|12-A/T 6661605|7-T/C 6664288|12-C/T 100016786|17-G/A 100020956|6-T/C   
## 0.000000000 0.009174117 0.004661979 0.004123694 0.008771760 0.009216392 0.004376347 0.000000000 0.006557306 0.012578112 0.000000000   
## 100016197|32-C/T 100017640|9-C/G 100018738|55-G/T 6651375|43-G/A 6651394|40-A/T 6657692|30-G/C 6661438|21-G/A 100015230|14-A/T 100015429|54-A/G 100016348|67-T/C 100022665|32-G/A   
## 0.000000000 0.004728106 0.009851975 0.008546851 0.004157986 0.004705856 0.008810400 0.004228311 0.008438667 0.009755863 0.012631069   
## 6650646|12-A/G 6651058|8-C/T 6652871|25-G/T 6653284|49-A/G 100020780|47-T/C 100082291|18-C/T 6657270|16-C/A 6658306|32-A/G 6663971|20-C/T 100018785|45-G/A 100019578|24-A/G   
## 0.000000000 0.004157986 0.009216392 0.008733456 0.006920332 0.000000000 0.009174117 0.005361892 0.008620528 0.005141354 0.008474423   
## 100021429|16-A/G 6651301|13-T/C 6653801|25-T/C 6662791|9-T/C 6665675|15-G/A 6665677|34-G/A 6651053|25-C/T 6651062|23-G/C 6657266|49-A/G 6661781|11-G/A 6662884|20-G/A   
## 0.013186232 0.000000000 0.000000000 0.008810400 0.004474250 0.004728106 0.006779583 0.004192854 0.008733456 0.000000000 0.005037751   
## 6661633|24-T/C 100064957|57-C/G 6650480|42-G/T 6651168|20-T/C 6651202|6-G/T 6651669|51-A/T 6651901|52-A/G 6652133|6-G/A 6652277|34-G/T 6652429|23-C/A 6652852|41-C/T   
## 0.000000000 0.005141354 0.008333187 0.009433750 0.005509600 0.004106759 0.004157986 0.007721892 0.000000000 0.000000000 0.004494359   
## 6653859|66-G/C 6657107|30-C/T 6657341|14-T/G 6657827|41-T/C 6657863|36-T/C 6657972|11-T/G 6658332|28-G/A 6661576|17-T/C 6662852|8-G/C 6665753|18-G/A 6665974|16-T/A   
## 0.000000000 0.004357278 0.000000000 0.004414989 0.012902682 0.004301055 0.000000000 0.000000000 0.000000000 0.013422206 0.005167924   
## 6665974|39-G/C 100022319|61-G/T 100066473|44-C/T 6650457|59-C/T 6650512|39-G/A 6650541|48-T/C 6650816|44-C/T 6651070|58-A/C 6651408|58-C/G 6651681|14-C/T 6651690|41-A/G   
## 0.004434568 0.005089025 0.010470914 0.000000000 0.004454321 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651751|52-A/G 6651951|29-T/C 6652480|24-G/A 6652536|25-A/G 6653136|38-A/G 6653193|66-G/C 6653366|47-T/C 6653406|51-T/C 6653654|13-A/G 6653743|54-T/C 6653795|65-G/T   
## 0.004157986 0.000000000 0.013362424 0.000000000 0.004819249 0.000000000 0.000000000 0.004376347 0.000000000 0.008368053 0.000000000   
## 6656968|20-T/C 6657138|49-C/T 6657141|6-G/A 6657590|27-T/C 6657970|16-C/G 6658518|17-G/A 6658664|15-C/A 6661383|36-A/G 6661406|53-T/C 6661709|47-A/C 6661820|30-C/T   
## 0.004728106 0.008968428 0.007721892 0.008163128 0.000000000 0.000000000 0.009389462 0.005089025 0.000000000 0.004106759 0.004357278   
## 6661892|24-C/T 6662654|9-C/A 6662663|5-A/T 6663104|29-A/G 6664717|21-A/G 6665800|40-A/C 6665804|30-T/C 100018586|15-A/G 100045576|29-G/A 100064632|55-G/A 100124805|23-T/C   
## 0.008230312 0.016459772 0.000000000 0.009389462 0.004705856 0.000000000 0.000000000 0.000000000 0.000000000 0.008888712 0.000000000   
## 6650420|21-G/A 6650787|62-C/A 6650795|22-T/C 6651016|52-G/A 6651805|15-A/G 6652208|23-C/T 6652257|65-G/T 6652383|57-G/C 6652388|11-A/G 6652788|54-A/G 6652943|57-G/A   
## 0.000000000 0.000000000 0.004301055 0.005141354 0.000000000 0.004246265 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653199|35-A/C 6653447|32-A/G 6653467|25-G/A 6653565|10-G/C 6653569|24-A/T 6654084|42-A/G 6656901|37-A/C 6656919|48-T/A 6656965|28-C/T 6657179|25-G/A 6657434|21-C/A   
## 0.000000000 0.005361892 0.004376347 0.000000000 0.004106759 0.004535124 0.000000000 0.004210508 0.005970096 0.004376347 0.004123694   
## 6657454|17-T/C 6657477|8-A/G 6657523|10-C/T 6657578|8-C/T 6657628|10-A/G 6657698|41-A/G 6657753|24-G/A 6657784|15-C/G 6657818|27-A/G 6657821|26-T/C 6657854|14-G/A   
## 0.000000000 0.004474250 0.009661608 0.004157986 0.004962748 0.008771760 0.000000000 0.004175347 0.011975613 0.011975613 0.009708507   
## 6657918|33-T/A 6657923|13-T/C 6657975|18-C/G 6658063|26-T/C 6658152|11-T/C 6658175|49-T/C 6658353|18-G/T 6658417|35-C/A 6658431|14-A/G 6658485|8-A/G 6658531|35-G/A   
## 0.004106759 0.000000000 0.005277008 0.000000000 0.008928392 0.006430801 0.007662722 0.000000000 0.004494359 0.000000000 0.005730612   
## 6661099|20-G/A 6661250|41-T/C 6661252|5-A/G 6661823|31-T/C 6661826|50-T/A 6661853|33-G/A 6662682|18-G/C 6662708|45-C/A 6662717|10-T/A 6662720|17-G/A 6663956|7-C/T   
## 0.005037751 0.004414989 0.008968428 0.006825859 0.004535124 0.004494359 0.011975613 0.004494359 0.004123694 0.006309085 0.005037751   
## 6664324|31-T/C 6664897|36-T/G 6664904|21-A/G 6665135|35-C/T 6665977|58-C/T 100062054|9-T/G 100066053|65-C/G 100073867|18-T/C 100098449|11-T/C 100102329|39-G/C 100104849|27-A/C   
## 0.000000000 0.004210508 0.004705856 0.000000000 0.006230469 0.000000000 0.000000000 0.011049383 0.004474250 0.004434568 0.008196582   
## 100118311|8-T/G 6651728|12-T/C 6651869|31-G/A 6651992|39-T/C 6652070|15-A/G 6652698|58-A/G 6653498|29-C/G 6656984|39-A/T 6656988|16-A/T 6657054|5-A/G 6657255|43-C/T   
## 0.000000000 0.008968428 0.000000000 0.000000000 0.009049587 0.004640346 0.004773242 0.004414989 0.007781982 0.008968428 0.009302122   
## 6657257|18-T/G 6657264|21-A/C 6657486|25-A/G 6657731|27-T/C 6657762|30-T/G 6658275|5-T/C 6658351|8-T/A 6658356|40-T/A 6662713|37-C/T 6662735|7-T/C 6662802|35-T/C   
## 0.005089025 0.004228311 0.000000000 0.008163128 0.004106759 0.005602197 0.008368053 0.000000000 0.010869241 0.006514588 0.000000000   
## 6664285|14-G/T 6664286|5-A/G 6664411|22-G/A 100116189|12-G/A 100020566|50-G/A 100073416|9-G/C 100073555|13-T/C 100073946|24-C/A 100082262|34-C/T 100082279|42-T/G 100093533|7-G/T   
## 0.005361892 0.008968428 0.000000000 0.012819979 0.008196582 0.004414989 0.000000000 0.005037751 0.004414989 0.000000000 0.008196582   
## 100093556|10-T/A 100093571|9-A/T 100093658|5-T/C 100102354|38-T/G 100102368|8-T/C 100108745|39-G/C 100124806|24-A/G 6652013|36-G/A 100019613|42-A/G 6653942|18-C/G 100021748|48-G/A   
## 0.004123694 0.004106759 0.005602197 0.004264373 0.004618913 0.004434568 0.000000000 0.000000000 0.004535124 0.000000000 0.013985320   
## 100022307|64-C/T 6661279|61-A/G 100016043|65-A/G 100021551|26-C/G 6651509|9-T/C 100015681|31-G/A 100022444|19-C/T 100065978|51-A/C 100015971|32-G/A 100018341|11-C/T 100018791|30-T/A   
## 0.004514650 0.004514650 0.009851975 0.000000000 0.000000000 0.004301055 0.010470914 0.000000000 0.008438667 0.004750567 0.004576635   
## 100021444|27-G/T 6651402|31-T/C 6652371|36-A/G 100016955|21-T/C 100017267|60-T/C 100017271|28-T/A 100017633|14-G/T 100018216|18-C/T 100018585|65-G/A 100018930|7-A/G 100019458|6-T/C   
## 0.004357278 0.000000000 0.000000000 0.008888712 0.000000000 0.008403212 0.010694878 0.000000000 0.000000000 0.005063259 0.000000000   
## 100020508|64-T/C 100021998|13-T/C 100065288|30-C/T 6657675|5-C/T 100018006|38-A/G 100018907|18-T/C 100018908|67-C/T 100019522|42-C/T 100021552|23-G/T 100021990|59-T/C 100066166|11-T/A   
## 0.025058620 0.011695502 0.000000000 0.006733930 0.009615160 0.011049383 0.005970096 0.008298611 0.004301055 0.004683815 0.004175347   
## 6651977|40-G/C 6661494|35-T/C 6661600|20-T/C 100023675|41-A/G 100064707|39-C/T 100066332|9-G/A 100111975|14-G/C 100015765|23-G/A 100017875|29-A/G 100019456|25-T/C 100019962|30-A/G   
## 0.000000000 0.000000000 0.000000000 0.008771760 0.000000000 0.004210508 0.042792969 0.004842586 0.004705856 0.012194663 0.000000000   
## 100020185|57-C/A 100020870|33-C/G 100021266|13-G/A 6651172|33-A/G 100015703|20-A/G 6653988|60-A/T 100018373|30-C/T 100020483|16-G/A 100022388|34-C/T 100022854|43-G/T 100023104|56-C/T   
## 0.007067049 0.009090720 0.006779583 0.004683815 0.007662722 0.004338374 0.004357278 0.008031998 0.008810400 0.004106759 0.000000000   
## 100023409|22-T/C 100086339|36-T/G 6651925|23-G/C 100120327|18-G/A 100120327|6-G/A 100016290|59-A/C 100020594|60-T/A 100022242|47-G/T 100022320|10-T/C 100022502|23-T/A 6651745|39-T/C   
## 0.008583532 0.004210508 0.000000000 0.000000000 0.015383691 0.006269530 0.004157986 0.000000000 0.004357278 0.004123694 0.008163128   
## 6661848|25-T/G 100016236|36-G/T 100016349|39-A/G 100016910|15-T/A 100020122|19-C/G 100021092|17-T/C 100022165|12-A/G 100023470|59-G/A 6661692|56-G/A 100016458|65-C/G 100018964|48-T/G   
## 0.004597677 0.011049383 0.008771760 0.017092747 0.004728106 0.013512888 0.004395583 0.008771760 0.000000000 0.000000000 0.000000000   
## 100021554|25-A/G 100023185|19-T/G 6650701|18-A/G 6652394|37-T/C 6653506|13-T/A 6664058|35-C/T 100016479|45-A/T 100017508|19-C/G 100018962|16-T/C 100022682|11-A/T 100066335|57-A/T   
## 0.014387734 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100082668|8-A/T 6658494|15-A/G 100015625|54-A/G 100016249|62-A/C 100016393|18-A/T 100016660|55-C/T 100017075|58-G/A 100017124|8-A/G 100017541|11-T/A 100018026|11-T/C 100019630|31-T/C   
## 0.004338374 0.000000000 0.000000000 0.008546851 0.004395583 0.000000000 0.000000000 0.008928392 0.004175347 0.004474250 0.000000000   
## 100019855|44-T/C 100019873|44-G/A 100019915|44-G/T 100022465|65-C/G 100022648|51-G/A 100044512|21-C/T 6650696|57-G/A 6653452|20-G/A 100015340|55-T/G 100017500|23-A/C 100020588|47-C/A   
## 0.004175347 0.000000000 0.000000000 0.000000000 0.000000000 0.005115056 0.000000000 0.000000000 0.004434568 0.004434568 0.000000000   
## 100022422|51-G/T 100022425|5-T/C 100023388|34-C/A 100023484|57-G/A 100023525|29-A/G 100064648|32-T/C 100065646|5-C/A 100073396|12-C/T 100073814|33-T/C 6650655|58-G/A 6651105|51-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004705856 0.004192854 0.004434568 0.000000000 0.004434568 0.000000000 0.000000000   
## 6651192|9-A/G 6652274|53-T/C 6652608|18-G/C 6652649|33-C/G 6653266|5-T/A 6661462|57-A/G 100016352|41-C/T 100016515|37-T/A 100016629|18-T/C 100017186|6-T/C 100018441|46-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.011049383 0.011560303 0.000000000   
## 100019819|59-T/G 100021768|16-G/T 100022658|14-G/A 100022749|22-C/T 100023505|21-C/G 100064613|60-T/C 6650443|20-C/T 6650647|27-A/C 6650672|16-T/C 6650875|47-G/A 6652044|30-A/G   
## 0.004282636 0.006600588 0.004866151 0.000000000 0.004140769 0.004474250 0.000000000 0.000000000 0.000000000 0.009433750 0.000000000   
## 6652814|39-C/T 6653050|59-G/T 6653245|23-A/G 6653382|37-T/C 100015237|28-T/A 100016165|7-G/A 100017157|49-G/A 100017486|22-T/G 100019175|10-C/G 100019665|26-G/A 100020841|64-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004683815 0.000000000 0.004282636 0.000000000 0.000000000 0.010100750   
## 100120329|23-A/G 6650705|36-C/T 6651136|7-G/C 6651295|17-C/T 6651888|7-A/G 6652092|41-A/G 6652390|29-T/C 6653344|40-A/G 100017290|62-G/T 100017981|57-C/T 100018180|55-T/C   
## 0.008849383 0.000000000 0.000000000 0.000000000 0.000000000 0.004395583 0.000000000 0.000000000 0.000000000 0.000000000 0.011904335   
## 100018460|39-T/G 100018667|65-G/A 100019573|61-A/C 100020403|29-G/T 100023540|56-T/G 100065318|8-A/G 100066600|5-T/C 100066622|14-T/C 100086014|36-T/C 100098840|27-G/A 6650711|25-C/A   
## 0.008333187 0.005089025 0.000000000 0.010152020 0.000000000 0.000000000 0.000000000 0.004705856 0.012902682 0.006230469 0.000000000   
## 6651249|51-G/C 6653001|20-G/A 6653114|14-T/A 6653811|17-T/C 6661187|29-A/C 100015694|44-A/T 100016554|8-A/G 100017386|12-G/A 100017844|43-G/A 100020562|42-C/G 100021051|67-G/T   
## 0.000000000 0.000000000 0.004123694 0.000000000 0.000000000 0.004123694 0.013362424 0.006430801 0.012792647 0.000000000 0.004282636   
## 100065266|5-T/C 6650693|44-C/T 6651276|7-A/G 6651724|68-A/G 6652175|66-T/C 6652356|17-A/G 6653008|30-C/G 6653473|47-C/T 6653869|47-T/G 6654016|14-A/G 6664729|22-C/T   
## 0.000000000 0.000000000 0.005063259 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009132228   
## 6661750|65-G/A 100016089|30-C/T 100017364|16-A/G 100017568|38-A/G 100017636|20-G/A 100018230|62-T/C 100020647|25-G/A 100023048|6-T/C 100023313|65-G/T 100023842|66-T/C 6650662|57-T/A   
## 0.000000000 0.000000000 0.000000000 0.009615160 0.005037751 0.000000000 0.008733456 0.000000000 0.009216392 0.000000000 0.000000000   
## 6650857|56-T/C 6650871|15-T/G 6652354|41-T/G 6652712|18-A/G 6652897|32-G/A 6653119|17-A/G 6653277|45-G/C 6653413|34-C/T 6653686|19-A/G 6653906|8-T/C 6656936|12-G/A   
## 0.000000000 0.000000000 0.004210508 0.000000000 0.004228311 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6658216|16-T/C 6661637|61-A/T 6664071|59-C/T 6652420|13-T/G 100017654|43-G/C 100021742|38-C/A 100044665|10-T/G 100064985|48-C/T 100065246|12-A/G 100066557|28-C/T 100082397|38-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004106759 0.000000000 0.008368053 0.000000000 0.004395583 0.000000000 0.000000000   
## 6650620|8-A/G 6650692|56-G/A 6650978|6-G/A 6651221|15-T/C 6651235|33-A/G 6651703|33-T/C 6651891|44-T/C 6652170|11-A/G 6652463|46-A/C 6652496|43-C/T 6653226|65-A/G   
## 0.000000000 0.008510483 0.007721892 0.000000000 0.000000000 0.000000000 0.000000000 0.012047750 0.005012500 0.000000000 0.000000000   
## 6653778|39-T/A 6654074|20-G/T 6658572|16-A/G 6661139|49-C/A 6661309|12-G/A 6661345|40-C/G 6662659|12-A/C 100120331|53-T/G 100020242|53-A/G 100021807|31-T/C 100065925|36-C/T   
## 0.004434568 0.000000000 0.004414989 0.000000000 0.000000000 0.004192854 0.004264373 0.008264321 0.000000000 0.000000000 0.000000000   
## 100066073|6-T/C 100102122|31-C/A 6650428|57-G/T 6652370|62-G/A 6653373|60-G/T 6653417|48-C/G 6653777|46-G/T 6653792|53-C/A 6654058|18-T/C 6661147|26-G/C 6661226|53-C/T   
## 0.011560303 0.004106759 0.000000000 0.000000000 0.000000000 0.004357278 0.000000000 0.004175347 0.005540123 0.000000000 0.000000000   
## 6661658|19-C/T 6661670|43-T/C 6663906|23-C/T 6664040|9-G/T 100017806|36-A/G 100019553|65-G/A 100020150|48-T/C 100022824|15-T/C 100045255|15-T/C 100064683|52-A/G 100065044|38-G/T   
## 0.000000000 0.000000000 0.000000000 0.005063259 0.005089025 0.005089025 0.000000000 0.005730612 0.000000000 0.004157986 0.000000000   
## 100065331|11-A/G 100082376|10-G/T 100114017|32-T/C 6650513|52-C/T 6650793|26-A/C 6650805|11-A/G 6650968|18-A/T 6651099|28-A/G 6651150|45-T/C 6651383|67-T/G 6651541|66-T/C   
## 0.000000000 0.000000000 0.000000000 0.005899653 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651588|49-C/T 6651711|11-A/G 6651715|59-C/G 6651731|68-G/T 6652027|41-G/A 6652109|27-A/G 6652130|35-T/C 6652152|19-T/G 6652278|43-G/C 6652658|29-A/T 6652840|16-G/A   
## 0.008968428 0.000000000 0.000000000 0.000000000 0.004157986 0.011975613 0.000000000 0.000000000 0.004106759 0.000000000 0.008031998   
## 6652867|64-C/T 6652883|26-G/C 6653149|58-C/T 6653187|24-G/T 6653229|41-A/G 6653591|11-G/C 6653796|8-T/C 6653829|21-C/A 6653872|47-G/T 6653967|40-G/A 6657086|36-C/A   
## 0.000000000 0.000000000 0.006230469 0.000000000 0.000000000 0.000000000 0.004618913 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657671|40-C/T 6657902|21-T/C 6661102|10-A/G 6661477|67-A/G 6661483|14-G/C 6661530|26-C/G 6661560|54-A/G 6661564|45-T/A 6662672|28-C/A 6664046|51-T/C 6664055|23-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.006230469 0.004705856 0.000000000 0.000000000 0.000000000 0.008733456 0.000000000   
## 100120332|58-C/A 100120330|33-G/T 100015220|59-C/A 100016151|11-T/C 100016562|12-G/A 100016798|34-C/T 100021467|36-G/A 100065538|21-A/T 100065912|28-G/A 100098480|21-A/C 6650742|33-G/A   
## 0.008264321 0.008298611 0.000000000 0.004474250 0.012819979 0.000000000 0.000000000 0.004773242 0.014387734 0.000000000 0.004494359   
## 6650889|38-G/T 6651263|53-A/C 6651318|7-C/T 6651340|27-C/T 6651392|24-C/T 6651403|11-C/A 6651475|6-A/G 6651645|50-G/A 6651662|13-T/A 6651726|49-G/A 6651740|27-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004123694 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651858|23-A/G 6651880|60-C/T 6651889|58-T/C 6651919|45-G/T 6652026|29-G/T 6652151|12-T/C 6652259|45-G/T 6652382|40-G/A 6652492|21-C/T 6652504|25-A/G 6652541|50-A/G   
## 0.004434568 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008695486 0.000000000 0.000000000 0.000000000   
## 6652568|29-G/T 6652593|5-G/T 6652667|36-T/C 6652794|64-C/T 6652856|20-T/A 6653235|13-T/G 6653395|26-G/A 6653420|50-G/A 6653458|58-C/T 6653463|23-A/G 6653479|25-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008849383 0.000000000   
## 6653599|33-C/T 6653745|15-T/C 6653871|33-G/A 6653881|45-G/A 6657644|31-G/T 6657994|16-G/A 6658139|28-G/A 6658379|30-A/G 6658529|38-A/G 6658559|22-T/G 6658652|28-T/C   
## 0.000000000 0.005730612 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004962748 0.004819249 0.000000000 0.004819249   
## 6658660|28-C/G 6661093|40-C/A 6661130|16-T/C 6661369|40-T/C 6661393|35-C/A 6661665|50-T/C 6661672|7-G/A 6661712|36-C/T 6663057|27-A/C 6663982|51-T/G 6665517|21-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004474250 0.000000000 0.000000000 0.006230469 0.004106759 0.000000000 0.009523591   
## 6665665|51-T/C 6665807|65-G/A 100104824|10-C/A 100020394|66-C/G 100020441|43-A/C 100021095|9-T/C 100021324|61-A/G 100044982|27-T/C 6633176|7-T/C 6650394|45-T/C 6650524|64-C/A   
## 0.004376347 0.000000000 0.009900745 0.000000000 0.004750567 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650526|41-A/C 6650616|12-C/T 6650617|39-T/G 6650695|29-G/A 6650768|33-C/T 6650776|41-A/G 6650824|6-C/G 6650856|61-G/C 6650931|6-C/T 6650932|50-A/G 6650935|64-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004157986 0.000000000 0.000000000 0.004301055 0.000000000 0.004192854 0.000000000   
## 6650950|61-A/C 6650971|13-G/A 6651076|54-T/C 6651094|7-C/T 6651112|44-A/C 6651140|51-A/G 6651141|28-C/T 6651166|8-G/A 6651232|36-T/A 6651234|42-A/T 6651248|33-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651256|30-A/G 6651296|34-G/A 6651362|29-A/G 6651505|25-A/G 6651536|18-C/T 6651549|18-T/C 6651584|29-A/G 6651585|28-G/A 6651603|27-G/A 6651650|53-C/T 6651682|41-G/A   
## 0.004962748 0.000000000 0.000000000 0.014387734 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004661979 0.000000000   
## 6651722|21-T/C 6651790|34-A/C 6651836|41-C/A 6651920|32-T/A 6651945|47-T/C 6651948|51-G/A 6651949|50-A/C 6651978|13-T/C 6651988|28-A/T 6651995|36-G/C 6651996|46-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004640346 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652021|23-A/T 6652050|59-T/C 6652102|5-C/T 6652139|9-C/G 6652157|32-T/A 6652164|29-T/C 6652198|12-T/A 6652209|23-C/G 6652232|10-G/A 6652236|58-T/C 6652248|19-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004106759 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652256|38-A/G 6652399|58-G/T 6652408|36-G/T 6652455|7-A/G 6652563|7-G/C 6652666|14-C/T 6652708|30-T/C 6652718|43-C/A 6652723|11-A/G 6652744|49-T/G 6652761|57-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652809|41-A/G 6652820|37-G/T 6652865|19-C/G 6653005|35-T/C 6653010|64-G/C 6653038|53-G/C 6653130|47-A/T 6653175|37-A/G 6653237|34-C/T 6653376|49-A/C 6653396|18-A/G   
## 0.004395583 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004414989 0.000000000 0.000000000   
## 6653462|51-G/A 6653499|18-A/G 6653523|14-A/C 6653530|62-T/C 6653604|19-T/A 6653643|33-G/C 6653655|16-T/C 6653725|23-C/A 6653838|44-C/T 6653994|51-G/A 6656884|31-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004319634 0.000000000 0.000000000 0.006078971   
## 6656889|19-A/G 6657085|18-T/G 6657130|23-G/T 6657217|6-G/T 6657267|27-G/T 6657331|17-A/G 6657391|26-A/G 6657478|16-A/C 6657485|17-C/T 6657548|20-A/G 6657600|33-G/A   
## 0.004640346 0.005089025 0.008583532 0.000000000 0.004357278 0.000000000 0.007117347 0.000000000 0.007843016 0.000000000 0.004494359   
## 6657637|34-A/C 6657667|22-A/G 6657873|49-G/A 6658002|34-T/C 6658172|30-C/A 6658300|7-T/A 6658375|19-C/G 6658441|13-C/T 6658569|13-G/A 6661094|36-A/G 6661297|9-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.008230312 0.000000000 0.004728106 0.004866151 0.006779583 0.000000000 0.000000000   
## 6661311|33-T/C 6661392|20-A/G 6661396|55-T/C 6661401|35-G/A 6661459|27-G/A 6661496|33-C/G 6661598|62-A/G 6661609|59-A/C 6661636|18-T/A 6661653|9-G/A 6661756|25-G/A   
## 0.000000000 0.000000000 0.005970096 0.005730612 0.000000000 0.000000000 0.008403212 0.006269530 0.004264373 0.000000000 0.000000000   
## 6661788|59-G/T 6661804|5-T/A 6661860|33-C/T 6662701|6-A/G 6662705|5-C/G 6662826|20-C/T 6663036|30-T/G 6663052|30-A/G 6663927|13-G/A 6664053|24-C/T 6664315|17-A/G   
## 0.000000000 0.000000000 0.000000000 0.004395583 0.000000000 0.000000000 0.000000000 0.004962748 0.000000000 0.004123694 0.006600588   
## 6664393|35-G/A 100101004|14-G/C 6664748|30-C/A 6665122|15-A/T 6665280|39-G/A 6665349|39-T/A 100109477|21-T/C 6665749|9-T/C 6665804|12-G/A 6665805|15-G/A 6665809|11-A/G   
## 0.005730612 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004414989 0.000000000 0.000000000 0.000000000   
## 6665975|52-G/A 6666169|13-T/A 6666355|23-A/G 100123948|55-T/C 100022390|44-G/A 100023236|15-G/A 100073694|7-G/A 100082381|22-C/A 100098535|7-C/G 100098787|33-A/G 100123797|15-G/T   
## 0.000000000 0.004106759 0.000000000 0.000000000 0.004819249 0.000000000 0.004683815 0.000000000 0.000000000 0.000000000 0.000000000   
## 6632181|18-G/A 6650384|58-A/G 6650392|28-C/A 6650405|15-T/C 6650425|36-A/T 6650440|25-T/C 6650441|46-C/T 6650503|7-C/T 6650511|35-A/T 6650582|52-A/C 6650601|22-C/T   
## 0.013422206 0.004640346 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650694|13-A/C 6650707|5-A/G 6650750|63-G/A 6650751|7-T/G 6650881|41-T/C 6650887|8-T/G 6650895|17-A/G 6650942|29-A/G 6651068|27-G/A 6651106|54-A/T 6651126|7-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651199|46-C/G 6651277|12-C/T 6651309|58-A/G 6651440|6-A/G 6651559|24-C/T 6651568|46-G/C 6651596|5-C/T 6651608|37-G/A 6651626|23-G/C 6651670|12-A/G 6651678|31-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004106759   
## 6651702|11-C/T 6651729|48-A/G 6651775|9-A/G 6651799|50-C/G 6651833|60-C/T 6651834|42-T/G 6651856|61-G/A 6651902|48-A/T 6651916|32-C/T 6651940|40-C/T 6651955|38-C/A   
## 0.000000000 0.004913975 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004210508   
## 6652103|6-G/A 6652221|13-A/G 6652233|30-C/T 6652271|50-T/C 6652312|29-A/G 6652323|41-T/C 6652348|30-G/A 6652387|29-A/C 6652570|42-C/A 6652579|68-G/T 6652611|59-C/A   
## 0.000000000 0.000000000 0.000000000 0.004618913 0.000000000 0.000000000 0.000000000 0.000000000 0.004106759 0.000000000 0.000000000   
## 6652679|46-G/C 6652770|46-T/C 6652916|41-A/G 6652924|5-G/T 6653139|25-C/T 6653290|15-T/C 6653405|19-T/G 6653547|59-T/C 6653608|25-C/G 6653635|5-T/C 6653678|35-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004683815 0.000000000 0.000000000 0.000000000   
## 6653689|26-T/A 6653786|26-A/G 6653788|50-G/A 6653837|14-C/T 6653866|26-A/T 6653923|19-A/T 6653998|66-G/A 6654062|37-C/T 6654076|43-A/C 6656943|6-A/T 6656950|8-C/G   
## 0.005797052 0.000000000 0.004106759 0.015036731 0.000000000 0.004106759 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657301|15-A/G 6657373|32-C/A 6657396|21-C/T 6657408|41-T/C 6657466|14-C/G 6657470|5-C/T 6657514|43-G/A 6657532|34-T/C 6657551|9-T/C 6657596|44-G/A 6657604|9-T/G   
## 0.000000000 0.004228311 0.005115056 0.000000000 0.000000000 0.013422206 0.000000000 0.005063259 0.004414989 0.004819249 0.000000000   
## 6657613|10-A/C 6657630|52-C/T 6657681|17-C/T 6657715|15-C/T 6657723|9-A/T 6657726|41-A/G 6657729|7-G/A 6657752|22-T/A 6657881|18-C/G 6658064|41-T/A 6658065|28-A/C   
## 0.004228311 0.000000000 0.007843016 0.000000000 0.004106759 0.000000000 0.004683815 0.004123694 0.000000000 0.000000000 0.000000000   
## 6658111|29-A/T 6658148|11-T/C 6658186|19-A/G 6658226|42-C/T 6658296|10-A/T 6658347|20-C/G 6658374|29-C/T 6658438|42-C/G 6658501|21-A/C 6658566|40-C/T 6661096|38-A/G   
## 0.000000000 0.000000000 0.000000000 0.004157986 0.000000000 0.004301055 0.000000000 0.004454321 0.004228311 0.004140769 0.000000000   
## 6661098|8-C/T 6661155|52-A/G 6661165|8-T/C 6661251|38-A/G 6661269|21-G/A 6661341|8-C/T 6661391|21-C/A 6661466|12-C/T 6661555|18-G/C 6661659|40-C/T 6661684|52-G/A   
## 0.000000000 0.004157986 0.004618913 0.004819249 0.000000000 0.004157986 0.000000000 0.006557306 0.000000000 0.000000000 0.000000000   
## 6661698|59-T/A 6661775|7-A/G 6661797|49-G/A 6662590|20-A/G 6662615|6-C/T 6662790|12-G/C 6662818|19-G/A 6662832|11-A/G 6662835|7-G/C 6662944|22-G/C 6662946|24-G/A   
## 0.004434568 0.000000000 0.000000000 0.000000000 0.000000000 0.008403212 0.004866151 0.000000000 0.004889946 0.000000000 0.000000000   
## 6662996|36-G/A 6663047|41-G/A 6663054|17-C/T 6663939|28-A/T 6663975|44-T/C 6663987|39-C/G 6664296|7-C/G 6664312|54-A/T 6664428|37-G/A 100082074|52-T/C 6664722|41-T/G   
## 0.000000000 0.004157986 0.007843016 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005633758 0.010256138 0.000000000   
## 6665235|64-T/C 6665278|5-A/G 6665282|36-G/A 6665346|17-A/G 6665662|22-T/C 6665663|28-T/A 6665849|25-C/T 6665877|33-T/C 6665879|38-A/T 6666358|65-C/T 100016475|46-G/A   
## 0.000000000 0.000000000 0.009389462 0.000000000 0.004301055 0.004210508 0.006779583 0.004434568 0.004338374 0.000000000 0.000000000   
## 100016905|48-C/A 100018192|15-C/A 100018375|55-C/G 100021981|25-T/A 100045028|11-A/G 100065468|15-G/A 100065569|37-C/A 100073412|16-T/C 100073701|13-G/T 100074011|18-G/C 100082459|38-C/A   
## 0.000000000 0.000000000 0.004210508 0.000000000 0.006042241 0.000000000 0.000000000 0.015266272 0.004192854 0.006005952 0.004210508   
## 100086150|10-G/T 100086229|17-T/C 100086237|9-C/A 100091190|32-A/G 100091207|45-C/G 100091251|13-T/C 100096444|12-A/C 100098472|22-C/G 100103647|6-C/A 100107103|17-C/T 6650387|53-A/G   
## 0.004210508 0.000000000 0.000000000 0.000000000 0.000000000 0.011695502 0.004264373 0.004140769 0.013729321 0.000000000 0.004301055   
## 6650481|61-G/A 6650788|22-T/C 6651332|37-A/C 6651818|50-T/C 6651863|32-C/T 6652372|10-T/C 6652511|31-G/A 6652754|21-A/G 6652755|9-G/A 6653571|19-A/G 6653574|37-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004357278 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653585|24-C/T 6657101|27-G/A 6657124|22-T/C 6657595|21-A/G 6657640|37-T/G 6657747|20-T/A 6657809|8-A/C 6657847|15-A/G 6657859|39-G/C 6657980|25-A/G 6658003|48-T/C   
## 0.000000000 0.000000000 0.004301055 0.004705856 0.000000000 0.005305002 0.004434568 0.000000000 0.004434568 0.014387734 0.000000000   
## 6658141|5-G/C 6658173|38-T/C 6658437|16-G/A 6658509|5-T/C 6658625|7-G/C 6661101|21-T/C 6661509|18-T/G 6661745|36-G/A 6661802|6-G/A 6661814|14-T/G 6662656|29-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004454321 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6662837|7-T/A 6662873|7-G/C 6662947|5-G/A 6663032|15-G/A 6664269|17-T/G 6664285|27-A/C 6664757|14-T/C 6664912|6-T/C 6665124|27-C/T 6665664|30-A/C 6665874|13-A/G   
## 0.000000000 0.000000000 0.008510483 0.008928392 0.010416381 0.000000000 0.000000000 0.011560303 0.006116150 0.004264373 0.004246265   
## 6665876|47-A/G 6666225|7-A/G 100065638|51-G/C 100065980|45-T/C 100073421|25-T/C 100073630|15-C/G 100073757|34-G/C 100073948|30-G/A 100074014|19-T/A 100074068|17-A/G 100082248|28-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004576635 0.004357278 0.000000000 0.000000000   
## 100086042|5-C/T 100093665|8-T/G 100098602|36-T/A 100098836|24-A/C 100102147|13-C/T 100121015|18-T/C 100066223|13-G/A 100106210|14-T/G 6665285|9-C/T 6661710|31-T/C 6653668|61-T/A   
## 0.013422206 0.004264373 0.008298611 0.004357278 0.004866151 0.000000000 0.000000000 0.013604804 0.008810400 0.000000000 0.000000000   
## 100024870|39-A/C 6663929|41-A/C 100019092|30-T/A 6661298|58-T/C 100016534|66-G/A 100023056|37-G/A 100082643|25-G/C 100064775|20-G/A 100023265|24-C/A 6651137|52-T/C 6652727|6-C/A   
## 0.000000000 0.000000000 0.000000000 0.005449551 0.000000000 0.011235596 0.013888210 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021017|32-G/T 100073776|11-G/A 100015600|63-A/T 6665051|27-A/T 100019246|34-T/A 6651056|34-C/T 6661829|9-C/T 6665126|22-A/C 100016268|6-T/C 100020350|21-A/G 100023328|20-T/C   
## 0.004796135 0.000000000 0.000000000 0.000000000 0.000000000 0.004414989 0.000000000 0.009389462 0.011560303 0.004705856 0.004728106   
## 100066210|28-C/T 6661110|21-T/A 100018023|63-A/G 100020236|59-G/A 100021188|32-G/C 100021960|39-C/T 100023459|46-A/G 100017280|64-T/G 100018247|39-T/A 100021898|39-C/T 100022093|45-A/T   
## 0.000000000 0.004282636 0.000000000 0.004395583 0.000000000 0.000000000 0.009090720 0.008546851 0.004434568 0.009950000 0.004246265   
## 100023129|9-T/A 100023441|20-A/G 100065302|16-G/A 100066548|17-C/T 6650550|11-T/G 100016077|58-A/G 100018469|20-T/G 100019543|16-G/T 100020860|10-A/C 100022172|17-T/G 100045257|30-G/T   
## 0.004338374 0.007662722 0.000000000 0.000000000 0.000000000 0.004640346 0.000000000 0.000000000 0.000000000 0.000000000 0.004157986   
## 6650546|47-C/A 6653399|26-T/A 100015390|53-T/G 100017298|53-C/T 100017444|58-C/T 100017989|5-T/C 100018126|55-A/G 100018257|27-G/T 100018350|18-A/T 100020244|19-T/A 100021605|34-G/T   
## 0.000000000 0.000000000 0.004140769 0.004661979 0.000000000 0.000000000 0.000000000 0.000000000 0.004395583 0.000000000 0.004210508   
## 100023076|20-A/T 100023357|49-A/T 6653628|59-A/G 6661821|17-T/A 100015255|25-C/T 100015707|14-A/T 100015710|46-C/T 100016017|19-C/T 100017899|6-A/G 100019473|54-C/T 100020145|63-C/G   
## 0.000000000 0.000000000 0.000000000 0.008968428 0.000000000 0.004228311 0.005390796 0.000000000 0.004395583 0.008583532 0.000000000   
## 100021743|44-C/T 100022776|55-C/A 100023242|39-G/C 100082188|29-T/C 100015628|14-G/A 100020893|36-A/G 100021540|61-G/A 100021665|36-G/A 100022938|66-G/C 100023291|60-T/A 6661242|40-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661353|60-C/T 100016201|10-C/T 100016537|37-T/G 100016842|18-C/T 100016876|65-C/T 100016987|65-G/A 100017504|59-C/A 100019821|57-T/A 100020901|34-T/C 100021671|8-G/A 100021969|10-T/C   
## 0.000000000 0.009661608 0.000000000 0.000000000 0.000000000 0.000000000 0.004157986 0.000000000 0.000000000 0.000000000 0.004357278   
## 100022199|66-G/A 100022545|35-T/C 100022573|13-G/C 100022831|52-G/A 100066558|7-C/T 100016263|30-C/G 100016306|10-A/T 100017198|10-T/A 100017275|13-A/G 100017509|15-C/G 100018032|68-T/C   
## 0.000000000 0.000000000 0.000000000 0.005141354 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004705856   
## 100018336|6-C/T 100018672|56-G/T 100019100|44-G/T 100019286|14-C/G 100019912|15-C/T 100020907|14-C/T 100021161|47-T/A 100021810|7-T/C 100023367|18-C/T 100064740|15-A/T 6653264|41-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6663072|37-T/A 100016098|7-T/C 100016143|59-T/C 100016740|12-A/C 100016777|38-T/C 100018407|47-C/A 100018609|48-C/T 100019034|62-G/A 100019293|6-G/T 100019468|41-G/A 100019644|45-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008733456   
## 100019745|64-C/T 100021138|40-C/T 100022777|45-C/T 100066874|50-C/A 100091157|27-T/G 6652941|42-T/C 6653902|40-C/T 6664728|12-C/T 100015633|60-A/G 100016193|8-T/A 100017485|19-T/C   
## 0.009008825 0.000000000 0.000000000 0.000000000 0.000000000 0.004264373 0.004140769 0.006557306 0.000000000 0.000000000 0.000000000   
## 100018162|27-C/T 100019061|21-G/C 100019334|15-C/T 100019756|22-T/C 100020056|55-G/T 100020924|20-C/T 100022009|9-G/A 100022323|36-A/G 100022703|5-T/C 100023049|42-G/A 100023218|64-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004264373   
## 100023269|66-A/G 100024832|25-T/C 100044738|8-C/T 100065081|38-C/T 100065706|32-G/A 100096952|53-C/A 6651239|56-C/A 6651495|32-A/G 6652638|14-C/A 6653296|13-A/C 6661158|36-C/T   
## 0.004661979 0.000000000 0.004157986 0.000000000 0.004228311 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006230469   
## 100015381|11-T/A 100015413|40-A/T 100015882|61-G/T 100017512|41-A/C 100018395|5-T/C 100019423|68-C/G 100019434|60-G/T 100019704|32-C/G 100019785|27-T/C 100021066|30-G/A 100021425|47-C/A   
## 0.000000000 0.000000000 0.005089025 0.000000000 0.005602197 0.004192854 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021475|63-A/T 100021915|65-G/A 100022373|12-A/G 100022606|28-T/C 100022910|49-A/G 100025041|57-G/A 100044554|19-G/A 100064948|49-T/A 100065362|20-C/T 6650752|20-T/A 6652176|15-T/C   
## 0.000000000 0.005089025 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653696|11-C/T 6662909|25-T/C 100015291|39-T/G 100016129|26-G/A 100017225|65-T/C 100017536|38-A/T 100017676|8-G/A 100019216|7-C/G 100019420|52-C/G 100019494|63-G/T 100020318|21-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004157986 0.000000000   
## 100020532|11-T/G 100020604|29-A/G 100020745|51-A/C 100021499|21-G/C 100021838|13-T/A 100021978|37-T/C 100022031|7-T/A 100022223|45-A/G 100023499|68-G/T 100023507|21-G/A 6634782|49-G/A   
## 0.000000000 0.000000000 0.004301055 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004474250   
## 6650656|12-T/G 6652475|14-A/T 6661333|17-C/T 100015448|67-A/T 100015469|19-T/A 100015537|12-C/T 100015992|7-C/A 100016029|18-C/T 100016274|21-C/T 100016854|18-G/T 100017144|48-G/A   
## 0.000000000 0.008438667 0.000000000 0.004376347 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017489|57-G/A 100017909|16-T/C 100018611|43-C/A 100018927|63-G/C 100019035|27-T/A 100019236|16-C/T 100020671|26-T/C 100021001|60-T/A 100021318|46-C/G 100021549|61-A/C 100021863|20-C/T   
## 0.000000000 0.000000000 0.004962748 0.000000000 0.000000000 0.004842586 0.000000000 0.004157986 0.000000000 0.000000000 0.004319634   
## 100023205|16-G/T 100044711|34-G/A 100064599|63-A/C 100065680|37-G/A 100118396|21-A/G 6651534|52-G/A 6651570|59-C/T 6652200|26-G/A 6652872|49-G/A 6654031|17-C/T 6661376|52-G/A   
## 0.000000000 0.004728106 0.000000000 0.000000000 0.009389462 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005141354   
## 6662917|14-G/T 6666226|12-T/G 100015950|5-A/G 100016109|31-A/T 100016805|54-A/G 100016861|15-T/C 100017893|45-T/C 100018244|41-A/T 100018636|16-G/A 100018890|25-T/C 100018982|31-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005730612 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019094|40-C/T 100019137|21-G/C 100019699|26-G/C 100020118|29-C/T 100020890|29-C/T 100021219|23-C/T 100021521|57-T/G 100022288|6-G/C 100022337|30-A/G 100022554|22-T/C 100023064|19-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.009389462 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004866151   
## 100045690|24-G/A 6650514|37-T/A 6651982|15-T/A 6653247|28-A/C 6653292|47-C/G 6653430|58-A/G 6653481|64-T/C 6653533|6-C/A 6653865|59-A/C 6661831|60-G/A 100015200|15-A/C   
## 0.004474250 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015297|26-C/T 100015382|10-T/A 100017834|8-C/T 100020258|46-C/T 100021617|53-T/C 100021932|18-G/T 100022038|23-C/A 100022622|15-A/G 100022667|15-C/T 100022800|24-C/A 100022903|55-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004319634 0.000000000 0.000000000 0.000000000 0.000000000   
## 100023130|51-G/C 100023154|5-T/C 100023531|17-A/G 100045599|24-A/G 100065227|31-T/C 100065691|24-C/T 100066039|22-G/A 100066092|14-C/T 100074069|38-T/C 100106301|19-A/G 6650690|47-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007547062 0.000000000 0.000000000 0.005249307   
## 6651361|32-G/A 6652061|58-G/A 6652327|54-A/T 6653204|40-A/G 6653393|35-C/A 6653673|65-A/G 6653746|33-C/A 6661305|25-C/G 6664067|16-C/A 6664716|12-T/C 100015645|28-C/T   
## 0.004228311 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016045|44-C/T 100016331|42-T/C 100017699|11-G/A 100018593|39-G/A 100018814|46-A/G 100019003|20-A/T 100019081|63-A/T 100019377|57-G/A 100019413|55-T/G 100019588|52-G/A 100021006|21-C/T   
## 0.000000000 0.000000000 0.004796135 0.000000000 0.004555785 0.000000000 0.000000000 0.000000000 0.004434568 0.000000000 0.000000000   
## 100021094|7-C/G 100022208|18-A/C 100022310|31-G/A 100022384|48-G/A 100022899|42-C/G 100108128|12-A/T 6650846|64-A/G 6650911|65-G/A 6651088|5-A/C 6651399|12-C/A 6652520|9-A/G   
## 0.000000000 0.000000000 0.004301055 0.000000000 0.000000000 0.004376347 0.000000000 0.000000000 0.000000000 0.000000000 0.008474423   
## 6653133|15-G/A 6653564|53-G/A 6653709|31-G/A 6653720|68-C/A 6653797|40-A/T 6653874|10-G/T 6653907|59-A/G 6653965|43-A/G 100065805|29-G/T 6661880|32-C/T 100015400|35-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005509600 0.000000000 0.005089025 0.008657845 0.006078971   
## 100016174|6-C/A 100016241|19-C/T 100016653|31-G/A 100017080|12-A/T 100017172|64-G/C 100017659|13-G/A 100017936|42-T/C 100018252|52-A/G 100018331|42-G/A 100019441|49-A/T 100020597|8-T/A   
## 0.000000000 0.000000000 0.000000000 0.004376347 0.000000000 0.000000000 0.004264373 0.008298611 0.000000000 0.004264373 0.000000000   
## 100020814|67-G/A 100022284|10-G/A 100022341|63-A/G 100023203|29-C/G 100023334|6-G/T 100023527|5-T/A 100082625|32-A/G 6631600|18-G/A 6634219|54-C/T 6650605|38-G/A 6650666|57-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.013422206 0.008583532 0.000000000 0.009132228   
## 6650850|54-G/C 6651176|17-T/A 6651223|56-T/G 6651266|67-C/T 6651497|13-G/A 6651500|53-T/A 6652020|49-C/T 6652396|20-C/T 6652765|20-C/T 6653179|35-C/A 6653588|36-G/A   
## 0.000000000 0.000000000 0.004157986 0.000000000 0.000000000 0.000000000 0.008968428 0.000000000 0.004319634 0.004474250 0.000000000   
## 6653617|17-C/G 6653803|13-C/G 6653921|17-G/A 6654071|34-C/T 6658453|44-C/T 6662623|41-C/T 100015396|38-G/A 100015614|19-G/A 100015961|7-A/G 100016361|49-G/A 100016600|22-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.010470914 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017130|57-T/G 100017328|47-G/A 100018645|27-A/G 100018647|11-T/C 100019579|57-A/G 100019755|66-T/A 100020516|10-T/C 100021870|45-T/C 100022119|34-G/A 100022158|40-C/G 100022170|46-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004357278 0.000000000 0.004728106 0.000000000 0.000000000   
## 100022467|38-A/C 100022708|55-T/C 100023428|39-C/A 100064901|22-G/A 100066583|50-G/C 100082198|48-A/G 100082209|53-T/A 100114666|37-A/T 6650551|48-A/C 6650640|8-G/T 6651037|14-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004913975 0.004106759 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651123|16-G/T 6651198|35-C/T 6651548|20-C/G 6652349|48-A/C 6652912|31-C/T 6652960|9-G/T 6653047|24-C/T 6653111|54-G/C 6653182|48-A/G 6653306|31-C/A 6653329|47-T/C   
## 0.000000000 0.007017457 0.004301055 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004106759 0.000000000   
## 6653695|53-T/C 6657908|24-T/C 6658488|17-G/A 6661172|54-T/C 6661256|38-C/G 6665238|10-A/T 100016051|64-C/A 100016065|42-C/A 100016173|67-C/G 100016227|33-T/G 100016734|15-A/G   
## 0.004319634 0.005141354 0.000000000 0.000000000 0.004192854 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017686|33-G/C 100017703|8-T/C 100017977|13-T/C 100018439|16-T/C 100020203|19-G/A 100021102|63-A/C 100021231|28-T/G 100021723|29-T/G 100022522|40-C/T 100022709|6-G/A 100045624|6-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004866151 0.000000000 0.000000000 0.004338374 0.000000000 0.000000000 0.000000000   
## 6650668|41-T/C 6650746|17-T/C 6650807|17-C/T 6650886|31-G/A 6650934|11-G/A 6651435|37-C/T 6651778|31-G/A 6651783|65-C/T 6652191|59-C/T 6652464|36-A/G 6652873|35-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004796135 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653077|56-T/C 6653537|32-A/G 6653577|27-G/A 6653747|15-A/G 6661083|6-C/T 6661240|52-C/A 6661424|62-T/C 6661830|19-T/C 6665513|19-G/C 6661486|13-G/C 100015240|23-G/A   
## 0.000000000 0.005361892 0.000000000 0.000000000 0.000000000 0.016735210 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016947|13-A/G 100018671|65-G/A 100019864|8-C/G 100019949|8-C/T 100020694|31-T/C 100022684|13-T/A 100022926|58-G/T 100023200|68-C/T 100044609|42-A/G 100065342|51-C/T 100066803|48-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004106759 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100085950|35-A/G 100108060|20-G/C 6630419|14-G/A 6650581|35-C/G 6650628|40-T/C 6650650|35-G/T 6650684|65-A/T 6650719|47-G/A 6650735|38-G/C 6650879|60-C/T 6651049|16-C/G   
## 0.000000000 0.000000000 0.004866151 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006153788 0.000000000 0.000000000   
## 6651124|38-C/T 6651144|62-T/C 6651167|41-A/G 6651516|36-T/G 6651679|24-G/A 6651984|7-T/A 6652023|10-G/A 6652091|50-T/A 6652242|32-G/A 6652409|10-T/C 6653236|64-T/C   
## 0.000000000 0.000000000 0.000000000 0.004210508 0.000000000 0.000000000 0.000000000 0.004535124 0.000000000 0.004357278 0.000000000   
## 6653348|13-G/A 6653637|32-G/T 6653657|58-T/C 6653943|15-G/T 6653959|63-A/G 6654028|68-A/G 6654050|51-G/T 6654072|32-C/A 6657061|32-A/G 6661522|65-A/G 6665120|10-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004750567 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100120328|20-T/C 100120333|61-G/A 100065668|5-T/C 100015835|6-C/T 100016061|39-G/C 100016656|14-T/C 100017602|16-G/A 100019319|48-T/C 100019777|21-G/C 100021190|47-T/C 100022177|66-A/G   
## 0.000000000 0.011172832 0.000000000 0.000000000 0.008849383 0.000000000 0.000000000 0.011235596 0.000000000 0.000000000 0.000000000   
## 100023241|6-T/C 100044452|9-C/G 100065422|7-G/A 100066442|52-G/A 6650473|26-A/G 6650482|38-T/C 6650496|24-C/T 6650610|24-T/A 6650644|49-A/G 6650834|54-C/A 6650842|16-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.007117347 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651138|26-A/T 6651261|54-G/A 6651453|19-A/C 6651597|59-A/G 6651744|34-A/T 6651756|62-G/A 6651812|33-C/T 6651980|42-A/G 6652201|21-C/A 6652243|14-C/G 6652864|38-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004282636 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653219|11-G/C 6653248|20-T/C 6653427|25-A/G 6653971|28-A/T 6657006|6-C/A 6657540|27-G/A 6661088|54-C/T 100082471|46-T/C 6661706|26-T/C 6664071|6-G/A 100016295|41-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018466|44-G/A 100020140|32-T/C 100020690|9-T/G 100020765|38-G/C 100021275|46-C/T 100045738|12-T/A 100082496|60-G/T 6650712|28-A/C 6650913|49-A/G 6650972|30-C/T 6651222|59-G/A   
## 0.004819249 0.004192854 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651438|51-T/C 6651492|20-G/A 6651654|52-A/G 6651829|48-G/A 6651860|44-T/G 6651877|63-C/T 6651935|33-C/T 6651974|35-C/T 6651986|27-T/C 6652262|36-T/C 6652560|9-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652688|16-G/A 6652875|8-C/G 6653021|18-A/G 6653263|25-G/C 6653294|9-G/A 6653410|59-G/C 6653536|55-G/A 6653603|22-T/C 6653802|50-G/C 6653830|13-C/T 6653963|35-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004301055 0.000000000 0.000000000 0.013985320   
## 6654043|16-A/G 6658028|40-G/C 6661349|14-C/A 6661568|63-A/T 6661747|28-T/C 6663960|60-T/C 6663980|14-A/G 100019622|48-T/A 100019802|12-C/T 100020020|13-G/A 100021576|15-T/C   
## 0.004414989 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006557306 0.000000000 0.000000000   
## 100022394|27-C/T 100023389|57-T/G 100023502|39-T/A 100073839|28-C/G 6635439|23-T/C 6650563|22-C/T 6650688|61-A/G 6650747|16-A/C 6650772|42-C/A 6650861|34-T/A 6651030|62-A/T   
## 0.000000000 0.000000000 0.004434568 0.004123694 0.008196582 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651225|58-T/C 6651322|19-G/A 6651329|44-C/A 6651331|12-T/A 6651353|65-C/A 6651374|45-A/G 6651589|18-T/A 6651687|45-A/G 6651748|42-G/T 6651933|62-A/G 6652449|21-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652527|63-C/A 6652542|24-G/C 6652684|46-A/G 6652730|63-C/G 6652782|44-C/T 6652925|43-T/C 6653316|17-T/A 6653365|26-A/G 6653370|22-C/T 6653474|66-G/A 6653556|52-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004889946 0.000000000 0.000000000 0.004576635 0.000000000 0.000000000   
## 6653733|18-G/T 6653741|19-T/C 6653765|48-T/C 6653879|16-T/C 6654049|52-T/A 6657335|32-G/A 6658312|10-A/G 6661127|7-A/C 6661289|11-T/C 6661380|15-T/G 6661529|31-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004454321 0.000000000   
## 6661563|46-C/A 6661785|56-A/G 6661832|23-C/T 6663079|11-G/A 6665675|20-A/G 6666102|6-C/T 100121706|16-C/T 100015265|55-C/A 100015554|25-A/G 100017634|45-C/T 100018229|31-T/A   
## 0.000000000 0.000000000 0.004246265 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018597|37-C/G 100018998|48-T/C 100019106|32-T/C 100093589|24-T/C 6632259|35-G/A 6632582|5-C/T 6650532|52-G/A 6650756|47-A/G 6650830|17-G/A 6650851|66-A/T 6650928|5-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650987|34-A/G 6651080|35-C/T 6651107|37-G/A 6651110|32-G/T 6651196|62-C/A 6651288|46-T/C 6651442|63-C/T 6651613|49-C/A 6651658|42-A/T 6651720|6-A/G 6651765|63-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651802|34-G/T 6651873|50-T/C 6651874|53-T/A 6651906|20-T/A 6651943|26-G/A 6651957|58-G/A 6652104|41-C/G 6652143|61-T/G 6652149|28-A/G 6652158|57-C/T 6652181|32-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652211|12-C/T 6652240|22-G/A 6652269|40-C/T 6652459|65-C/T 6652473|56-G/T 6652516|46-A/G 6652757|25-T/C 6652797|7-G/T 6652811|14-C/T 6652891|17-T/C 6652914|32-A/G   
## 0.000000000 0.000000000 0.000000000 0.006733930 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652922|32-G/A 6653051|5-G/C 6653071|48-C/T 6653276|22-T/C 6653337|5-T/C 6653343|21-C/G 6653392|28-C/G 6653404|15-T/C 6653456|52-A/G 6653484|18-G/A 6653641|8-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004157986 0.000000000 0.000000000   
## 6653669|32-C/T 6653732|48-A/T 6653735|8-T/G 6653739|44-G/C 6653814|28-G/A 6653826|65-T/G 6653844|35-A/G 6653895|16-A/G 6653898|20-C/A 6653961|15-T/C 6654048|23-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005730612 0.000000000   
## 6657273|10-C/G 6657733|25-C/T 6657825|20-A/C 6658114|32-C/G 6658233|5-T/G 6658363|20-A/C 6661157|31-A/G 6661223|43-A/T 6661238|20-T/G 6661454|19-A/G 6661478|59-G/T   
## 0.000000000 0.000000000 0.004106759 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661581|31-C/T 6661584|33-A/T 6661734|17-A/G 6662610|35-C/T 6663909|13-G/T 6664051|46-A/C 6665119|8-A/G 6666170|15-A/C 6666170|17-G/A 6666170|6-G/A 100018529|16-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008031998   
## 100019109|54-C/T 100020873|6-C/G 100020968|7-A/G 100021983|42-A/C 100022525|11-T/A 100065722|64-T/C 6650393|5-T/C 6650424|56-T/C 6650439|56-G/A 6650466|32-T/C 6650505|17-A/G   
## 0.000000000 0.000000000 0.000000000 0.004123694 0.000000000 0.005063259 0.005602197 0.000000000 0.000000000 0.000000000 0.006600588   
## 6650506|45-A/C 6650533|15-G/T 6650557|47-G/T 6650621|36-G/A 6650631|22-C/T 6650685|22-A/T 6650724|18-T/A 6650838|22-C/T 6650866|40-T/C 6650867|54-T/C 6650893|22-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650917|35-C/T 6650920|31-G/C 6651018|30-A/C 6651060|22-T/C 6651146|26-G/A 6651378|67-C/T 6651387|24-T/A 6651391|45-G/A 6651444|17-T/C 6651450|54-T/G 6651457|37-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005141354 0.000000000 0.000000000 0.000000000   
## 6651484|65-A/G 6651503|6-A/G 6651510|59-A/G 6651537|19-A/C 6651552|29-C/T 6651562|32-G/C 6651569|33-T/G 6651580|22-T/A 6651606|13-T/C 6651612|31-C/T 6651615|24-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651705|42-A/G 6651737|5-C/T 6651892|35-T/C 6651930|26-G/C 6651938|17-A/C 6652055|48-A/G 6652132|43-T/C 6652144|17-G/A 6652212|22-A/G 6652231|38-C/A 6652386|55-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652398|40-G/A 6652413|28-C/A 6652427|27-T/A 6652438|68-G/A 6652494|24-T/C 6652515|15-A/G 6652518|57-T/C 6652535|53-G/T 6652564|55-A/G 6652619|16-T/C 6652816|67-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009049587 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652945|37-C/A 6653041|46-A/G 6653142|49-C/A 6653144|56-G/T 6653148|46-A/C 6653163|62-T/C 6653369|63-C/T 6653408|40-T/C 6653429|7-A/G 6653439|17-G/C 6653493|47-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008230312 0.000000000   
## 6653501|7-C/T 6653502|28-G/C 6653504|7-C/G 6653563|7-T/A 6653593|19-T/C 6653740|20-C/T 6653755|14-T/C 6653790|16-T/G 6653834|11-T/C 6653851|28-A/C 6653936|33-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004474250 0.000000000 0.000000000   
## 6653989|22-G/A 6654038|30-G/A 6654047|8-G/A 6654066|45-C/G 6657075|25-A/C 6657215|14-A/T 6657652|33-T/C 6658198|15-T/C 6658380|19-G/A 6658597|10-T/C 6661103|59-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004357278 0.000000000   
## 6661108|53-A/G 6661557|11-G/A 6661627|50-T/C 6661879|7-T/C 6662888|24-C/A 6662892|24-C/T 6664359|17-A/T 6664391|17-A/G 6664780|11-C/T 6665039|22-C/G 6666100|22-C/T   
## 0.004301055 0.004796135 0.000000000 0.006514588 0.000000000 0.000000000 0.000000000 0.000000000 0.004750567 0.000000000 0.000000000   
## 6666102|30-T/C 6654102|57-C/A 100016395|29-T/C 100020724|58-C/T 100022521|22-C/T 100022955|34-C/A 100045457|17-G/A 100073683|46-G/A 100093512|17-C/G 100102305|42-T/G 100121708|34-C/G   
## 0.000000000 0.000000000 0.006557306 0.000000000 0.000000000 0.000000000 0.006309085 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650447|47-T/C 6650456|36-A/G 6650499|21-C/T 6650502|55-C/G 6650518|44-C/T 6650566|9-A/G 6650589|18-C/T 6650595|24-C/T 6650602|41-G/A 6650625|38-T/C 6650630|7-C/G   
## 0.006920332 0.000000000 0.000000000 0.000000000 0.010470914 0.000000000 0.000000000 0.004123694 0.004157986 0.000000000 0.000000000   
## 6650642|21-G/A 6650708|55-C/A 6650731|33-G/A 6650777|15-G/C 6650798|22-T/C 6650874|54-T/G 6650892|52-T/C 6650926|30-T/C 6650951|18-A/G 6650983|20-T/G 6651002|11-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004597677   
## 6651006|19-G/A 6651015|9-T/A 6651028|11-C/T 6651064|34-C/G 6651075|68-C/T 6651082|17-A/G 6651108|57-A/T 6651169|15-T/C 6651211|35-G/A 6651214|29-G/C 6651218|36-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005089025   
## 6651236|9-A/C 6651265|9-G/A 6651293|36-A/T 6651299|48-A/G 6651311|22-C/T 6651316|37-T/G 6651339|7-G/A 6651360|17-C/A 6651411|25-A/G 6651455|40-A/G 6651480|6-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004494359 0.000000000   
## 6651535|17-G/C 6651553|40-C/T 6651633|11-G/C 6651642|43-A/C 6651652|13-T/A 6651653|46-A/T 6651666|39-C/A 6651668|54-T/C 6651692|43-T/C 6651779|57-A/G 6651819|25-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651894|54-A/G 6651913|20-A/G 6651928|6-C/T 6651950|10-C/T 6651962|57-C/T 6651979|59-G/T 6652004|68-A/T 6652041|41-T/C 6652076|24-T/G 6652082|47-A/G 6652128|6-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005089025 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652178|42-C/T 6652228|29-C/T 6652229|59-T/C 6652252|11-C/T 6652279|53-A/T 6652302|43-G/A 6652328|42-T/G 6652402|15-A/G 6652405|52-T/C 6652430|41-A/T 6652442|59-A/G   
## 0.024687500 0.000000000 0.004683815 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652444|19-A/C 6652476|42-G/A 6652478|11-G/T 6652495|5-G/A 6652517|8-A/G 6652531|35-T/C 6652633|57-C/A 6652685|43-G/A 6652711|52-C/T 6652775|11-G/A 6652812|20-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005899653 0.000000000 0.004728106   
## 6652825|12-T/C 6652846|44-A/G 6652876|5-G/A 6652899|47-T/G 6652923|25-T/A 6652938|38-G/A 6652954|34-G/A 6652977|48-A/C 6653056|35-C/G 6653113|5-G/A 6653221|12-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653285|45-G/C 6653299|45-T/C 6653300|45-T/C 6653301|16-C/T 6653302|10-C/T 6653314|19-C/A 6653350|22-C/T 6653402|19-G/T 6653488|18-C/T 6653495|56-A/T 6653519|51-A/G   
## 0.000000000 0.008733456 0.000000000 0.004842586 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007781982 0.000000000   
## 6653534|60-C/T 6653576|42-C/A 6653592|23-G/A 6653671|64-C/A 6653680|17-G/A 6653685|30-G/A 6653711|10-T/A 6653718|49-A/C 6653737|54-G/A 6653753|52-T/C 6653780|36-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653880|38-A/G 6653900|13-T/A 6653944|44-G/A 6653977|55-A/G 6653997|67-G/A 6654006|12-T/C 6654014|37-G/A 6654041|11-A/G 6654055|10-A/G 6654086|14-G/A 6654088|35-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004866151 0.000000000   
## 6656956|22-A/G 6657047|46-C/T 6657188|43-C/G 6657327|42-G/C 6657536|7-A/G 6657721|47-G/C 6657808|17-T/A 6657912|46-T/G 6658001|44-A/T 6658011|9-C/A 6658107|14-C/G   
## 0.000000000 0.000000000 0.000000000 0.004140769 0.005063259 0.000000000 0.000000000 0.000000000 0.004123694 0.000000000 0.010049995   
## 6658156|5-G/T 6658199|15-T/C 6658229|33-G/T 6658234|5-T/G 6658254|27-T/C 6658284|37-G/A 6658292|22-T/C 6658327|20-A/G 6658407|20-G/A 6658414|11-G/A 6658562|19-G/T   
## 0.000000000 0.000000000 0.004157986 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6658586|32-A/C 6658643|11-C/T 6658671|14-C/T 6661089|25-T/C 6661118|54-A/G 6661135|53-G/A 6661189|30-T/C 6661215|39-T/G 6661222|65-T/A 6661248|53-C/G 6661249|13-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661292|48-T/C 6661362|55-T/C 6661374|18-A/G 6661410|32-G/T 6661422|22-C/T 6661440|5-C/T 6661444|36-A/G 6661467|8-T/G 6661491|67-G/C 6661502|37-A/T 6661590|51-A/C   
## 0.000000000 0.000000000 0.005970096 0.000000000 0.004576635 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661599|28-A/G 6661630|50-G/A 6661635|15-T/C 6661640|37-T/A 6661680|9-C/G 6661723|32-C/T 6661736|14-G/C 6661758|19-G/A 6661804|60-A/G 6661810|40-A/C 6661811|44-T/A   
## 0.005194770 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004157986 0.000000000   
## 6661811|67-G/A 6661833|57-C/T 6661841|11-G/A 6661855|40-T/C 6661864|19-T/A 6661882|41-A/G 6661883|8-G/A 6661885|20-A/T 6662600|6-A/G 6662722|30-G/C 6662742|10-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004395583 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6662844|10-A/C 6662885|9-G/T 6662886|27-C/T 6662910|18-C/G 6662926|18-T/C 6663096|18-A/T 6663907|45-A/G 6663910|8-C/T 6663965|32-C/T 6663983|49-G/C 6663986|51-T/A   
## 0.004228311 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664025|20-C/T 6664038|20-G/A 6664063|32-G/A 6664295|6-G/A 6664431|31-A/G 6664713|15-G/A 6665122|10-A/C 6665220|17-C/T 6665221|28-T/C 100109498|18-A/G 100109477|15-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100109477|9-A/C 6665568|14-T/C 6665571|10-T/C 6665805|26-C/G 6666099|20-C/T 6666516|59-G/A 100124929|12-A/G 100016665|5-A/G 100016860|40-G/A 100019055|15-C/A 100019486|67-T/C   
## 0.000000000 0.000000000 0.004357278 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020835|48-C/G 100044994|33-G/A 100064828|9-G/T 100064931|32-G/A 100065941|26-T/C 100073522|28-A/G 100081694|12-C/T 100093694|8-T/G 100114698|38-A/T 100121709|38-A/G 6631771|63-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6643511|8-T/C 6650389|25-A/G 6650408|50-C/T 6650436|33-G/A 6650531|50-G/A 6650573|57-G/A 6650637|15-T/C 6650654|52-A/C 6650710|46-T/G 6650720|22-A/T 6650779|16-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004175347 0.000000000   
## 6650822|27-G/A 6650832|27-T/C 6650901|27-G/A 6650902|39-G/T 6650937|10-A/G 6650960|65-A/G 6651019|62-A/G 6651142|65-T/C 6651204|9-G/A 6651227|47-C/T 6651280|20-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651418|16-G/T 6651508|15-G/T 6651574|38-G/T 6651577|11-A/G 6651598|31-T/C 6651697|15-C/T 6651725|7-T/C 6651760|20-A/T 6651762|50-A/G 6651788|15-A/G 6651792|9-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006514588 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651793|43-T/C 6651862|51-C/T 6651882|23-G/A 6651884|35-A/C 6651903|16-A/G 6651924|35-T/C 6651929|41-G/T 6651993|33-G/A 6651998|13-G/T 6652029|51-G/A 6652043|18-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004414989 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652138|37-A/G 6652167|65-C/G 6652206|59-C/A 6652238|26-C/T 6652289|28-A/T 6652298|67-A/G 6652307|44-C/A 6652334|58-A/T 6652336|15-C/A 6652366|34-C/A 6652425|29-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004705856 0.000000000 0.000000000   
## 6652524|49-C/T 6652588|40-G/T 6652613|43-C/G 6652632|21-A/G 6652778|29-G/A 6652802|13-A/T 6652819|42-A/C 6652826|14-T/C 6653026|52-G/C 6653068|62-G/C 6653116|22-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004454321 0.000000000 0.000000000   
## 6653218|66-C/G 6653354|23-C/A 6653444|44-G/T 6653464|25-A/G 6653494|25-G/A 6653568|59-G/C 6653672|51-G/T 6653690|24-G/C 6653700|47-T/C 6653713|41-T/C 6653736|20-T/A   
## 0.000000000 0.004319634 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653875|30-C/T 6653968|66-C/G 6653974|33-T/A 6653991|65-G/T 6657021|28-G/A 6657102|16-C/T 6657128|18-G/A 6657132|5-A/C 6657178|34-G/A 6657193|53-C/T 6657201|19-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007117347 0.004728106 0.000000000 0.000000000   
## 6657204|30-A/C 6657318|9-G/A 6657354|8-C/T 6657383|35-G/T 6657458|5-C/G 6657566|43-G/A 6657607|43-G/A 6657631|9-G/A 6657655|8-T/C 6657745|21-C/A 6657813|21-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657950|26-T/C 6658016|18-C/G 6658025|28-G/A 6658074|26-C/A 6658086|13-T/C 6658116|19-T/G 6658140|8-T/C 6658176|39-C/T 6658256|13-G/C 6658270|50-G/T 6658309|15-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6658382|35-G/A 6658386|9-G/T 6658396|48-A/T 6658416|19-T/C 6658448|12-A/G 6658539|20-A/G 6658593|6-T/C 6658605|5-T/A 6658616|40-G/T 6658646|18-C/A 6661133|7-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661179|34-A/T 6661195|26-A/G 6661294|16-G/T 6661342|14-G/C 6661347|62-A/G 6661359|29-T/C 6661360|12-T/C 6661375|25-G/A 6661390|29-G/A 6661411|10-A/T 6661415|7-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661429|43-A/G 6661461|24-A/G 6661525|21-A/G 6661561|6-A/G 6661611|46-A/C 6661622|45-G/T 100097038|21-G/A 6661741|18-C/T 6661767|9-T/C 6661768|5-T/C 6661780|15-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.005012500 0.000000000 0.026196257 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661784|18-A/G 6661801|15-C/T 6662572|23-G/A 6662577|20-C/A 6662598|13-T/G 6662619|18-C/T 6662621|6-C/T 6662686|27-C/T 6662729|33-C/T 6662743|22-C/T 6662903|44-T/C   
## 0.005970096 0.000000000 0.000000000 0.000000000 0.000000000 0.013071330 0.000000000 0.006116150 0.004157986 0.000000000 0.000000000   
## 6664062|57-T/C 6664077|54-G/T 6664087|35-A/T 6664282|11-G/A 6664352|17-T/G 6664715|34-G/A 6665049|6-C/T 6665121|17-A/G 6665508|35-A/G 6665515|61-A/G 6665540|8-G/A   
## 0.007168366 0.000000000 0.000000000 0.004796135 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004514650 0.000000000   
## 6665849|33-C/T 6666095|7-A/G 6666174|7-C/T 6666520|31-G/A 100015941|21-T/C 100016251|35-G/A 100016732|29-G/A 100045346|24-C/T 100045582|33-G/A 100045632|7-G/A 100064767|54-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004123694 0.000000000 0.004683815 0.000000000   
## 100064928|53-G/A 100065927|39-C/T 100074119|31-T/C 100082416|45-C/A 100085968|36-G/A 100091287|38-A/T 100093420|8-G/A 100104859|48-T/C 100121707|24-C/G 6650478|7-C/T 6650577|59-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650765|26-G/A 6651007|49-A/G 6651119|61-A/G 6651133|33-C/T 6651237|16-C/T 6651693|21-C/T 6651704|49-G/T 6651952|32-C/T 6652155|42-G/C 6652275|21-C/T 6652283|16-C/T   
## 0.000000000 0.000000000 0.004514650 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652292|40-G/A 6652303|27-C/T 6652553|13-A/G 6652626|33-A/G 6652630|7-G/C 6652656|7-T/C 6652758|10-G/A 6653200|23-C/A 6653877|30-A/G 6653984|20-G/T 6656875|8-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004192854 0.000000000   
## 6656924|30-G/C 6656996|5-A/T 6657117|41-C/T 6657154|6-G/A 6657156|29-A/C 6657483|18-T/G 6657561|6-C/T 6657735|31-T/A 6657741|7-G/A 6657814|9-A/G 6657850|12-C/G   
## 0.000000000 0.000000000 0.000000000 0.007721892 0.000000000 0.000000000 0.000000000 0.000000000 0.004683815 0.004246265 0.000000000   
## 6657942|13-C/G 6657997|45-C/T 6658062|30-T/G 6658550|29-A/G 6658582|12-C/G 6658632|5-T/C 6661273|54-T/A 6661308|52-T/C 6661408|14-C/T 6661538|9-G/A 6661791|66-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.010256138 0.000000000 0.000000000 0.000000000   
## 6661818|22-G/A 6662638|5-A/G 6662824|38-C/T 6662887|8-G/C 6663037|41-C/G 6664882|7-A/C 6665050|32-A/T 6665295|5-T/C 100019888|47-T/C 100045453|46-G/A 100045704|9-A/G   
## 0.000000000 0.000000000 0.004264373 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100064586|17-G/C 100066059|7-C/T 100074054|47-T/A 100082120|8-T/C 100086057|9-A/G 100086096|24-G/T 100093333|41-G/C 100098548|28-A/G 100104693|28-T/A 100104890|20-C/A 100106918|8-T/C   
## 0.000000000 0.000000000 0.010581711 0.000000000 0.004246265 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100086278|15-A/T 100098561|7-T/A 100112393|13-T/C 6665409|19-C/A 100106209|11-T/A 6652014|36-G/A 100016895|29-G/A 6661843|44-G/A 6652389|64-T/C 6661649|50-A/C 6657666|21-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.012473521 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009523591   
## 6661268|63-T/G 100023082|28-G/T 100017188|42-C/G 6661288|45-T/C 100021319|48-T/G 100045470|27-C/T 6661435|57-G/T 100065514|5-T/C 6630387|13-C/T 100065726|10-C/T 6653782|5-C/T   
## 0.000000000 0.000000000 0.004454321 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006733930   
## 100021899|36-A/T 100066454|16-G/T 100065272|30-T/C 100066129|22-G/A 6653374|61-T/C 6664733|54-T/A 100022349|67-T/A 100015942|46-A/C 100016792|52-G/C 100018206|33-G/A 100064825|31-G/T   
## 0.000000000 0.000000000 0.032249395 0.006557306 0.000000000 0.012345203 0.000000000 0.000000000 0.004454321 0.000000000 0.000000000   
## 100066202|30-T/C 100073401|49-C/A 6633382|47-T/C 100021640|61-G/C 100022856|29-A/C 100023978|37-A/T 6652591|64-T/C 6661464|50-T/A 100015796|50-T/A 100016769|29-T/C 100019373|29-G/A   
## 0.000000000 0.000000000 0.006920332 0.000000000 0.000000000 0.004535124 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100023055|35-A/T 100097014|5-T/G 6661225|60-T/C 6661548|33-A/T 100017088|61-C/T 100023509|31-T/C 100015492|43-G/A 100018948|22-T/C 100020108|6-G/A 100020234|29-G/C 100021104|60-G/C   
## 0.000000000 0.004434568 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009090720 0.004454321   
## 100022438|10-G/T 100065777|27-G/T 6634350|32-G/T 100015248|33-A/G 100016465|17-G/A 100016470|38-G/A 100017055|22-C/A 100020326|38-A/G 100020580|5-T/G 100020916|54-A/T 100022162|26-G/C   
## 0.004210508 0.000000000 0.004796135 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022968|12-G/A 100023214|50-T/C 100023558|48-A/G 100065527|10-A/G 100108046|10-C/G 6652805|19-C/T 6653649|51-C/A 100016806|34-T/C 100016973|34-G/A 100017185|9-C/T 100019652|10-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008810400 0.000000000   
## 100020977|12-T/C 100021791|20-G/A 100064895|33-A/T 100064988|25-T/C 6653972|28-A/G 6658602|21-G/C 100015510|28-A/T 100016175|6-T/C 100016191|14-G/A 100018397|31-G/T 100019542|48-A/C   
## 0.004494359 0.005037751 0.000000000 0.000000000 0.005194770 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020295|21-C/T 100020374|38-T/C 100021678|59-A/G 100066638|43-T/G 6653330|11-G/A 100015953|68-T/C 100016139|30-C/T 100016326|61-C/T 100016487|19-G/T 100016577|32-A/G 100016760|26-T/A   
## 0.000000000 0.000000000 0.000000000 0.004228311 0.000000000 0.000000000 0.000000000 0.005141354 0.000000000 0.005361892 0.000000000   
## 100016954|51-G/A 100017145|65-A/G 100017289|41-G/C 100017927|57-A/G 100019119|41-A/C 100019129|28-A/G 100020392|13-C/T 100021327|23-G/A 100022094|8-A/T 100023476|68-C/T 100065094|17-G/A   
## 0.000000000 0.000000000 0.000000000 0.007604452 0.009049587 0.000000000 0.000000000 0.000000000 0.000000000 0.004494359 0.000000000   
## 100082310|17-G/A 100091292|53-C/T 6633859|61-C/G 6651602|9-A/G 6653320|67-A/G 100015805|62-G/A 100016005|36-T/C 100017432|35-A/G 100019685|30-C/T 100020281|34-T/C 100020816|17-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.005249307 0.000000000 0.012902682 0.000000000 0.000000000 0.010100750 0.000000000   
## 100020920|57-A/G 100021124|31-G/T 100021513|63-A/G 100021836|10-G/A 100022515|43-C/T 100023216|57-G/T 100023496|7-C/T 100023681|60-G/A 100065088|33-A/T 100065666|45-T/C 100066471|53-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008733456 0.000000000   
## 6652033|13-A/C 6661430|6-G/T 6661570|26-C/T 6661730|63-G/C 100016186|12-C/A 100016774|44-T/A 100017111|47-A/G 100017208|21-G/A 100017523|52-T/C 100017874|53-A/G 100018144|64-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.010256138 0.008583532 0.004301055   
## 100018225|53-A/G 100018942|41-G/T 100019677|5-A/G 100022269|27-A/T 100066082|15-C/A 100066253|43-C/A 100066444|14-G/A 100114672|22-C/T 6651282|60-A/T 6651428|21-T/C 6652874|33-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015264|22-A/T 100015814|11-C/G 100015850|40-T/C 100016120|45-G/A 100017115|64-C/T 100017958|17-G/A 100018308|19-A/G 100018683|52-C/T 100019218|10-T/C 100019222|23-G/C 100020050|41-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020331|13-C/T 100020335|6-A/C 100021226|41-T/G 100021502|29-G/A 100021862|6-G/A 100021994|17-A/G 100022357|61-G/A 100022781|47-C/T 100023182|23-A/G 100023311|52-A/T 100023534|68-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007843016 0.008849383 0.000000000 0.000000000   
## 6653500|12-A/G 6661123|54-G/C 6665401|24-G/T 100015499|31-G/A 100015907|12-G/C 100016631|34-T/C 100019009|45-G/A 100019123|42-G/A 100019424|28-A/G 100019445|67-A/C 100019654|17-C/T   
## 0.000000000 0.000000000 0.014813990 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020359|57-A/G 100020876|63-C/T 100022261|20-C/T 100022625|36-A/G 100023251|49-T/A 100090852|5-C/T 6653799|6-G/A 6661647|17-A/C 100015702|42-C/T 100015896|29-T/C 100016097|8-A/G   
## 0.007604452 0.004338374 0.000000000 0.000000000 0.000000000 0.013422206 0.000000000 0.000000000 0.004157986 0.000000000 0.000000000   
## 100016416|52-T/A 100016914|9-T/G 100017736|15-G/C 100018093|40-G/C 100018383|12-A/G 100018805|31-A/G 100018914|23-G/A 100019000|63-T/G 100019412|18-C/T 100019519|62-G/C 100019671|36-A/G   
## 0.000000000 0.004157986 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005089025   
## 100019895|42-T/C 100020000|31-A/G 100020210|64-C/T 100021670|11-G/A 100021761|67-C/T 100022043|14-T/A 100022106|27-G/A 100022213|48-C/T 100022452|60-C/T 100022997|31-G/A 100065791|46-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004661979 0.000000000 0.000000000 0.000000000   
## 100066265|30-T/C 100066487|11-G/A 100101063|5-T/C 6634524|57-T/A 6652255|33-A/G 6661618|12-C/T 100015912|66-G/T 100015914|56-A/G 100016606|50-T/C 100016946|25-C/A 100017520|47-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004535124 0.000000000 0.000000000 0.000000000   
## 100018722|5-C/A 100019526|9-G/A 100019891|44-C/T 100020909|55-A/T 100020985|50-A/G 100021139|33-G/C 100021214|56-G/A 100021255|31-C/T 100021313|59-A/C 100022420|43-T/C 100022458|29-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004395583 0.000000000 0.000000000 0.000000000   
## 100022624|40-G/C 100022691|40-C/T 100023114|8-T/A 100023164|37-T/C 100023165|10-C/T 100023475|55-A/G 100024879|34-A/G 6650963|31-A/G 6650995|35-T/C 100015203|28-T/C 100015415|9-G/T   
## 0.000000000 0.000000000 0.004192854 0.000000000 0.000000000 0.000000000 0.004555785 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015496|59-G/T 100015847|60-G/C 100015873|28-A/C 100015977|34-A/G 100016012|21-A/C 100016160|65-G/A 100016617|11-C/G 100016919|15-T/A 100016933|17-A/C 100017138|9-G/C 100017592|13-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004454321 0.004414989 0.000000000   
## 100017929|18-A/C 100018201|42-T/G 100018285|15-G/A 100018596|39-G/A 100018944|19-C/A 100019340|48-A/G 100019515|10-G/A 100019761|17-G/A 100019817|32-A/G 100020455|16-G/A 100020993|47-T/C   
## 0.004773242 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005361892 0.000000000 0.000000000   
## 100022157|60-A/G 100023102|7-C/T 100045024|30-A/C 100065312|53-G/T 100066063|67-C/T 100066423|46-G/A 6634305|33-C/G 6651275|16-A/C 6652010|36-G/A 6661116|34-A/C 6664719|65-C/G   
## 0.008657845 0.000000000 0.000000000 0.000000000 0.005970096 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015734|66-G/C 100015877|41-T/C 100016028|28-G/T 100016794|51-C/G 100016930|62-C/T 100016976|17-C/G 100017073|58-C/A 100017352|5-T/A 100017471|13-G/C 100017594|43-T/C 100017596|13-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004106759 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018057|54-A/T 100018384|20-C/A 100018436|8-C/T 100018459|29-C/T 100018601|57-C/A 100018886|5-G/C 100019401|38-C/A 100019538|40-A/G 100019682|13-G/C 100019773|68-G/T 100019884|7-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020084|63-C/A 100020358|5-G/C 100020410|17-G/T 100020846|22-A/G 100021982|22-G/C 100022352|35-G/C 100023106|5-T/A 100023435|47-T/A 100023548|13-A/T 100064672|55-C/T 100091227|51-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007781982 0.000000000 0.000000000 0.000000000 0.000000000   
## 100121014|17-C/T 6653240|15-A/T 100015605|26-A/G 100015623|29-T/A 100015712|9-A/T 100015915|16-G/C 100016293|25-T/A 100016319|36-T/C 100016723|21-C/T 100017173|15-T/A 100017697|22-G/A   
## 0.015624031 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.012902682 0.000000000 0.000000000 0.006557306   
## 100018492|22-T/C 100018548|16-C/T 100018796|68-C/T 100018865|11-C/A 100018936|13-C/T 100019019|18-A/G 100019086|21-G/A 100019131|12-T/C 100019765|29-C/T 100019951|22-C/T 100020346|50-T/C   
## 0.004301055 0.000000000 0.008968428 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004576635 0.000000000   
## 100021253|53-T/C 100021441|53-T/C 100021634|50-A/C 100021664|5-T/C 100021900|25-G/C 100021918|16-G/C 100021944|59-G/C 100022064|57-C/T 100022439|9-G/A 100022958|60-G/A 100023335|10-T/C   
## 0.000000000 0.004319634 0.000000000 0.005602197 0.000000000 0.000000000 0.004705856 0.000000000 0.004210508 0.004338374 0.000000000   
## 100066167|17-A/C 6652225|65-T/C 6653132|37-C/T 6653692|35-T/A 6661742|53-G/T 6663972|39-G/A 6664076|30-T/C 100015254|42-A/G 100015421|66-C/T 100017443|50-T/A 100018227|9-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009049587 0.000000000 0.000000000 0.000000000   
## 100018684|33-T/C 100019036|18-A/C 100019346|5-C/T 100019642|57-C/T 100020216|59-T/G 100020462|12-G/T 100020825|41-T/A 100021447|5-C/T 100021487|10-A/G 100022350|27-C/T 100022637|44-C/T   
## 0.004434568 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022974|38-G/A 100023108|17-G/A 100023245|57-A/T 100023390|19-G/A 100023533|34-T/C 100064760|51-A/T 100064984|7-A/T 6635254|28-C/T 6650882|51-G/T 6651794|65-C/A 6652456|5-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.005063259 0.000000000 0.000000000 0.000000000 0.004301055 0.000000000 0.000000000   
## 6652956|28-T/C 6653074|11-G/T 6653246|55-C/T 6653257|11-T/C 6653558|37-T/C 6653841|24-C/G 6661717|50-A/G 100015306|34-G/T 100017026|18-T/C 100017183|63-A/C 100017740|39-T/C   
## 0.000000000 0.004597677 0.000000000 0.000000000 0.000000000 0.004319634 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018186|14-G/A 100018502|54-A/C 100019407|9-A/G 100019597|22-G/T 100019799|11-C/T 100020064|5-A/G 100020467|61-C/G 100021342|19-T/G 100021726|23-G/T 100021853|38-A/G 100022073|47-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004819249 0.000000000   
## 100022174|61-T/C 100022237|64-T/G 100022450|28-C/T 100023247|11-G/A 100024830|48-A/T 100065475|5-A/C 100065743|19-C/T 6651542|50-G/C 6652006|5-C/A 6652136|34-G/A 6652490|28-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653164|33-G/T 6661138|57-G/A 6661286|13-C/T 100015294|55-T/C 100015312|26-G/C 100015717|58-T/C 100016035|58-C/T 100017166|55-C/G 100017336|19-C/T 100017436|6-T/A 100018333|8-T/C   
## 0.000000000 0.026139204 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004210508 0.000000000 0.000000000 0.000000000   
## 100018623|26-G/A 100018949|25-G/A 100019179|31-T/A 100019378|46-T/C 100019715|11-C/T 100020007|20-C/A 100020186|42-A/T 100020325|12-G/A 100020984|22-A/T 100021063|19-C/T 100021116|47-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021276|48-T/C 100021323|21-A/G 100023352|36-C/T 100023524|20-T/A 100064607|25-T/A 100064666|61-G/A 100066449|6-A/G 100104023|51-G/T 6651556|12-T/C 6651732|66-T/C 6652161|13-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.015266272 0.000000000 0.000000000 0.000000000 0.000000000 0.011695502 0.000000000   
## 6653042|9-A/T 6661220|17-G/T 100015287|46-T/C 100015379|18-A/G 100015449|18-T/C 100016230|18-C/G 100016245|55-T/C 100016437|62-T/C 100017249|15-G/A 100018724|8-T/C 100018729|20-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004474250 0.000000000 0.000000000   
## 100018771|32-C/T 100019308|38-T/C 100019625|33-C/T 100019716|25-C/T 100020654|61-G/A 100021098|19-A/T 100021170|5-G/C 100021240|55-G/C 100021330|41-C/T 100021985|6-G/C 100022470|47-C/T   
## 0.000000000 0.000000000 0.004157986 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022786|9-C/T 100022992|63-G/C 100023087|65-T/C 100023089|12-A/T 100065113|20-C/T 100065660|34-T/C 100082081|14-T/C 6650676|61-A/G 6650683|35-G/A 6650847|62-G/T 6651376|46-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004319634 0.000000000 0.000000000 0.004514650 0.000000000 0.000000000 0.000000000   
## 6651698|17-A/G 6652341|11-G/A 6652418|6-T/A 6652657|13-T/C 6653549|37-G/A 6653926|47-C/T 6661137|45-A/G 6661795|29-A/G 6664067|38-C/T 100015300|34-C/G 100015553|64-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015662|64-G/A 100015747|67-T/C 100016172|45-C/A 100016321|25-T/C 100016379|15-C/T 100016524|6-T/G 100016678|13-G/A 100017389|39-C/A 100017447|10-T/G 100018638|48-T/C 100019669|13-T/C   
## 0.000000000 0.000000000 0.000000000 0.006116150 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005633758 0.000000000   
## 100021395|62-G/A 100021505|40-T/C 100021653|13-T/G 100021672|31-T/C 100022109|34-G/A 100022563|58-C/T 100022828|22-T/C 100023017|29-A/T 100066440|62-C/G 100066652|41-G/A 100096906|18-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006230469 0.000000000 0.000000000 0.000000000 0.004157986 0.000000000   
## 6630114|53-A/C 6650736|10-G/T 6651252|16-C/T 6653034|28-A/G 6653152|22-C/A 6653197|10-T/C 6653543|62-T/A 6653729|12-T/C 6658435|49-C/A 6661280|18-T/C 6661782|19-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005540123 0.000000000   
## 100015470|41-C/T 100016237|28-C/A 100016452|17-G/A 100016620|23-T/C 100016680|26-G/A 100016867|47-C/T 100016970|8-C/T 100018066|41-A/G 100018458|45-C/T 100018598|40-C/T 100019260|10-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019313|6-T/C 100020459|17-G/C 100022183|15-A/C 100022219|59-T/A 100022324|20-A/T 100022476|18-T/C 100022820|44-T/C 100065830|50-G/A 100073534|35-A/T 100108129|53-C/A 6631518|25-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650419|25-C/G 6650596|64-G/T 6650922|18-T/C 6650997|7-A/G 6651758|26-G/A 6652094|60-T/C 6652276|10-G/A 6652446|14-G/A 6652850|15-T/C 6652911|22-A/G 6653387|31-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008928392 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653442|7-A/G 6653457|43-C/T 6653666|33-A/G 6653913|54-A/G 6661714|10-A/T 6661819|18-T/C 6665305|19-G/A 100015271|40-A/G 100015651|23-C/T 100016940|6-T/G 100017024|68-G/A   
## 0.005063259 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018261|61-T/C 100018474|24-G/A 100018954|18-A/G 100019606|34-G/A 100019837|9-G/A 100020506|37-T/A 100020651|11-C/G 100021368|14-C/T 100021399|20-A/C 100021433|22-A/C 100021823|21-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007547062 0.000000000 0.000000000 0.000000000   
## 100022483|30-T/A 100022774|66-T/G 100023022|43-C/T 100023206|43-A/G 100023292|16-A/G 100023396|25-C/T 100024289|11-T/C 100045482|25-C/T 100065022|34-A/G 100065562|43-G/A 100065795|26-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004282636 0.000000000   
## 100066292|25-T/C 100073974|41-A/C 100082647|16-C/A 6650814|43-G/C 6650908|37-A/C 6651113|11-C/G 6651346|28-A/T 6651709|24-A/G 6652049|29-T/C 6652500|45-G/T 6652777|22-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006557306 0.000000000 0.000000000   
## 6653333|13-T/C 6653390|14-T/G 6653414|31-T/C 6653728|20-G/T 6654032|23-T/G 6654037|57-A/G 6657904|10-G/C 6661607|55-C/A 6661700|18-G/A 6662767|16-T/C 6664074|40-T/G   
## 0.000000000 0.000000000 0.000000000 0.004192854 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664074|44-G/C 6664735|26-T/G 6665238|34-T/C 100124938|57-G/A 100015346|10-T/A 100016456|52-G/C 100016501|31-A/T 100017004|22-C/T 100017283|39-T/G 100017322|41-G/A 100017407|26-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017421|12-A/G 100018243|9-T/C 100018879|32-C/A 100019658|67-A/G 100020347|21-G/C 100021567|15-A/G 100021727|64-T/A 100023434|25-T/C 100066346|64-T/C 100066369|51-A/G 100066626|37-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6631525|11-C/T 6650677|49-C/T 6650829|66-C/T 6650865|22-G/T 6651274|64-A/G 6651327|26-G/A 6651363|38-T/A 6651684|66-A/G 6652046|31-A/G 6652267|48-T/C 6652284|17-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652529|31-T/C 6652900|9-A/G 6653610|43-G/T 6653665|46-C/T 6653751|12-A/T 6653876|40-A/G 6654005|53-G/A 6654018|46-G/A 6661150|29-C/G 6661536|5-G/A 6664750|33-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100103994|12-C/T 100103994|20-G/A 100104021|9-A/G 100015729|18-T/G 100015952|21-T/A 100016302|16-G/A 100016507|10-G/T 100016962|46-C/T 100017543|65-T/C 100018176|18-T/A 100018259|44-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004282636 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019881|23-C/A 100019923|11-A/T 100020081|6-T/A 100020349|28-G/T 100022424|20-G/A 100023400|43-G/T 100044682|9-A/G 100044750|30-A/G 100065250|9-G/T 100065326|31-T/A 100065589|31-A/G   
## 0.004319634 0.000000000 0.000000000 0.000000000 0.005037751 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100066526|17-G/A 100091166|12-G/A 100091166|42-A/G 6650613|48-C/T 6650687|41-T/G 6650796|6-C/T 6650803|47-G/C 6651101|36-C/G 6651528|20-A/T 6651771|12-T/C 6651853|15-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652025|35-C/T 6652815|7-T/G 6652936|53-A/C 6653177|8-T/G 6653241|40-G/T 6653293|49-G/A 6653307|12-A/G 6653389|28-A/G 6653538|48-T/C 6653579|57-T/A 6653832|7-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661683|57-A/G 6661685|63-G/A 6661816|48-A/G 6661824|42-G/C 6661850|36-A/T 6661890|47-A/G 6665337|42-A/G 100015757|13-C/T 100016204|33-T/C 100017468|57-G/T 100017967|62-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018112|46-A/C 100018165|13-C/T 100018718|21-G/A 100019849|5-G/A 100019859|8-G/A 100022136|24-T/C 100022312|53-T/C 100045521|11-T/G 100065432|12-T/G 100065536|20-G/A 100066606|52-G/T   
## 0.005012500 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100082316|6-G/A 100082368|14-T/G 100097022|6-T/C 100108129|36-G/A 6631225|7-T/C 6631997|14-C/T 6650612|10-C/T 6650648|12-C/G 6651035|6-G/A 6651242|13-G/A 6651289|37-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651290|54-T/A 6651373|58-C/T 6651393|29-G/A 6651401|31-A/G 6651427|13-G/A 6651437|43-G/C 6651445|36-G/T 6651476|13-C/T 6651646|25-A/G 6651749|48-G/A 6651841|8-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652088|32-C/T 6652192|52-C/A 6652260|63-T/C 6652326|50-G/A 6652369|31-T/C 6652422|33-T/C 6652547|9-G/T 6652893|32-T/A 6652909|24-T/G 6652955|18-G/C 6653017|55-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004434568 0.000000000 0.000000000 0.000000000 0.000000000 0.004454321   
## 6653103|52-T/G 6653677|36-T/C 6653708|16-C/G 6653903|37-A/G 6653934|25-C/T 6654040|14-T/C 6654091|9-T/C 6657832|39-T/C 6661183|41-T/C 6661274|44-G/C 6661675|22-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6663998|37-C/T 6664011|37-G/C 100016463|53-T/C 100016812|38-G/A 100017567|49-A/C 100017961|50-G/T 100018143|16-G/A 100019099|54-T/G 100019383|33-G/T 100019940|39-C/T 100020427|36-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004157986 0.000000000 0.000000000   
## 100020660|8-T/A 100020677|22-A/G 100021361|48-T/C 100021511|43-C/T 100021828|33-C/A 100022057|11-A/G 100022783|26-C/T 100064616|40-A/G 100065171|45-C/G 100065966|15-C/G 100082527|51-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100082585|40-G/A 100106949|10-G/A 100117044|51-G/C 6650418|9-G/T 6650423|29-A/G 6650818|67-C/T 6651153|49-G/T 6651180|65-A/T 6651287|48-A/C 6651447|19-T/C 6651655|40-A/G   
## 0.000000000 0.063280636 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651717|7-T/C 6651971|61-A/G 6651981|50-T/G 6652195|35-T/C 6652270|30-C/T 6652411|8-G/A 6652419|17-C/T 6652451|65-G/A 6652920|22-G/A 6653067|56-T/C 6653377|17-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653583|28-T/C 6653636|14-A/G 6653697|13-T/C 6653731|66-C/T 6653767|20-G/C 6653770|20-C/G 6653784|35-T/C 6653810|62-C/A 6653854|42-T/C 6653892|54-G/A 6653910|50-T/C   
## 0.004819249 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6654022|30-A/G 6661470|52-C/A 100066269|13-T/C 6662979|27-T/C 6664013|56-T/C 6664771|32-C/T 6665036|59-T/C 100015387|20-A/C 100016289|59-C/A 100017196|51-G/T 100017527|6-T/A   
## 0.000000000 0.000000000 0.045951557 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017670|46-C/A 100018265|14-C/T 100018491|67-A/C 100019232|26-T/C 100019318|16-T/A 100019703|50-G/A 100019708|6-A/G 100019897|65-G/A 100020477|33-C/T 100022633|31-A/G 100023423|28-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004106759 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100064644|53-C/T 100065127|11-C/T 100082124|16-C/G 6632526|27-G/T 6650445|31-C/T 6650584|38-A/G 6650848|20-G/A 6651173|50-C/A 6651298|24-T/G 6651530|41-T/C 6651782|31-G/A   
## 0.000000000 0.000000000 0.000000000 0.008695486 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651907|9-T/C 6652024|30-A/G 6652131|34-G/A 6652159|67-C/T 6652177|21-C/T 6652210|27-C/A 6652401|28-T/A 6652416|68-C/G 6652713|26-G/C 6652866|10-G/A 6652983|43-C/A   
## 0.000000000 0.000000000 0.004728106 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653039|43-G/C 6653044|17-A/G 6653092|18-T/C 6653202|68-T/A 6653253|13-C/G 6653255|39-G/T 6653445|25-C/G 6653487|29-C/T 6653527|21-G/A 6653922|36-T/C 6653930|13-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6654013|57-T/G 6657669|38-C/T 6658619|38-A/G 6661144|14-T/C 6661228|61-G/A 6661239|28-A/G 6661757|61-G/A 6661837|5-T/C 6663958|42-G/C 6664017|22-C/T 6665345|60-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.005602197 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6665563|37-A/C 6665563|41-G/A 6665563|7-C/T 6666102|24-A/G 100015848|14-C/A 100016751|21-G/A 100017832|10-T/C 100017856|21-A/G 100018301|7-A/G 100019450|10-C/A 100019818|16-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008031998   
## 100019983|13-A/G 100020502|50-G/A 100020602|47-A/G 100065169|68-T/C 100066267|15-G/A 100066657|20-C/G 6632946|54-T/A 6650395|54-T/C 6650450|36-T/C 6650539|5-T/C 6650675|13-G/T   
## 0.008474423 0.000000000 0.000000000 0.000000000 0.004474250 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650760|49-T/G 6650770|63-T/C 6650778|15-A/G 6650888|42-T/A 6650948|22-G/A 6651067|68-T/C 6651104|14-T/C 6651269|64-A/G 6651380|66-C/A 6651460|39-T/A 6651469|31-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651565|25-G/T 6651594|47-T/G 6651714|59-A/T 6651809|19-T/C 6651814|64-A/G 6652119|10-C/T 6652183|53-C/T 6652218|58-G/A 6652272|46-C/A 6652443|56-C/T 6652587|38-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004301055 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652614|24-T/A 6652643|8-A/T 6652647|54-C/A 6652695|37-C/T 6652702|52-A/C 6652729|55-C/G 6652886|48-T/A 6653028|14-A/G 6653065|44-C/T 6653124|7-G/C 6653205|17-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007843016   
## 6653210|45-C/A 6653524|37-T/G 6653532|60-C/T 6653787|34-A/G 6653818|55-C/T 6653820|23-G/A 6653825|25-G/A 6653908|59-C/G 6653938|33-G/A 6656975|12-C/G 6658434|32-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.006779583 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661131|30-C/A 6661170|60-C/T 6661460|63-C/T 100082330|10-C/T 6661516|30-G/T 6661542|10-A/G 6661650|9-G/A 6661787|54-G/C 6661807|10-G/A 6663931|44-A/G 6663966|33-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664887|16-T/G 6665234|5-T/A 6666170|37-C/T 100016216|6-C/A 100016431|13-A/G 100016980|14-G/C 100017035|18-A/G 100018089|20-C/A 100018299|18-A/G 100019103|66-G/A 100020260|22-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005970096 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020593|29-A/G 100021233|9-G/T 100022402|38-T/A 100022743|53-G/A 100064690|24-G/C 100065349|19-G/C 100065841|23-T/C 100074065|11-G/A 6650412|48-C/T 6650459|40-G/A 6650487|15-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650510|49-G/C 6650571|53-C/T 6650575|33-C/T 6650657|31-A/G 6650727|33-T/A 6650764|18-A/G 6650786|30-G/A 6650877|51-A/G 6650982|52-G/T 6650992|26-T/G 6651041|46-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651162|25-G/T 6651244|31-C/A 6651284|8-G/C 6651398|18-G/A 6651485|12-A/G 6651517|35-T/G 6651527|40-C/T 6651546|39-T/C 6651644|49-G/A 6651663|43-G/C 6651671|42-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651691|10-G/A 6651700|17-C/A 6651734|47-T/C 6651746|20-C/T 6651800|11-A/G 6651813|5-C/T 6651896|64-A/G 6651912|26-C/G 6651917|68-G/T 6652038|34-C/A 6652059|20-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652081|56-C/G 6652085|6-G/A 6652121|43-A/T 6652134|47-G/C 6652186|30-C/T 6652189|13-A/G 6652281|62-C/G 6652285|54-C/T 6652290|29-T/C 6652304|61-G/T 6652432|55-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652503|20-A/G 6652505|16-A/C 6652521|39-C/T 6652525|37-G/T 6652601|21-T/C 6652602|25-G/C 6652606|48-T/C 6652624|28-T/C 6652668|15-G/C 6652670|16-C/G 6652721|10-T/A   
## 0.000000000 0.016665490 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652733|37-A/G 6652745|53-A/G 6652752|31-C/T 6652791|49-C/A 6652818|11-T/C 6652862|15-A/G 6652881|22-C/A 6652972|10-T/C 6652998|52-A/T 6652999|57-A/G 6653082|48-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653098|9-A/G 6653162|29-G/A 6653274|28-A/G 6653325|64-G/C 6653332|57-G/A 6653357|42-C/T 6653362|53-G/C 6653412|42-A/G 6653426|18-C/T 6653440|10-T/C 6653465|26-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653468|58-T/C 6653470|47-G/C 6653503|52-C/T 6653589|18-G/A 6653681|55-A/G 6653716|66-G/A 6653721|50-T/C 6653756|39-T/C 6653768|57-T/C 6653772|52-C/T 6653912|41-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653970|10-G/T 6654035|9-A/T 6654089|34-G/C 6657074|8-C/T 6657427|36-T/G 6658142|19-G/A 6658487|31-A/T 6658567|11-A/G 6661106|67-C/A 6661340|59-C/T 6661404|52-G/C   
## 0.004210508 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661465|25-C/G 6661493|15-T/C 6661592|37-C/T 6661602|55-A/G 6661729|38-A/G 6661755|5-T/C 6661849|5-T/A 6662667|9-T/C 6663069|39-G/A 6663912|29-A/G 6663945|17-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004414989 0.000000000 0.000000000 0.000000000   
## 6665239|6-A/G 6665353|11-A/G 6665974|11-A/T 6666103|68-G/A 100016182|32-A/G 100017836|20-G/A 100017869|6-A/G 100018411|68-A/C 100020222|50-C/G 100021008|5-T/G 100021734|34-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021842|6-T/A 100045232|8-G/C 100065195|59-A/G 100074076|12-A/C 100114674|53-G/A 6650380|13-C/T 6650404|10-C/T 6650422|10-A/C 6650471|64-T/C 6650500|18-G/C 6650515|50-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650537|13-C/T 6650542|10-G/A 6650554|41-G/A 6650556|9-G/C 6650615|12-C/T 6650633|41-A/C 6650636|55-A/G 6650715|51-A/G 6650784|41-A/G 6650806|54-A/G 6650812|44-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650885|45-G/T 6650890|7-G/A 6650891|27-C/G 6650939|41-A/G 6651045|37-G/C 6651063|37-A/C 6651127|50-C/G 6651189|65-G/A 6651213|10-C/G 6651259|15-G/A 6651305|62-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651312|67-T/C 6651314|20-C/T 6651471|5-C/A 6651479|37-T/G 6651523|45-A/T 6651524|18-G/A 6651611|23-A/T 6651617|38-A/C 6651627|10-C/A 6651680|16-T/G 6651686|18-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651990|27-G/T 6652031|21-T/C 6652068|30-T/C 6652123|48-C/T 6652141|65-C/T 6652156|37-G/T 6652188|11-A/G 6652217|66-T/A 6652220|47-G/A 6652222|50-C/T 6652329|66-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004728106 0.005570987 0.000000000   
## 6652364|41-C/T 6652450|9-A/C 6652454|59-C/T 6652470|43-C/T 6652506|53-A/T 6652539|13-G/A 6652561|39-T/C 6652572|11-T/G 6652637|54-T/C 6652648|60-T/A 6652659|15-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652665|12-A/G 6652728|28-T/C 6652751|58-A/G 6652774|48-G/A 6652817|30-A/G 6652845|15-G/A 6652939|61-C/T 6652947|66-T/A 6653004|32-T/G 6653011|14-C/T 6653170|45-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653174|64-A/C 6653291|22-A/G 6653324|46-G/A 6653415|50-C/G 6653489|12-A/C 6653514|8-A/G 6653535|20-A/T 6653594|40-G/A 6653646|49-A/T 6653674|54-T/C 6653683|31-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653750|55-T/C 6653771|10-A/G 6653779|21-T/C 6653822|27-G/A 6653827|15-A/G 6653858|29-G/T 6653928|36-T/A 6653969|26-C/T 6654051|34-T/C 6654056|9-C/T 6654078|12-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657388|11-G/T 6657512|7-T/A 6657941|41-C/T 6658094|46-C/A 6658571|22-C/A 6658640|12-C/T 6661287|22-A/G 6661315|34-C/A 6661316|17-T/A 6661420|51-G/A 6661453|6-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661468|17-G/T 6661489|62-C/T 6661552|5-G/T 6661577|44-A/C 6661601|15-G/A 6661629|40-G/A 6661651|60-G/A 6661703|29-A/G 6661728|35-C/T 6662799|24-G/T 6662820|22-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007017457 0.000000000 0.000000000   
## 6662890|34-A/G 6662898|11-T/C 6662977|22-A/G 6664083|6-T/C 6664294|44-T/A 6664720|7-C/A 6665218|24-G/A 6665351|57-C/G 100109477|37-C/T 6665629|41-C/T 6665821|31-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005449551 0.000000000 0.000000000   
## 100016377|14-C/T 100016728|8-C/G 100017376|68-T/C 100018451|6-C/T 100019918|66-C/T 100022411|61-C/G 100064620|27-T/G 100064811|7-G/A 100065350|20-A/G 100109953|9-A/G 6650460|21-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650519|57-T/C 6650579|51-T/C 6650580|37-G/A 6650607|66-G/A 6650671|45-C/A 6650689|52-T/A 6650703|19-G/A 6650815|7-A/G 6650944|60-T/A 6650965|12-G/T 6651031|38-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651069|41-G/C 6651089|58-C/G 6651139|39-G/A 6651355|22-C/T 6651367|34-G/T 6651487|9-A/G 6651578|26-T/C 6651593|32-G/C 6651619|40-T/C 6651620|38-C/T 6651675|34-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651806|49-A/C 6651821|15-A/G 6651825|51-A/T 6651968|21-G/A 6651983|9-A/T 6652057|5-C/T 6652073|37-A/C 6652074|10-G/A 6652115|60-T/G 6652197|23-A/G 6652244|39-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652249|29-C/T 6652338|5-C/T 6652392|7-T/C 6652466|57-C/T 6652514|66-T/C 6652554|50-A/G 6652556|53-T/C 6652589|8-C/A 6652749|25-T/C 6652753|11-T/G 6652776|45-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652806|6-C/T 6652834|26-T/C 6652885|65-C/G 6652929|66-T/A 6652935|47-C/T 6653073|5-G/T 6653088|16-G/A 6653093|44-G/A 6653104|55-C/T 6653436|11-T/C 6653497|6-C/T   
## 0.000000000 0.000000000 0.004454321 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653639|65-G/T 6653645|43-C/G 6653769|16-G/C 6653927|44-C/T 6653953|41-C/T 6653987|61-A/G 6653993|15-A/G 6654009|23-C/T 6656879|21-T/C 6656932|34-C/G 6657077|25-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657152|47-T/C 6657200|7-T/C 6657228|8-C/T 6657447|9-A/T 6657510|13-A/G 6657518|14-A/C 6657616|11-A/G 6657889|17-C/G 6657989|13-T/G 6657992|32-T/C 6658007|29-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006042241 0.000000000 0.000000000 0.000000000 0.000000000   
## 6658058|7-C/G 6658330|11-C/G 6658349|12-A/C 6658401|16-G/T 6658424|11-A/T 6658451|54-A/G 6658473|36-A/C 6658548|12-C/A 6658667|17-A/G 6661128|54-T/A 6661132|53-C/T   
## 0.000000000 0.004661979 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006600588 0.000000000 0.000000000   
## 6661145|48-C/T 6661169|16-A/C 6661418|24-T/G 6661447|57-G/A 6661551|43-A/T 6661606|48-G/C 6661621|22-T/C 6661667|62-A/G 6661716|24-C/T 6661770|21-C/T 6662676|12-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6662737|6-A/T 6662747|22-A/G 6662778|8-A/G 6662831|7-G/C 6662962|22-T/G 6662984|35-A/G 6663913|23-G/A 6663996|47-G/T 6664080|40-C/A 6664712|24-G/A 6665849|24-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6665849|27-A/G 100019306|41-G/C 100023120|53-T/C 100045071|11-G/T 100073787|12-T/C 100073808|38-G/A 100082396|45-C/T 100082676|61-G/A 6650780|18-C/T 6651956|47-C/T 6652018|68-G/A   
## 0.000000000 0.000000000 0.000000000 0.004597677 0.000000000 0.000000000 0.000000000 0.000000000 0.013071330 0.000000000 0.000000000   
## 6652299|52-G/C 6652898|20-T/A 6653146|40-G/A 6657342|25-G/C 6657451|13-T/C 6657720|20-T/G 6657882|21-C/T 6658021|6-G/C 6658104|7-T/G 6658212|12-A/G 6658246|8-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661212|11-A/C 6661231|65-C/G 6661373|56-C/G 6661472|51-T/C 6662632|29-C/A 6662644|9-A/C 6662718|14-A/G 6662788|5-C/G 6663015|45-C/G 6663056|27-G/A 6663101|48-T/C   
## 0.000000000 0.000000000 0.011299070 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6663942|12-C/G 6663943|19-C/G 6664030|20-T/A 6664734|37-C/T 6665050|6-C/T 6665686|46-A/G 100064830|15-G/C 100073523|7-G/T 100073850|23-A/C 100074130|14-T/C 100085916|27-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100085918|17-C/T 100093520|12-T/C 100102104|19-G/T 100104847|9-C/T 100107045|42-G/A 100111102|5-T/C 100118833|7-G/A 100118214|9-G/A 6661395|67-G/A 6661549|61-G/A 6664299|8-G/C   
## 0.007843016 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005602197 0.000000000   
## 6661899|30-T/C 100117994|5-C/A 100118292|6-C/T 100120255|8-G/T 100122091|12-G/A 6658340|10-T/A 6662816|5-C/A 6662936|6-T/A 6662936|8-A/G 6662964|8-C/T 6662966|17-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006309085   
## 6664885|14-G/A 6661031|8-G/A 100066612|18-A/G 6652306|13-T/C 100085941|14-G/T 100018734|36-T/A 6661163|12-C/T 100065635|32-C/T 6661774|57-G/A 100082623|35-G/A 100065110|61-C/T   
## 0.000000000 0.000000000 0.000000000 0.011695502 0.000000000 0.008298611 0.025969529 0.017240076 0.006600588 0.077222883 0.000000000   
## 6661113|35-G/T 100118834|24-T/A 100065734|46-A/C 6663988|26-G/A 6661432|6-G/T 6661894|14-C/T 100025027|41-A/T 100065037|22-A/G 6661398|17-C/G 6661689|5-A/G 6664901|14-T/C   
## 0.000000000 0.028979239 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661325|52-G/A 100024800|55-T/C 6661569|21-G/T 100015330|20-C/A 100017807|41-C/T 100021430|18-A/C 100021922|61-T/G 100024081|21-C/T 100044596|39-C/T 6651341|31-A/G 6652981|11-C/A   
## 0.000000000 0.005970096 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065893|67-C/T 100015238|36-T/C 100015491|32-C/T 100015884|7-G/A 100019050|23-G/A 100022813|55-A/C 6653072|57-C/T 100016062|38-A/G 100017135|23-C/G 100021766|9-T/A 100022076|54-G/A   
## 0.005970096 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.014387734 0.000000000 0.000000000 0.000000000   
## 6661377|53-C/T 100015975|43-A/T 100016187|49-G/C 100024150|52-T/G 100018712|5-A/C 100021390|26-A/G 100045683|24-T/C 6661840|10-C/T 100016255|15-T/A 100020380|45-T/G 100021355|11-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021470|64-A/G 100023138|54-G/A 100023921|57-C/T 6650819|43-C/T 6653757|13-T/G 100015309|36-C/A 100015511|36-A/G 100015825|32-G/T 100016469|15-C/A 100019560|67-A/T 100021988|8-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022638|31-A/T 100022674|60-A/G 100023456|47-T/C 100023464|21-G/T 100023506|63-G/C 100121198|44-C/T 6664022|46-T/C 100017302|21-A/C 100017884|42-T/C 100020887|11-G/A 100022100|32-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.012738330 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022978|31-G/T 100064951|7-C/T 100108048|25-G/C 6653000|22-C/T 6661699|44-C/T 100015643|21-A/G 100016494|59-G/A 100017300|12-G/T 100017465|6-C/A 100019558|59-A/C 100021942|23-G/A   
## 0.022672755 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022249|52-T/C 100022694|55-C/G 100022788|12-C/T 100101046|61-C/A 6652314|37-T/C 100015332|7-C/A 100015389|56-T/A 100015557|20-C/G 100017329|58-G/T 100018963|60-A/C 100019082|25-A/G   
## 0.000000000 0.000000000 0.006557306 0.004514650 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019182|47-T/A 100020256|17-T/G 100020398|8-A/C 100021013|48-A/T 100021289|8-A/G 100023421|10-T/G 6653492|18-A/G 6661385|64-G/C 6661806|68-G/A 100017094|36-C/T 100017357|22-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.013422206 0.000000000 0.000000000   
## 100018276|13-A/G 100018426|49-A/T 100018952|47-A/T 100021643|42-A/T 100022068|8-T/C 100022755|51-G/A 100066666|24-G/A 6661519|31-A/T 100015745|7-C/T 100018424|55-T/A 100021037|43-A/C   
## 0.000000000 0.000000000 0.004210508 0.000000000 0.000000000 0.000000000 0.004474250 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021847|31-C/T 100022744|13-G/C 100023381|30-A/G 100023472|27-C/T 100023477|8-T/G 100024933|20-T/G 6651050|34-T/C 6652421|32-C/G 100082161|17-G/C 6661817|22-G/A 6665065|47-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005063259 0.000000000 0.008230312 0.000000000 0.000000000   
## 6666515|7-G/A 100015276|20-C/T 100016849|33-A/G 100018157|49-A/G 100018512|6-C/A 100019166|40-G/A 100019599|68-C/T 100020395|68-C/T 100020496|40-T/C 100022054|30-T/C 100022238|35-T/C   
## 0.000000000 0.000000000 0.000000000 0.004376347 0.000000000 0.000000000 0.004494359 0.004494359 0.000000000 0.000000000 0.000000000   
## 100022761|21-C/T 100064714|31-A/C 100082512|27-G/T 6635566|26-T/G 6651319|63-C/T 100101042|27-A/G 100015522|21-A/T 100015635|48-A/C 100016324|17-G/C 100017167|42-A/G 100017270|46-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018878|51-C/T 100019810|41-A/G 100020422|49-T/G 100021781|44-T/A 100022052|36-T/A 100022732|37-A/G 100023771|42-A/T 100064904|9-C/T 100066133|22-A/T 6635226|21-A/G 6661769|64-T/A   
## 0.004819249 0.004395583 0.004661979 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004228311   
## 100015503|66-A/T 100015669|26-A/G 100016926|66-A/G 100017163|47-A/G 100017930|44-G/A 100018643|57-G/A 100019627|11-G/A 100019775|26-T/C 100020011|13-C/A 100020180|30-T/A 100020794|35-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004819249 0.000000000 0.000000000 0.011975613 0.000000000 0.000000000 0.005730612   
## 100022441|55-A/G 100065577|55-T/C 100066375|31-C/T 100101063|14-G/A 6634311|8-T/C 6650564|10-C/G 6651449|21-G/A 100015590|56-T/C 100015813|59-T/A 100015865|6-C/T 100015966|35-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016299|67-G/A 100017046|59-A/G 100017306|20-C/T 100017681|59-G/A 100018541|45-C/T 100019001|52-T/C 100019248|51-C/A 100019357|10-A/C 100020167|8-T/C 100020584|49-G/A 100020830|34-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021518|64-T/G 100023323|17-A/G 100065274|22-T/A 100066055|6-T/C 6652294|28-T/C 6661350|27-G/A 100015979|10-G/A 100016232|12-A/G 100016804|11-G/T 100016918|64-T/A 100017355|38-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018239|64-C/A 100018653|43-T/C 100019075|38-G/C 100020739|29-A/G 100022196|19-G/A 100022506|24-C/G 100022716|15-T/C 100065001|58-T/A 6661682|7-T/C 100016459|9-T/C 100016800|17-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004319634 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016857|32-A/T 100016901|25-G/A 100017304|40-T/G 100018018|24-G/T 100018056|56-G/C 100018188|36-G/T 100018521|14-G/A 100019406|13-G/A 100019617|68-C/A 100020206|45-C/G 100021877|23-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022598|56-C/T 100022715|29-C/T 100022769|37-G/A 100023124|68-T/G 100045390|32-G/A 100064869|18-A/G 100066159|27-C/T 6651348|40-T/G 6651910|25-A/T 6661267|31-G/A 6661407|12-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005012500 0.000000000 0.000000000 0.000000000   
## 6661471|46-G/T 100015328|40-A/C 100015329|5-T/A 100015695|23-C/T 100015994|62-A/T 100016280|42-G/C 100016310|50-G/A 100017976|8-T/G 100018090|15-T/C 100018376|15-G/A 100019811|9-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019879|32-T/C 100020836|42-T/G 100020897|56-T/C 100020918|25-A/G 100022084|40-A/G 100022253|28-T/C 100022347|11-T/G 100022822|20-C/T 100022863|16-C/G 100064727|32-C/G 100064762|17-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065060|19-C/T 100065198|28-C/T 100065497|6-G/A 100066169|37-C/A 100066413|57-T/G 100066518|25-A/C 6650606|12-A/G 6650782|37-G/A 6651161|26-A/T 6651343|64-C/T 6651987|65-G/C   
## 0.010470914 0.005970096 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652583|9-C/G 6653986|35-G/A 100017405|46-T/C 100018360|48-T/C 100020046|11-T/G 100020184|33-A/T 100020356|17-C/T 100021172|11-C/T 100021739|23-A/G 100022407|43-A/G 100022586|32-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009478458 0.000000000 0.000000000 0.000000000   
## 100023347|40-A/G 6630669|54-A/C 6651087|52-A/G 6653823|53-T/C 6661427|45-A/T 6664050|11-T/C 100015339|30-G/A 100015780|53-A/C 100016477|49-C/T 100016846|6-A/G 100017534|5-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018524|64-G/T 100018715|45-A/C 100019637|34-T/C 100019730|38-A/G 100020004|34-G/C 100020093|64-G/T 100020177|61-C/T 100020736|62-T/C 100021876|36-T/C 100022251|18-A/C 100022479|48-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.009389462 0.000000000 0.000000000 0.000000000   
## 100023192|44-C/T 100065374|28-T/A 100065413|68-G/T 100065460|57-T/A 100065786|62-T/C 100065981|32-G/A 100093548|6-T/C 6635925|28-G/A 6651303|15-G/A 6652226|61-A/C 6652595|25-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004705856 0.000000000 0.011560303 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652880|30-G/A 6653288|5-T/C 6661743|26-G/A 100015258|11-G/A 100015334|11-A/C 100015520|48-T/A 100016206|60-T/G 100016803|55-T/A 100016999|24-T/C 100017691|42-G/C 100018254|14-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018691|53-C/T 100018832|49-T/A 100018836|30-T/A 100018972|63-T/C 100018993|58-G/A 100019968|28-T/C 100019971|65-T/G 100020134|53-C/T 100020237|19-C/T 100020353|50-A/G 100021532|8-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022232|46-T/C 100022564|55-G/A 100064590|10-C/G 100064752|47-G/T 100066482|40-C/G 100066499|21-A/C 100082126|5-A/G 100082673|16-C/G 100118390|28-A/G 100118390|5-C/G 6650749|8-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008968428 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650993|48-A/G 6651187|10-A/T 6652437|24-T/C 6652887|56-G/A 6653102|62-A/C 6653358|49-T/A 6661200|10-A/G 6661277|39-G/A 6661479|25-C/A 6665776|10-G/A 100116183|6-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004282636 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007721892   
## 100065388|52-T/C 100015585|60-A/G 100016513|5-C/A 100016711|48-G/A 100017104|21-C/A 100017773|59-C/T 100017895|25-A/T 100018069|40-A/G 100018279|30-C/A 100018386|10-G/C 100018698|26-G/A   
## 0.020405994 0.000000000 0.000000000 0.000000000 0.000000000 0.009049587 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021026|29-A/G 100021644|9-C/A 100022215|30-A/G 100023511|29-G/A 100065011|9-G/T 100065481|45-G/C 100065665|18-T/G 100082041|35-T/G 100082540|39-C/T 6635352|11-C/T 6651637|46-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004434568 0.000000000 0.000000000 0.000000000   
## 6652697|44-G/A 6652848|23-G/T 6661188|24-G/C 6661506|68-A/T 6661846|36-C/G 100121512|16-T/C 100015223|24-C/T 100015336|36-G/A 100016018|57-G/C 100016257|18-G/A 100016363|39-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016533|62-C/T 100017334|62-C/T 100017905|42-A/G 100018782|32-C/A 100018840|12-A/G 100018918|28-G/A 100018973|26-T/G 100019583|32-G/T 100020635|19-T/C 100020952|67-A/G 100021607|12-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021759|51-G/A 100022391|27-T/C 100022668|57-T/C 100065738|47-G/C 100066164|11-G/A 100066550|5-T/C 6633324|49-T/G 6634529|30-T/C 6651763|8-A/T 6651994|28-A/G 6652616|33-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005602197 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653336|20-T/C 6653857|60-T/A 6661332|57-A/T 6661613|21-G/A 100015558|12-T/G 100016614|13-A/G 100016893|9-G/A 100016974|14-T/C 100017016|14-G/C 100018076|32-A/G 100019206|6-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019217|46-A/T 100019384|38-C/T 100019646|24-T/A 100019874|10-C/G 100019964|12-C/A 100020293|37-A/G 100020842|17-G/A 100021693|26-T/C 100022050|68-A/T 100022979|40-A/G 100023492|66-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100045668|41-G/A 100065160|26-C/T 100066259|47-G/A 6630074|25-T/C 6651026|5-A/G 6651431|37-C/G 6651540|51-T/C 6651708|27-C/T 6652397|25-T/C 6653258|20-A/C 6661295|56-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006116150 0.000000000 0.000000000   
## 100016658|9-C/T 100016823|19-A/C 100017190|25-A/G 100017629|18-T/C 100018573|66-T/A 100019552|33-T/G 100021046|26-A/G 100022548|38-A/C 100065206|29-C/A 100065846|12-T/A 6651279|28-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004210508 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652199|28-G/A 6652400|17-C/T 6652445|11-A/T 6653155|9-C/G 6653256|29-G/A 6661317|35-T/C 6663970|38-G/C 6665305|7-T/C 100015212|40-T/C 100015773|62-T/C 100016229|66-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006153788 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017966|44-G/A 100018540|41-C/G 100019145|8-G/A 100020607|26-G/A 100021569|14-G/A 100023034|23-C/T 100023386|11-T/C 100065690|24-C/G 6650623|27-T/C 6650909|20-C/G 6651336|17-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651419|53-T/C 6652696|7-A/G 6652736|50-T/A 6653280|14-G/T 6653295|57-T/C 6653940|33-C/G 6661206|18-A/G 6661327|42-G/C 6664003|47-C/T 100015464|37-A/T 100015704|41-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007905014 0.000000000 0.000000000   
## 100016862|45-C/T 100019871|11-C/T 100020987|40-T/C 100021296|8-G/A 100065560|20-C/G 100066263|36-C/T 100066672|61-G/C 100082462|27-A/G 6632122|60-C/T 6650958|39-G/T 6651020|25-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651285|11-A/G 6651625|35-A/G 6651661|21-C/A 6651716|31-A/G 6651796|30-T/G 6651885|10-A/T 6652069|22-A/G 6652117|17-A/G 6652234|42-G/A 6653188|36-T/C 6653368|52-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661580|47-C/T 6661803|14-T/C 6661812|53-C/T 6661866|32-G/C 100015736|43-G/A 100016141|36-G/A 100017142|64-C/T 100019476|8-T/C 100022055|56-G/A 100022078|12-T/C 100022886|24-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6631211|9-C/T 6651047|34-T/G 6651407|46-C/T 6651481|28-G/C 6652585|52-T/G 6653252|68-G/A 6653882|52-A/T 6653901|21-A/T 6654029|48-A/G 100015720|28-G/T 100016789|20-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016796|38-G/A 100017412|8-A/G 100017613|42-T/G 100017642|45-C/A 100017690|28-G/T 100018660|67-C/T 100020040|40-T/A 100021191|5-G/C 100023009|12-A/G 100065757|7-G/C 100066245|18-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100074042|5-T/C 100082359|43-C/T 6635615|63-A/T 6650495|22-G/C 6650509|12-C/A 6651034|16-A/T 6651369|18-C/G 6651472|63-T/C 6651525|65-T/G 6651657|19-G/A 6651750|54-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652293|6-T/G 6652474|14-G/A 6653662|55-G/C 6661543|6-A/G 100017915|15-G/A 100020329|6-T/C 100021269|67-C/T 100021647|7-C/G 100065434|44-T/G 100091128|19-C/T 6630649|30-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6631485|63-C/T 6634232|23-C/T 6650379|29-C/T 6650507|19-A/C 6650854|20-G/A 6651417|34-C/T 6651649|55-G/A 6651797|46-C/T 6652137|50-T/C 6652171|14-G/C 6652353|59-C/T   
## 0.000000000 0.012684473 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652439|17-A/C 6652481|49-A/G 6652592|44-C/T 6652631|8-T/C 6652759|5-G/C 6653033|21-C/A 6653086|60-T/C 6653403|58-C/G 6653441|17-C/A 6653651|15-A/G 6653652|24-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653717|62-T/A 6653911|22-G/C 6657418|43-C/G 6658319|40-G/A 6661213|21-C/T 6661527|23-T/C 6664003|60-C/T 100017332|29-G/A 100018422|17-T/C 100019803|28-C/T 100020227|22-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021230|36-G/A 100045732|32-A/G 100065400|55-A/G 100065695|10-T/A 6650641|39-G/C 6650730|37-C/T 6651079|5-A/T 6651096|56-T/C 6651302|27-C/G 6651575|42-A/G 6651609|46-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651712|16-T/C 6651755|6-C/G 6651927|7-C/T 6652423|26-A/G 6653022|23-G/C 6653024|17-C/T 6653143|11-A/G 6653233|66-T/A 6653287|46-C/T 6653308|9-A/G 6653555|27-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653600|5-T/C 6653915|45-T/G 6653995|60-T/C 6657836|14-A/G 6661227|16-C/A 6661262|58-G/T 6661434|38-G/T 6661641|45-A/G 6661702|15-A/G 6662581|37-A/T 100114018|47-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004597677 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016369|9-A/G 100017864|12-A/C 100018488|65-A/G 100018874|30-C/T 100022833|43-A/C 100045516|20-A/G 100065233|14-C/G 100065518|13-T/G 100065693|58-C/T 100066101|12-T/C 6633196|52-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004454321   
## 6633443|50-C/G 6650488|44-T/C 6650661|48-G/C 6650800|48-C/T 6650825|39-G/A 6650845|36-C/T 6650876|20-T/G 6651093|21-T/C 6651267|9-G/A 6651306|19-G/A 6651379|44-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651554|67-T/C 6651736|43-T/C 6651932|30-T/C 6651941|51-C/T 6652116|48-C/T 6652661|48-C/T 6652756|60-T/C 6652829|67-A/G 6653016|28-G/A 6653035|59-T/C 6653400|19-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653480|48-C/A 6653764|58-T/G 6654093|42-A/G 6661397|22-T/G 6663931|67-C/G 6663957|68-G/A 6663967|43-G/C 6665630|56-C/T 100017995|7-C/G 100020113|15-A/T 100022566|30-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100044990|7-T/C 100065049|7-G/T 100066339|40-A/G 100082461|32-T/A 6632579|11-G/A 6650828|56-C/T 6650907|12-G/C 6650924|57-A/T 6651078|6-G/A 6651186|45-G/A 6651357|21-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.007721892 0.000000000 0.000000000   
## 6651533|11-T/C 6651835|18-A/G 6651845|5-C/T 6652615|62-G/A 6652654|38-A/G 6652959|31-C/A 6652967|19-C/T 6653003|36-G/C 6653135|53-G/T 6653227|62-A/G 6653345|29-G/T   
## 0.000000000 0.000000000 0.000000000 0.004282636 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653424|16-A/C 6653449|26-T/C 6653581|57-G/C 6653676|29-A/G 6653712|15-T/C 6653723|10-C/T 6653956|18-A/G 6654001|23-C/A 6658504|15-C/A 6658614|43-T/G 6661202|35-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661234|44-T/C 6661397|27-C/T 6661731|51-C/A 6661793|54-A/G 6663947|19-T/G 6664041|32-A/G 6664042|66-G/A 6664043|13-T/A 100017392|44-T/G 100020618|50-C/T 100022663|33-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6630289|20-G/C 6650619|36-T/C 6650638|22-A/C 6650699|38-T/C 6650728|58-T/C 6650755|23-T/A 6650783|14-G/A 6650849|14-T/C 6650880|67-A/G 6651095|41-C/T 6651245|18-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651292|26-C/G 6651352|20-T/C 6651467|62-G/C 6651557|42-C/T 6651631|26-C/T 6651664|24-T/C 6651688|48-C/T 6651718|35-C/T 6651795|51-C/T 6651923|42-T/C 6651965|39-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652219|19-T/C 6652378|63-C/T 6652434|66-A/C 6652655|53-T/G 6652722|31-C/A 6652830|22-T/C 6652882|43-C/A 6653040|42-C/T 6653271|6-A/G 6653385|63-G/T 6653386|12-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653418|27-T/A 6653450|16-A/G 6653476|17-G/C 6653520|26-A/G 6653763|12-G/A 6653916|15-T/C 6654026|50-T/C 6654061|33-A/G 6657577|47-G/A 6657800|39-C/A 6658145|22-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.010049995 0.000000000   
## 6658508|25-A/G 6661100|58-G/C 6661185|17-G/C 6661209|14-C/T 6661230|12-C/T 6661236|16-T/C 6661314|22-A/C 6661446|29-G/A 6661535|11-G/A 6661559|28-T/C 6661597|46-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661642|45-G/T 6661657|60-G/A 6661731|68-A/G 6661796|25-A/G 6662683|15-T/C 6664747|36-A/C 6665469|54-T/A 6665629|23-C/G 100023210|29-C/A 100065681|26-G/T 100114697|13-C/G   
## 0.000000000 0.000000000 0.004474250 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6630523|63-G/A 6650409|45-T/C 6650528|28-G/T 6650721|49-C/T 6651065|27-G/T 6651098|23-T/C 6651125|47-G/A 6651426|10-G/A 6651605|61-C/A 6651634|10-G/C 6651759|12-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651815|20-A/C 6652098|62-G/A 6652125|13-C/T 6652182|12-A/G 6652205|23-G/T 6652340|36-A/G 6652361|22-A/G 6652367|17-C/A 6652519|22-A/T 6652681|7-T/C 6652787|16-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653095|8-G/T 6653128|9-G/T 6653131|30-G/A 6653340|41-C/T 6653516|66-C/G 6653855|60-C/A 6654020|41-T/C 6654087|18-G/A 6657400|14-C/T 6658359|12-G/A 6661176|55-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661182|18-C/T 6661371|21-A/G 6661403|66-A/C 100065611|31-A/C 6661497|12-G/A 6661654|59-A/G 6662907|21-A/G 6663946|23-C/G 6665056|53-C/T 6665628|28-C/A 100019769|39-T/C   
## 0.000000000 0.000000000 0.000000000 0.052747133 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.006430801 0.000000000   
## 100082375|66-T/G 100082404|55-T/C 6650592|12-C/A 6651184|37-G/A 6652576|37-G/T 6652672|55-C/T 6653304|23-A/T 6656915|10-G/T 6657307|34-A/T 6657558|38-C/T 6658381|25-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6658521|6-G/C 6661752|23-A/C 6664327|23-G/A 100044751|5-A/G 100085984|13-G/A 100115531|5-T/A 6643578|12-A/G 100106109|11-G/A 100113138|5-T/G 100117994|11-T/A 6662821|6-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664383|8-A/G 6665284|5-C/G 6665328|8-T/A 6665629|20-C/G 100118214|11-C/A 6663102|10-G/A 100021042|56-T/C 100090841|7-C/A 100103683|13-G/A 100103683|6-A/T 100106227|13-C/A   
## 0.000000000 0.004106759 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100106247|9-T/A 100111488|6-C/G 100112338|6-T/G 100114623|5-C/G 6644428|5-T/A 6647555|5-C/A 6648501|8-A/G 6648560|7-T/C 6658337|6-C/G 6664325|9-C/T 6664355|7-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664406|5-G/T 6664885|10-C/T 6665134|5-A/G 6665147|13-C/T 100065344|49-T/C 6661457|44-C/T 6661867|13-G/A 6661122|26-C/T 100064630|57-A/G 100025554|68-T/A 6658677|32-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.019167534 0.000000000 0.000000000 0.000000000 0.007604452 0.000000000 0.000000000   
## 6635413|16-T/A 6661764|43-C/A 6652801|27-G/A 100024646|8-G/C 100066569|63-G/A 6652374|43-T/C 6661449|54-A/C 6661688|9-G/T 6661583|7-C/T 6661219|45-G/A 100016118|67-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004889946 0.000000000 0.020098431 0.005037751 0.000000000 0.000000000   
## 100065968|17-C/T 6664008|7-T/G 100019909|40-A/G 100024919|19-A/C 100021772|52-T/C 100066372|27-A/G 100091350|43-A/C 100017975|34-A/G 100045781|34-C/A 6652884|53-G/A 100017252|27-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017894|53-G/A 100022254|26-T/A 6632275|61-T/C 100065115|49-T/C 100065825|30-T/C 6654008|51-C/T 6653230|18-T/G 100020850|15-T/A 100024608|28-A/G 100065720|36-C/T 100019004|19-T/C   
## 0.000000000 0.000000000 0.004842586 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100022949|21-T/C 100024718|58-G/A 100065076|9-G/C 6650868|53-G/A 100017101|27-T/G 100017766|10-C/A 100019793|62-T/A 100021136|57-G/A 100021706|33-T/C 100025017|58-T/C 6652036|20-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100015261|30-G/A 100015698|55-A/C 100016039|28-T/C 100021704|31-A/T 100021798|6-G/A 100022137|6-T/C 100022883|14-A/G 100023375|24-A/C 100064876|34-G/A 100022317|10-A/G 100065186|8-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653805|57-G/C 100021710|10-A/G 100023305|24-G/A 6634600|17-T/C 6650598|62-C/A 100017818|14-T/G 100020277|67-T/G 100020322|14-C/T 100021252|30-G/A 100022007|39-C/T 100022967|55-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004576635 0.000000000 0.000000000   
## 100023231|52-G/C 100024979|12-A/T 6651448|5-C/A 6661619|36-C/T 100101013|46-C/T 100015916|40-T/G 100019381|29-T/C 100021309|54-A/G 100022531|25-T/C 100022877|17-A/C 100023365|32-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.010752374 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100023869|51-T/A 100066103|5-G/A 100066389|65-G/C 6652703|57-T/C 100019288|33-T/C 100020549|44-T/G 100020551|60-A/T 100023117|6-G/T 100023343|62-G/A 100065070|10-C/T 100119322|60-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653215|23-A/C 100015905|30-T/A 100018538|19-A/G 100020139|46-T/C 100020548|9-A/C 100065378|43-C/T 100065666|20-A/T 100065687|58-C/T 6651010|63-C/T 6651023|13-C/T 6651465|19-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004376347 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653507|50-C/G 6661164|56-C/G 100015555|49-G/A 100017215|20-C/T 100018040|51-T/A 100018557|8-A/C 100019185|63-C/G 100019688|44-C/T 100023075|63-C/G 6630180|30-A/G 100015432|27-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017493|63-A/G 100020399|26-G/A 100020528|67-A/G 100021151|33-C/G 100021753|16-G/A 100021795|51-G/A 100062072|14-A/C 100066634|26-T/A 6661693|17-A/G 100015331|61-T/C 100015609|28-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017169|13-G/A 100017928|37-T/A 100019505|12-C/A 100020075|44-G/T 100020413|29-G/A 100021373|46-G/A 100021417|26-A/C 100022461|56-A/G 100022969|9-G/A 100023275|19-T/C 100082212|44-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004210508 0.000000000 0.000000000   
## 6652622|54-G/A 6653084|57-C/G 6653710|21-C/T 6653840|32-A/T 100021632|19-T/C 100022984|17-G/C 100064905|26-T/A 100015960|29-G/A 100016761|32-C/T 100017811|61-T/C 100019007|29-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020970|16-G/A 100065097|13-T/C 6651396|51-T/G 6651430|31-C/T 100015246|12-A/G 100017606|48-T/C 100018953|27-G/C 100019018|13-A/G 100020129|19-G/A 100020404|28-A/G 100020733|17-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.012578112   
## 100021724|12-A/C 100066663|43-G/A 100122660|5-A/G 6630550|32-T/C 6652105|37-A/G 100015837|30-T/C 100016214|35-G/T 100017908|21-G/A 100019267|32-G/A 100023141|5-C/T 100023174|41-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100064755|8-G/A 6651656|34-G/A 6651767|59-G/C 6664728|67-C/T 100018065|63-T/A 100019510|9-G/A 100019632|22-T/C 100019754|7-A/T 100020251|60-G/A 100021712|18-T/A 100044571|14-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.007272630 0.000000000 0.000000000 0.000000000 0.004338374 0.000000000 0.000000000   
## 6661691|15-C/T 6663917|15-C/T 100018085|21-A/G 100019876|24-A/C 100020554|42-G/T 100022262|60-C/A 100023321|57-A/G 100065480|65-T/A 6652163|42-T/G 6661278|34-C/G 6661299|21-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100016113|5-T/A 100018753|18-C/A 100022995|26-G/A 100045005|36-T/A 100065425|18-T/G 100065813|42-A/C 100066450|34-C/G 6652607|6-A/G 6653544|67-T/C 6661463|59-T/G 6661534|24-C/T   
## 0.000000000 0.000000000 0.000000000 0.008298611 0.000000000 0.000000000 0.009090720 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020053|13-A/T 100020534|56-C/G 100020747|66-T/A 100022664|19-A/G 100023314|12-C/T 100024345|29-C/T 100065655|8-A/T 100082306|16-G/C 6632614|14-G/C 6650544|61-G/A 6661521|5-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661754|5-A/T 100017623|23-C/T 100019111|65-T/A 100020626|26-A/C 100022838|5-C/T 6661655|44-C/A 100015424|32-C/A 100017638|47-T/C 100019862|5-A/G 100064626|46-C/T 100066576|33-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100082421|35-G/T 100082421|56-A/T 6661595|45-G/A 100018565|14-C/T 100019547|16-A/T 100021316|68-A/T 100066021|13-T/C 100066577|66-T/C 6635995|53-T/G 6650794|31-T/C 6651294|52-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661643|39-A/C 6665642|53-T/C 100017091|53-T/C 100018288|5-C/T 100019411|13-C/T 100022970|53-A/G 100044935|38-C/G 100065133|26-G/A 100065604|17-G/A 6653270|12-C/T 100082437|5-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.004866151 0.000000000 0.004192854 0.000000000 0.000000000 0.000000000 0.000000000   
## 100017079|68-T/A 100018306|21-T/A 100065207|61-C/A 6651674|58-G/A 6661762|25-C/T 100016541|14-A/T 100019240|64-C/A 100022760|39-A/C 6661631|14-G/T 100015984|25-C/T 100020169|39-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020171|37-C/T 100020514|46-G/A 100093365|13-T/C 6631375|67-A/T 6651160|63-T/G 6651417|40-A/G 6653272|47-T/C 6661637|58-G/T 6661875|62-G/A 100016327|11-G/T 100017411|17-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.016127966 0.000000000 0.000000000 0.000000000   
## 100021938|40-C/A 100104022|29-G/C 6653086|61-G/A 6654063|52-T/C 6661270|57-C/T 6661413|37-C/T 6661571|64-G/A 6662928|6-G/T 6665563|11-G/C 100015347|8-A/G 100015697|17-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6630379|34-A/G 6651111|37-G/A 6651135|63-T/A 6652080|40-C/G 6653891|42-G/A 6661255|43-T/G 6661262|56-A/G 6661441|11-A/G 100019678|23-G/T 100065386|6-G/C 100082362|41-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008620528   
## 100119892|9-C/T 6650706|34-C/G 6651084|9-T/C 6652828|42-G/A 6653640|66-C/T 6661213|29-A/C 6661501|61-G/T 100020312|34-A/G 100066078|57-C/T 6651216|56-G/C 6651663|16-T/G   
## 0.000000000 0.004555785 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652291|30-C/A 6661623|16-C/T 6664064|11-C/A 100019069|65-C/T 6629913|31-T/G 6650658|32-T/C 6651643|7-G/A 6651651|36-T/C 6652652|32-C/T 6652781|24-G/A 6652781|64-C/G   
## 0.000000000 0.000000000 0.000000000 0.006733930 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652958|54-G/C 6661185|61-C/T 6661218|12-C/T 6661232|58-C/T 6662683|28-G/C 6662714|21-A/C 6663024|21-C/T 100016570|44-C/T 100017965|14-G/A 100018649|23-G/A 100021210|28-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004866151 0.000000000 0.000000000   
## 100044629|5-T/A 100065997|37-G/A 100066075|25-C/G 100119599|31-T/C 6633592|39-A/T 6650534|49-T/C 6650535|67-A/T 6651337|9-A/G 6653918|11-A/G 6657564|24-C/T 6661126|11-C/T   
## 0.007781982 0.000000000 0.000000000 0.000000000 0.000000000 0.012819979 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661428|5-C/T 6661666|46-C/T 6661783|8-T/C 6661798|20-C/T 6661798|28-T/C 6661836|10-G/A 6661836|20-G/C 6661863|56-C/T 6662849|35-T/C 6665679|46-T/G 100093359|29-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6629858|37-A/T 6643954|6-G/T 6652019|59-G/C 6652746|56-G/T 6652810|45-C/G 6653160|44-G/A 6653239|27-C/T 6653352|54-C/G 6653632|19-G/A 6662822|7-G/A 6664724|62-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.008230312   
## 100044710|9-T/G 100093660|28-C/A 6633718|59-C/T 6641748|42-C/A 6658299|7-T/C 6661450|36-G/A 6643586|10-T/G 6643586|9-C/A 6648203|14-A/T 6664350|5-C/T 100106226|9-C/A   
## 0.004157986 0.000000000 0.000000000 0.000000000 0.006514588 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100111464|9-T/C 6643578|11-A/T 6664414|23-C/A 6664432|8-G/T 6643814|11-C/G 6643814|5-G/A 100100648|8-G/T 100103657|7-G/C 100106110|9-A/G 100106239|8-T/G 100109437|5-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100109437|9-C/G 100110529|5-C/T 100111487|5-T/G 100122090|8-T/A 6649192|5-T/C 6657874|5-G/C 6658144|18-A/T 6662919|11-A/C 6663018|25-T/C 6664273|5-C/A 6664306|8-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664893|38-G/C 6664910|11-C/G 6665153|7-A/G 100082484|50-G/T 100118470|9-C/T 6664010|54-C/T 100046106|24-G/T 6666102|8-G/A 6657032|15-C/T 6665215|57-C/T 100018359|44-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.068290391 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100023139|68-G/T 6664085|47-C/T 6661211|58-C/T 100066559|31-T/C 6663985|50-C/T 6665628|45-T/C 100097039|23-C/G 6665040|44-A/G 100093411|9-A/C 100093413|26-G/C 6634480|31-T/A   
## 0.000000000 0.000000000 0.018574219 0.000000000 0.005570987 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065820|27-T/C 100065626|5-A/C 100017456|5-A/C 100065031|12-G/A 100090339|7-T/C 6654096|11-C/A 100045278|30-G/C 6650722|8-G/C 100023932|52-G/T 6661186|27-A/G 100066349|48-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005449551 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6664781|12-G/A 100018124|53-C/G 100064999|21-G/A 100074314|17-G/A 6661474|58-C/G 6664089|39-C/A 100074315|18-C/T 100109510|37-A/G 100106299|29-A/C 6652532|17-A/G 6666146|37-G/A   
## 0.000000000 0.000000000 0.017542486 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100020687|19-G/A 100017102|43-A/G 100016103|11-C/T 100016936|24-G/C 100065009|15-G/C 100021792|22-G/A 100065064|48-C/T 6651486|23-C/A 100022395|5-G/T 6635620|7-T/G 100021158|56-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100024001|29-C/A 100065225|30-T/C 100065766|32-C/A 100065871|7-G/C 6657554|17-A/G 100021381|48-A/G 100065073|30-T/C 100065186|6-A/G 100082387|67-G/T 100022890|66-G/A 100023224|41-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100066151|44-C/A 100065712|39-A/G 100016548|22-A/C 100018316|52-G/A 100018669|51-A/G 100020096|10-G/A 100021832|59-T/C 100045940|24-C/A 100066650|24-A/G 100045116|6-C/T 100112452|57-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653883|52-C/G 100021186|32-G/C 100021930|67-G/A 100065300|66-G/T 100082101|62-A/G 100119315|9-G/T 6650840|6-C/G 6664036|6-A/T 100015791|35-A/G 100021993|35-A/T 100065071|26-C/T   
## 0.000000000 0.000000000 0.005934666 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100106305|20-G/C 100020586|49-T/G 100022366|24-T/C 100022982|18-T/C 100102365|9-C/G 100016200|62-T/G 100017620|16-C/T 100018736|57-T/C 100020340|6-T/C 100066082|8-G/T 6663098|31-C/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100018726|57-G/T 100019037|42-G/A 100021366|54-C/T 100022220|45-A/G 100066146|14-T/C 100066266|57-C/G 100066574|19-T/C 100016560|7-T/C 100066037|49-C/G 100121195|35-C/G 100018616|49-T/G   
## 0.000000000 0.000000000 0.008583532 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100066663|58-T/C 100118142|5-T/C 6665806|57-G/A 100018844|30-C/T 100091301|63-G/T 100096922|11-G/T 6651543|26-C/T 100016510|41-T/A 100018353|22-G/T 100019853|68-A/T 100021078|39-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100021925|13-A/G 100065479|51-A/G 100066412|14-T/C 100091301|22-C/G 100019195|66-T/A 100023208|34-G/A 100065057|21-C/T 100065426|35-C/A 100073631|7-G/C 100016006|34-T/G 100017176|29-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.005089025   
## 100018612|5-A/C 100020218|34-A/C 100065408|22-T/G 100065476|64-G/A 100065761|7-G/A 6632042|19-G/C 100015587|20-C/A 100016037|24-A/G 100021787|68-A/C 100022942|14-C/G 100066550|58-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004434568 0.000000000 0.000000000   
## 100082539|7-G/A 6650594|30-T/G 6653546|21-T/C 6664281|14-A/T 100016076|49-A/C 100022081|49-G/A 100022274|36-C/A 100116482|57-T/A 100121512|34-G/C 100017777|61-G/A 100064625|41-A/G   
## 0.000000000 0.004106759 0.000000000 0.004228311 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100064874|12-T/C 100106306|45-G/A 100106306|65-G/A 100021587|57-C/T 100065160|65-G/T 100073403|34-A/C 100082633|51-A/G 100097045|48-T/C 6652651|47-T/A 6661761|37-C/T 100017728|53-A/C   
## 0.000000000 0.000000000 0.000000000 0.009661608 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065286|5-A/C 100082197|10-C/T 6633952|10-G/C 6657904|18-T/C 100065579|38-A/C 6661858|20-C/A 100019471|14-G/A 100044832|16-G/T 100065848|33-G/A 100066117|37-G/T 100112452|34-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6630404|40-A/C 100103994|35-G/T 100017343|6-T/C 100064738|40-C/G 100064746|17-G/A 100074010|27-G/C 6631936|55-T/C 6661620|58-C/G 100016884|51-C/A 100065351|47-C/G 6631698|7-C/G   
## 0.000000000 0.000000000 0.000000000 0.004192854 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652538|34-T/C 6657259|24-G/A 100016745|16-T/C 100065233|43-G/A 6630611|19-A/C 6652270|62-C/G 6652729|29-T/G 100020530|29-C/A 6630408|13-G/T 6630626|34-A/T 6631766|58-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6633539|7-G/A 6634322|14-T/G 6652458|12-A/T 6653006|66-G/A 6653115|48-T/A 6663957|45-C/T 100066473|39-A/G 6650554|32-A/G 6657465|23-T/A 6663949|9-G/A 100020033|33-A/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100082315|13-G/A 6629848|65-C/G 6630880|24-C/G 6650849|38-G/A 6650881|15-G/A 6651487|20-C/T 6651826|47-T/A 6652855|33-G/T 6657563|28-T/G 6657811|15-G/A 6658667|25-T/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6662907|9-T/A 6665143|45-A/G 100021831|19-T/A 100045184|5-G/C 100065651|20-A/C 100066434|64-T/A 100066660|33-T/C 6633749|29-T/A 6635481|20-A/G 6650535|47-C/A 6652320|27-G/C   
## 0.000000000 0.000000000 0.000000000 0.006230469 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652796|29-G/C 6654065|42-C/G 6657294|51-C/A 6658085|11-A/G 6661346|29-T/A 6661679|17-C/T 6662799|12-C/A 6662831|22-C/T 6663021|23-A/G 100085932|36-G/C 6630269|58-C/T   
## 0.004555785 0.000000000 0.000000000 0.000000000 0.004395583 0.000000000 0.000000000 0.000000000 0.000000000 0.004750567 0.000000000   
## 6630995|13-C/T 6633153|34-C/T 6644233|38-G/T 6650943|57-C/G 6650961|27-T/G 6651177|55-C/G 6651864|18-T/C 6652465|10-A/T 6652776|7-C/T 6654017|47-C/T 6657683|10-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6657925|11-T/C 6658404|12-T/G 6664915|43-G/T 100045721|8-T/A 100082404|10-G/T 100093333|22-G/A 6633054|40-T/A 6642765|20-C/T 6643196|21-C/G 6653359|24-C/T 6658471|31-G/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.004414989 0.000000000 0.000000000 0.000000000 0.004106759   
## 100065416|12-T/C 6661414|26-T/C 6664306|12-G/A 6665409|5-T/A 6642901|10-G/A 100108705|8-G/A 6665151|5-A/T 100122090|6-T/A 6662690|20-C/T 100016003|7-T/A 100016649|43-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100019431|29-C/T 100023959|16-T/C 100024997|62-T/G 100044851|16-G/C 100064658|7-C/T 100064682|49-G/A 100064707|51-G/A 100064714|52-G/A 100064753|29-A/G 100064840|30-G/A 100065000|48-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065025|5-A/G 100065087|14-G/A 100065157|40-T/G 100065238|55-G/T 100065368|11-G/C 100065400|61-A/G 100065428|33-G/C 100065497|38-G/T 100065538|49-T/G 100065597|12-A/T 100065605|63-C/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100065647|9-T/C 100065669|36-A/C 100065706|45-G/A 100065736|5-A/G 100065739|9-C/T 100065933|35-G/A 100066025|19-T/C 100066134|25-T/C 100066259|18-C/T 100066274|66-A/G 100066332|57-T/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100066410|32-G/A 100066624|60-C/G 100082151|41-C/A 100082232|23-T/G 100082297|57-C/T 100082311|43-C/T 100082409|16-T/A 100082418|7-T/C 100082564|6-T/C 100082633|21-G/A 100086276|23-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100086585|5-G/T 100091075|52-C/T 100091130|54-T/C 100093549|30-T/C 100098502|34-A/T 100101042|48-T/G 100121195|12-A/G 100121196|29-T/C 100121197|43-C/G 100121199|47-T/A 100121200|51-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 100122496|35-G/A 6630263|32-T/A 6630513|10-G/C 6631038|8-T/C 6631621|56-C/G 6633643|35-C/T 6634127|43-A/G 6635254|35-A/C 6641856|17-G/T 6642355|17-A/G 6650389|35-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.019997959 0.000000000 0.000000000 0.000000000 0.000000000   
## 6650444|8-A/G 6650519|63-A/G 6650553|61-C/G 6650587|17-C/A 6650591|24-A/G 6650676|68-C/T 6650899|7-G/A 6650902|63-C/T 6650919|10-A/G 6651039|12-G/A 6651054|54-C/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6651207|33-A/G 6651431|65-C/G 6651512|39-C/A 6651635|32-C/T 100065262|63-T/A 6651763|26-G/A 6651874|8-T/A 6651879|12-C/T 6652022|6-C/T 100065511|46-G/C 6652174|20-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6652193|50-G/A 6652287|47-C/A 6652538|35-G/A 6652743|25-G/A 100065924|8-G/T 6652898|57-G/T 6653034|66-G/A 6653037|45-C/G 6653161|37-C/T 6653161|51-C/G 6653240|43-A/G   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6653383|7-T/C 6653394|26-G/A 6653420|30-G/T 6653514|60-C/G 6653521|20-A/T 6653525|7-A/G 6653571|21-G/T 6653574|48-G/T 6653793|20-C/T 6653861|28-C/G 6653990|38-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6654094|56-G/T 6654108|11-A/G 6657811|16-C/T 6658021|8-T/G 6658173|44-C/A 6658487|25-C/A 6658616|17-G/T 6661180|50-T/C 6661214|14-C/G 6661229|60-G/A 6661236|33-G/A   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6661487|18-A/G 6661524|9-G/A 6661550|30-T/C 100082471|28-C/T 6661631|29-G/C 100082491|60-C/T 6661651|25-G/A 100082562|68-C/A 6661778|27-A/G 6661827|57-C/G 6661838|61-A/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.010256138 0.000000000   
## 6661845|30-A/G 6662631|42-G/A 6662646|5-A/C 6662657|27-G/A 6662765|9-A/G 6662767|43-T/A 6662797|33-T/C 6663018|35-C/G 6663941|10-G/C 6663953|25-A/G 6663990|56-G/T   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.012738330   
## 6664007|22-C/A 6664018|43-T/C 100091330|60-C/T 6664739|19-C/T 6665051|50-C/A 6665130|20-T/A 6665130|26-T/A 6665131|16-G/T 100109477|22-G/A 6665563|54-C/T 6665566|58-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000   
## 6665567|59-A/G 6665600|6-T/C 6665637|6-G/C 6665638|50-G/C 6665992|26-C/T 6666146|48-T/C   
## 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000

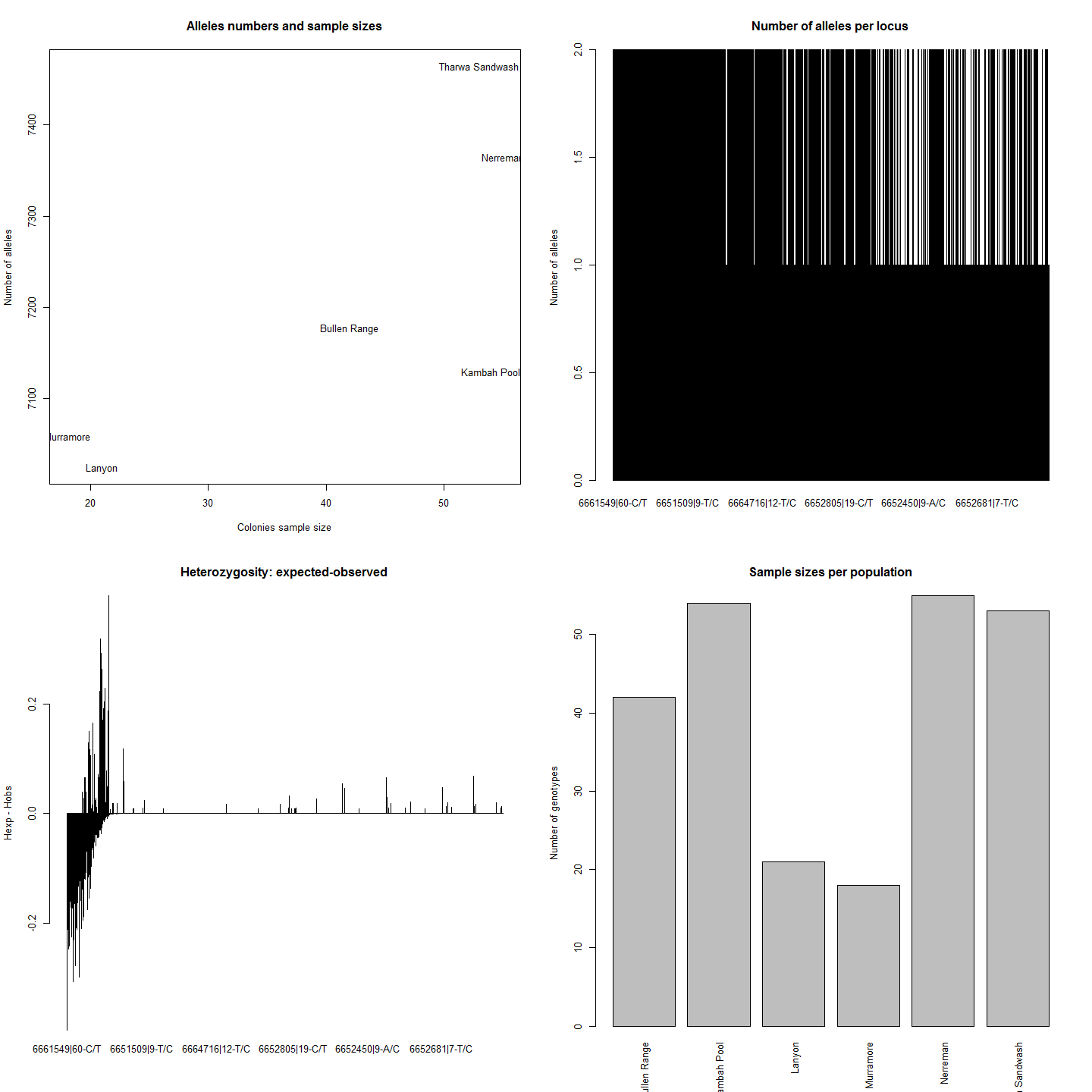
div$pop.eff

## Bullen Range Kambah Pool Lanyon Murramore Nerreman Tharwa Sandwash   
## 42 54 21 18 55 53

names(div)

## [1] "N" "pop.eff" "loc.n.all" "pop.nall" "NA.perc" "Hobs" "Hexp"

par(mfrow = c(2, 2))  
plot(div$pop.eff, div$pop.nall, xlab = "Colonies sample size", ylab = "Number of alleles", main = "Alleles numbers and sample sizes", type = "n")  
text(div$pop.eff, div$pop.nall, lab = names(div$pop.eff))  
barplot(div$loc.n.all, ylab = "Number of alleles", main ="Number of alleles per locus")  
barplot(div$Hexp - div$Hobs, main = "Heterozygosity: expected-observed",ylab = "Hexp - Hobs")  
barplot(div$pop.eff, main = "Sample sizes per population", ylab = "Number of genotypes", las = 3)



plot(div$Hobs, xlab="Loci number", ylab="Observed Heterozygosity",main="Observed heterozygosity per locus")  
  
mean(nAll(gi)) # Number of alleles per locus

## [1] 1.309554

plot(div$Hobs,div$Hexp, xlab="Hobs", ylab="Hexp", main="Expected heterozygosity as a function of observed heterozygosity per locus")  
  
bartlett.test(list(div$Hexp, div$Hobs)) # a test : H0: Hexp = Hobs

##   
## Bartlett test of homogeneity of variances  
##   
## data: list(div$Hexp, div$Hobs)  
## Bartlett's K-squared = 198.48, df = 1, p-value < 2.2e-16

basicstat <- basic.stats(gi, diploid = TRUE, digits = 2)   
names(basicstat)

## [1] "n.ind.samp" "pop.freq" "Ho" "Hs" "Fis" "perloc" "overall"

basicstat$overall

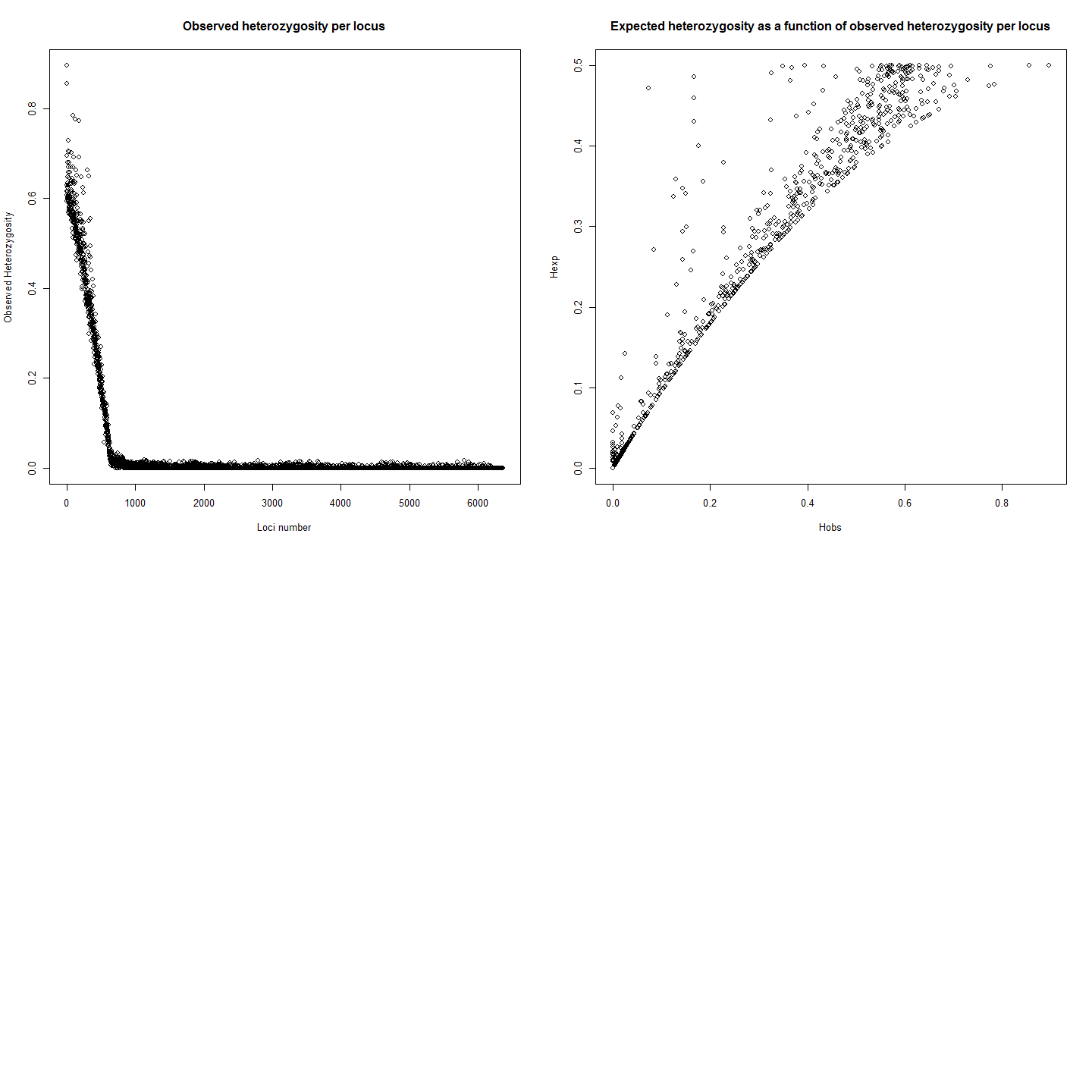
## Ho Hs Ht Dst Htp Dstp Fst Fstp Fis Dest   
## 0.04 0.03 0.03 0.00 0.03 0.00 0.01 0.02 -0.17 0.00

#mmod outputs  
diff\_stats(gi, phi\_st = FALSE)

## $per.locus  
## Hs Ht Gst Gprime\_st D  
## 6661549|60-C/T 0.537851343 0.507644027 -5.950492e-02 -1.563695e-01 -7.843532e-02  
## 6650588|15-C/T 0.506733320 0.499743555 -1.398670e-02 -3.412176e-02 -1.700443e-02  
## 6661794|21-A/G 0.472113392 0.487421375 3.140606e-02 7.094710e-02 3.479834e-02  
## 6664081|63-G/A 0.495192568 0.500418265 1.044266e-02 2.477197e-02 1.242223e-02  
## 6653885|30-A/G 0.487902403 0.493291859 1.092549e-02 2.554592e-02 1.262913e-02  
## 6661177|64-C/T 0.488242329 0.493365986 1.038510e-02 2.430114e-02 1.201426e-02  
## 6661457|52-C/T 0.510937824 0.502320494 -1.715504e-02 -4.223784e-02 -2.114414e-02  
## 6653401|39-G/A 0.501183705 0.501121486 -1.241594e-04 -2.986971e-04 -1.496798e-04  
## 6657572|30-T/A 0.444760300 0.451942974 1.589288e-02 3.423931e-02 1.552340e-02  
## 6661566|34-A/G 0.473030252 0.469106223 -8.364906e-03 -1.908024e-02 -8.935684e-03  
## 6663962|65-C/T 0.475354340 0.476734231 2.894465e-03 6.616559e-03 3.156166e-03  
## 6665217|18-A/G 0.501054015 0.501242186 3.754096e-04 9.028187e-04 4.525648e-04  
## 6661207|60-A/C 0.492928372 0.489539337 -6.922905e-03 -1.640598e-02 -8.020250e-03  
## 6661398|51-C/T 0.467089493 0.470293957 6.813747e-03 1.532221e-02 7.215764e-03  
## 6651899|27-T/A 0.454520277 0.472177818 3.739596e-02 8.165658e-02 3.884480e-02  
## 6653020|28-A/C 0.486948094 0.495577676 1.741318e-02 4.058711e-02 2.018412e-02  
## 6653704|64-T/G 0.497846562 0.499884182 4.076184e-03 9.732953e-03 4.869316e-03  
## 6650504|59-T/C 0.488323375 0.498092787 1.961364e-02 4.581878e-02 2.291153e-02  
## 6652003|38-G/C 0.451878579 0.455386915 7.704077e-03 1.684056e-02 7.680786e-03  
## 6661105|11-G/T 0.482983024 0.490174064 1.467038e-02 3.395044e-02 1.669045e-02  
## 6661432|29-C/A 0.466909440 0.464777645 -4.586697e-03 -1.033425e-02 -4.798722e-03  
## 6652162|44-A/T 0.483151705 0.482769676 -7.913274e-04 -1.837567e-03 -8.869811e-04  
## 6653798|57-C/T 0.495252350 0.490581872 -9.520283e-03 -2.267694e-02 -1.110371e-02  
## 6653191|40-A/G 0.488478451 0.486333379 -4.410702e-03 -1.035639e-02 -5.032214e-03  
## 6664876|31-G/A 0.458901732 0.461173687 4.926462e-03 1.091472e-02 5.038541e-03  
## 6661163|31-T/C 0.494744674 0.485714721 -1.859106e-02 -4.431925e-02 -2.144647e-02  
## 6652675|16-G/T 0.496427537 0.501420139 9.956923e-03 2.367993e-02 1.189724e-02  
## 6652288|45-C/T 0.483775088 0.476748525 -1.473851e-02 -3.436196e-02 -1.633373e-02  
## 6650933|66-G/A 0.503456786 0.498948448 -9.035680e-03 -2.187613e-02 -1.089534e-02  
## 6653948|58-T/C 0.484907503 0.500467765 3.109144e-02 7.198543e-02 3.625041e-02  
## 6663083|49-G/A 0.479890466 0.492176296 2.496225e-02 5.730697e-02 2.834594e-02  
## 6662726|45-A/G 0.473212868 0.469648146 -7.590197e-03 -1.731645e-02 -8.120294e-03  
## 6664756|9-C/T 0.459589753 0.451950245 -1.690343e-02 -3.766198e-02 -1.696380e-02  
## 6661688|18-A/G 0.482623630 0.483139721 1.068204e-03 2.477057e-03 1.197020e-03  
## 6666128|43-C/G 0.430809134 0.429374968 -3.340126e-03 -7.046547e-03 -3.023590e-03  
## 6652433|13-A/G 0.465076340 0.464837896 -5.129614e-04 -1.150850e-03 -5.349038e-04  
## 6652352|5-T/C 0.491716170 0.491271114 -9.059260e-04 -2.139175e-03 -1.050725e-03  
## 6664270|14-C/A 0.487252525 0.491294970 8.228142e-03 1.922496e-02 9.460668e-03  
## 6651416|17-C/T 0.493241088 0.501428737 1.632864e-02 3.854019e-02 1.938827e-02  
## 6664751|11-T/A 0.478118037 0.480224091 4.385566e-03 1.007520e-02 4.842599e-03  
## 6657734|47-A/G 0.435611958 0.431141142 -1.036973e-02 -2.209390e-02 -9.505835e-03  
## 6663081|18-A/G 0.436497270 0.443991968 1.688026e-02 3.582618e-02 1.596024e-02  
## 6651148|64-A/T 0.496734513 0.493938334 -5.660988e-03 -1.351351e-02 -6.667285e-03  
## 6656916|22-T/C 0.448737205 0.460009490 2.450446e-02 5.308166e-02 2.453774e-02  
## 6653573|49-T/C 0.487231003 0.487025703 -4.215376e-04 -9.865802e-04 -4.804494e-04  
## 6661198|22-T/G 0.484516450 0.490879273 1.296209e-02 3.009658e-02 1.481209e-02  
## 6665027|17-A/T 0.479706704 0.483774832 8.409136e-03 1.936219e-02 9.382696e-03  
## 6664900|6-C/T 0.473064396 0.487496225 2.960398e-02 6.702087e-02 3.286587e-02  
## 6650826|66-G/A 0.510453399 0.501538825 -1.777444e-02 -4.372500e-02 -2.185183e-02  
## 6653766|40-A/C 0.499477429 0.500833473 2.707574e-03 6.487880e-03 3.251107e-03  
## 6665588|8-C/T 0.458210945 0.456423582 -3.916020e-03 -8.680329e-03 -3.958804e-03  
## 6652573|8-C/A 0.447797343 0.450959686 7.012475e-03 1.521757e-02 6.872137e-03  
## 6652700|14-C/G 0.481425357 0.481628735 4.222702e-04 9.770656e-04 4.706226e-04  
## 6664334|9-A/G 0.465250250 0.469616581 9.297651e-03 2.082558e-02 9.798223e-03  
## 6651772|17-A/T 0.467232559 0.467434008 4.309675e-04 9.706233e-04 4.537414e-04  
## 6651828|36-G/A 0.486367694 0.502018746 3.117623e-02 7.238574e-02 3.656558e-02  
## 6650476|13-A/C 0.446429637 0.478023789 6.609326e-02 1.414042e-01 6.848810e-02  
## 6651474|15-T/C 0.472622180 0.468924691 -7.885036e-03 -1.797002e-02 -8.413296e-03  
## 6652836|30-C/T 0.491512454 0.490483385 -2.098072e-03 -4.953402e-03 -2.428542e-03  
## 6653346|25-C/A 0.481462556 0.482439604 2.025223e-03 4.684876e-03 2.261085e-03  
## 6658563|22-C/T 0.442495894 0.443606033 2.502534e-03 5.383886e-03 2.389520e-03  
## 6661870|10-G/T 0.498554086 0.501150097 5.180108e-03 1.238358e-02 6.212463e-03  
## 6657169|37-T/C 0.453347190 0.448477589 -1.085807e-02 -2.388727e-02 -1.068964e-02  
## 6661569|7-A/G 0.443923171 0.445904391 4.443150e-03 9.579695e-03 4.275424e-03  
## 6652342|46-G/A 0.447459836 0.461077321 2.953406e-02 6.376506e-02 2.957429e-02  
## 6656937|18-C/T 0.449309249 0.446548487 -6.182446e-03 -1.348873e-02 -6.015926e-03  
## 6661537|56-G/A 0.454887878 0.454454895 -9.527516e-04 -2.097770e-03 -9.531602e-04  
## 6664008|14-G/A 0.484385501 0.479907906 -9.330113e-03 -2.175476e-02 -1.042080e-02  
## 6651473|53-G/A 0.467819155 0.477071694 1.939444e-02 4.356302e-02 2.086330e-02  
## 6661884|29-T/A 0.492503404 0.499851120 1.469981e-02 3.465651e-02 1.737403e-02  
## 6662691|24-C/T 0.428650670 0.432602430 9.134855e-03 1.915087e-02 8.299848e-03  
## 6661181|61-C/T 0.460084167 0.465484708 1.160197e-02 2.572649e-02 1.200307e-02  
## 6651798|39-C/A 0.494167569 0.487841059 -1.296838e-02 -3.084525e-02 -1.500855e-02  
## 6661610|46-T/C 0.520920006 0.505718811 -3.005859e-02 -7.574616e-02 -3.807597e-02  
## 6653512|60-C/G 0.469256451 0.468513186 -1.586434e-03 -3.588032e-03 -1.680507e-03  
## 6651413|19-C/A 0.500083233 0.501140104 2.108934e-03 5.060149e-03 2.536913e-03  
## 6651436|18-C/T 0.512622233 0.500756612 -2.369539e-02 -5.861953e-02 -2.921501e-02  
## 6663093|22-C/A 0.439615555 0.442143840 5.718241e-03 1.223098e-02 5.414037e-03  
## 6652854|20-T/C 0.435511376 0.436775975 2.895304e-03 6.151326e-03 2.688307e-03  
## 6657907|22-C/T 0.426814523 0.433990738 1.653541e-02 3.450382e-02 1.502386e-02  
## 6664719|5-A/G 0.428322267 0.435052161 1.546917e-02 3.237094e-02 1.412662e-02  
## 6651857|34-G/T 0.430745875 0.432393215 3.809820e-03 8.025068e-03 3.472629e-03  
## 6658182|11-G/A 0.439987288 0.446413242 1.439463e-02 3.075639e-02 1.376959e-02  
## 6661203|33-G/T 0.468868837 0.477545674 1.816965e-02 4.090257e-02 1.960383e-02  
## 100066381|65-T/C 0.497975858 0.499392908 2.837545e-03 6.778803e-03 3.387207e-03  
## 6661291|28-A/C 0.487989865 0.497534256 1.918338e-02 4.478833e-02 2.236922e-02  
## 6651404|67-A/G 0.468820489 0.470758773 4.117361e-03 9.293973e-03 4.378822e-03  
## 6661583|6-T/C 0.457917497 0.441354711 -3.752715e-02 -8.370152e-02 -3.666479e-02  
## 6653019|13-C/T 0.447444811 0.443472447 -8.957408e-03 -1.948797e-02 -8.626896e-03  
## 6661633|39-G/T 0.447847151 0.447285110 -1.256563e-03 -2.731588e-03 -1.221492e-03  
## 6653539|14-G/C 0.468340764 0.466280233 -4.419082e-03 -9.983067e-03 -4.650793e-03  
## 6652507|49-A/G 0.414005823 0.416689139 6.439613e-03 1.317009e-02 5.494901e-03  
## 6662661|7-T/C 0.447829640 0.453670362 1.287438e-02 2.790728e-02 1.269331e-02  
## 6661859|57-A/G 0.501752807 0.500583277 -2.336333e-03 -5.629556e-03 -2.816745e-03  
## 6661395|60-C/T 0.521912427 0.491624099 -6.160871e-02 -1.565671e-01 -7.602372e-02  
## 6661690|43-G/A 0.477231894 0.490633374 2.731465e-02 6.235938e-02 3.076274e-02  
## 6653303|26-C/T 0.481364057 0.496272191 3.004024e-02 6.909085e-02 3.449387e-02  
## 6650697|6-C/A 0.501780288 0.500555105 -2.447648e-03 -5.898232e-03 -2.950945e-03  
## 6661748|26-C/T 0.487865121 0.487869830 9.650544e-06 2.261246e-05 1.103196e-05  
## 6661276|34-A/G 0.450759931 0.478710290 5.838679e-02 1.260932e-01 6.106698e-02  
## 6651590|59-C/G 0.455908845 0.454690733 -2.678992e-03 -5.911718e-03 -2.686563e-03  
## 6661435|48-G/A 0.414126573 0.438347769 5.525566e-02 1.119389e-01 4.961043e-02  
## 6664012|53-A/G 0.459866963 0.460133743 5.797878e-04 1.287951e-03 5.926983e-04  
## 6651071|8-C/T 0.446869124 0.470264598 4.974960e-02 1.068669e-01 5.075574e-02  
## 6661174|27-G/A 0.472523759 0.464500755 -1.727232e-02 -3.943046e-02 -1.825221e-02  
## 6657901|34-G/A 0.458577127 0.458334110 -5.302167e-04 -1.175288e-03 -5.386173e-04  
## 6661288|56-T/C 0.439631075 0.435267425 -1.002522e-02 -2.151159e-02 -9.344522e-03  
## 6664895|15-G/A 0.502987155 0.501221007 -3.523693e-03 -8.513690e-03 -4.264233e-03  
## 6665065|54-A/G 0.446928047 0.444207622 -6.124221e-03 -1.330402e-02 -5.902507e-03  
## 6653483|52-C/T 0.491198180 0.487514763 -7.555497e-03 -1.784647e-02 -8.687272e-03  
## 6652822|57-G/A 0.433398030 0.439052133 1.287798e-02 2.720406e-02 1.197476e-02  
## 100065688|55-A/G 0.477888611 0.475352345 -5.335549e-03 -1.227611e-02 -5.829252e-03  
## 6661405|37-G/T 0.455129403 0.467229784 2.589814e-02 5.674306e-02 2.664937e-02  
## 6661817|33-A/G 0.419925389 0.416020462 -9.386383e-03 -1.945413e-02 -8.078121e-03  
## 6651443|47-G/T 0.431816445 0.434046330 5.137436e-03 1.083909e-02 4.709503e-03  
## 6651921|15-T/A 0.476069613 0.478853515 5.813682e-03 1.330008e-02 6.376195e-03  
## 6654090|16-G/A 0.487703604 0.500385911 2.534505e-02 5.906868e-02 2.970696e-02  
## 6653899|53-A/G 0.456892510 0.454530471 -5.196657e-03 -1.149400e-02 -5.218942e-03  
## 6661211|62-G/A 0.502586299 0.502102448 -9.636496e-04 -2.325232e-03 -1.167280e-03  
## 6652984|32-G/A 0.455442581 0.463527194 1.744151e-02 3.830092e-02 1.781545e-02  
## 6661495|42-T/C 0.463582886 0.464390119 1.738266e-03 3.887263e-03 1.805834e-03  
## 6650679|43-C/T 0.460557544 0.452616574 -1.754458e-02 -3.916569e-02 -1.766484e-02  
## 6661246|33-G/A 0.406033454 0.409334887 8.065361e-03 1.626833e-02 6.669938e-03  
## 6653043|54-C/G 0.441651703 0.448451738 1.516336e-02 3.249050e-02 1.461461e-02  
## 6651254|12-A/T 0.477453623 0.474494509 -6.236352e-03 -1.433934e-02 -6.795450e-03  
## 6653789|32-G/T 0.458207828 0.454725855 -7.657301e-03 -1.698595e-02 -7.712122e-03  
## 6650988|24-G/A 0.434418075 0.440136246 1.299182e-02 2.749342e-02 1.213229e-02  
## 6650862|68-C/A 0.500975779 0.500568699 -8.132357e-04 -1.955900e-03 -9.789032e-04  
## 6653541|8-A/G 0.446480528 0.445915073 -1.268080e-03 -2.749825e-03 -1.225877e-03  
## 6662900|30-G/A 0.428713480 0.432855509 9.569079e-03 2.006167e-02 8.700423e-03  
## 6653618|37-G/A 0.498707483 0.497092364 -3.249131e-03 -7.782866e-03 -3.866289e-03  
## 6664721|14-C/T 0.417439170 0.427143639 2.271945e-02 4.658744e-02 1.998995e-02  
## 6652395|48-C/T 0.449110139 0.451823190 6.004672e-03 1.306425e-02 5.909821e-03  
## 6661842|33-T/A 0.484537291 0.482969989 -3.245134e-03 -7.559595e-03 -3.648688e-03  
## 6661739|54-G/A 0.446444944 0.445382854 -2.384666e-03 -5.171961e-03 -2.302404e-03  
## 6652644|26-G/A 0.469632196 0.464434405 -1.119166e-02 -2.537884e-02 -1.176042e-02  
## 6652332|20-T/C 0.428919475 0.441939551 2.946121e-02 6.154363e-02 2.735882e-02  
## 6651976|25-G/A 0.464018118 0.464033200 3.250328e-05 7.277052e-05 3.376816e-05  
## 6661113|14-C/T 0.472761162 0.468108059 -9.940232e-03 -2.266912e-02 -1.059050e-02  
## 6661301|20-G/A 0.431136089 0.433501371 5.456229e-03 1.149719e-02 4.989488e-03  
## 6662986|27-C/T 0.400783509 0.404686111 9.643528e-03 1.927510e-02 7.815409e-03  
## 6653529|7-G/A 0.426520696 0.445857869 4.337071e-02 8.997237e-02 4.046285e-02  
## 6651972|24-A/G 0.430545625 0.428718211 -4.262506e-03 -8.989959e-03 -3.850873e-03  
## 6652901|58-C/T 0.406525626 0.437262045 7.029290e-02 1.401612e-01 6.214877e-02  
## 6653167|32-C/T 0.478388042 0.469255089 -1.946266e-02 -4.495000e-02 -2.101091e-02  
## 6652763|59-G/A 0.453855587 0.453082809 -1.705600e-03 -3.748860e-03 -1.697965e-03  
## 6651610|56-G/C 0.467181739 0.474999221 1.645788e-02 3.694443e-02 1.760634e-02  
## 6661486|27-C/T 0.434067093 0.433714278 -8.134736e-04 -1.725164e-03 -7.481066e-04  
## 6664344|37-A/G 0.417737276 0.418352372 1.470282e-03 3.029251e-03 1.267667e-03  
## 6661743|17-G/A 0.383923918 0.392480865 2.180220e-02 4.228221e-02 1.666732e-02  
## 6651212|18-A/G 0.500695970 0.501415149 1.434299e-03 3.446127e-03 1.728436e-03  
## 6651054|64-T/A 0.454852146 0.450990117 -8.563444e-03 -1.888252e-02 -8.501243e-03  
## 6653313|42-A/G 0.452533466 0.453958256 3.138591e-03 6.875209e-03 3.123017e-03  
## 6652640|45-C/A 0.425255131 0.434743843 2.182598e-02 4.537204e-02 1.981132e-02  
## 6653127|48-G/A 0.456901137 0.442477231 -3.259808e-02 -7.249950e-02 -3.187023e-02  
## 6652179|62-G/A 0.467039785 0.481338944 2.970705e-02 6.649260e-02 3.219563e-02  
## 6664422|18-A/G 0.425305027 0.426597396 3.029481e-03 6.321920e-03 2.698549e-03  
## 6661732|8-C/T 0.408698046 0.416018931 1.759748e-02 3.558743e-02 1.485715e-02  
## 6658587|26-G/A 0.490537934 0.478799261 -2.451690e-02 -5.803229e-02 -2.764957e-02  
## 6661161|53-A/C 0.495743279 0.496191084 9.024849e-04 2.147292e-03 1.065659e-03  
## 6657089|25-C/T 0.464375275 0.467429577 6.534252e-03 1.462007e-02 6.842782e-03  
## 6650998|9-A/T 0.467392955 0.492743733 5.144820e-02 1.147357e-01 5.711703e-02  
## 6652379|23-G/C 0.448896860 0.448689584 -4.619574e-04 -1.005982e-03 -4.513321e-04  
## 6652823|50-C/A 0.431357167 0.426364076 -1.171086e-02 -2.477130e-02 -1.053686e-02  
## 6653209|28-G/C 0.474549087 0.484096501 1.972213e-02 4.486351e-02 2.180393e-02  
## 6664750|24-C/T 0.397705107 0.396735165 -2.444808e-03 -4.873369e-03 -1.932491e-03  
## 6666098|18-G/A 0.444460253 0.445257486 1.790499e-03 3.866203e-03 1.722072e-03  
## 6664416|28-A/G 0.424293170 0.424723258 1.012631e-03 2.110296e-03 8.964732e-04  
## 6661208|26-A/T 0.469908899 0.465689134 -9.061334e-03 -2.054994e-02 -9.552543e-03  
## 100017494|26-T/C 0.471373025 0.466946831 -9.479010e-03 -2.155852e-02 -1.004760e-02  
## 6657426|10-G/T 0.357200569 0.357122141 -2.196110e-04 -4.099954e-04 -1.464120e-04  
## 6650467|17-T/C 0.414219006 0.419221989 1.193397e-02 2.438909e-02 1.024885e-02  
## 6661591|23-T/C 0.426797347 0.429030432 5.204958e-03 1.088525e-02 4.674965e-03  
## 6661615|53-A/G 0.462862623 0.470562301 1.636272e-02 3.643614e-02 1.720159e-02  
## 6651689|52-C/T 0.438857221 0.436763507 -4.793702e-03 -1.026114e-02 -4.477394e-03  
## 100093282|6-C/T 0.377805250 0.383215684 1.411851e-02 2.715308e-02 1.043487e-02  
## 6651044|31-C/T 0.397873653 0.407452909 2.351009e-02 4.663486e-02 1.909086e-02  
## 6663926|8-G/A 0.494741468 0.486644945 -1.663743e-02 -3.964618e-02 -1.922942e-02  
## 6661122|39-C/T 0.482865937 0.475265959 -1.599100e-02 -3.722588e-02 -1.763561e-02  
## 6653015|45-G/T 0.412907003 0.420418740 1.786727e-02 3.639012e-02 1.535376e-02  
## 6651960|46-A/G 0.416341321 0.423861296 1.774159e-02 3.634767e-02 1.546104e-02  
## 6658395|10-A/G 0.377827146 0.375816641 -5.349698e-03 -1.032914e-02 -3.877711e-03  
## 6664288|7-C/G 0.382961742 0.382632333 -8.609035e-04 -1.674551e-03 -6.406271e-04  
## 6651937|12-G/T 0.431689808 0.429492929 -5.115052e-03 -1.081161e-02 -4.638760e-03  
## 6661119|32-T/C 0.485585935 0.483846841 -3.594307e-03 -8.390655e-03 -4.056873e-03  
## 6653567|68-C/T 0.432859585 0.434480115 3.729814e-03 7.885949e-03 3.428844e-03  
## 6657105|21-A/G 0.438110308 0.447997896 2.207061e-02 4.692797e-02 2.111643e-02  
## 6653958|12-C/T 0.398202534 0.400073416 4.676345e-03 9.316042e-03 3.730587e-03  
## 6664417|17-G/A 0.405453284 0.417483717 2.881653e-02 5.782840e-02 2.428156e-02  
## 6653929|22-G/A 0.405058844 0.409535584 1.093126e-02 2.200032e-02 9.029614e-03  
## 6653560|40-C/T 0.450502565 0.446397036 -9.197034e-03 -2.012162e-02 -8.965710e-03  
## 6651307|58-C/T 0.404181969 0.399896559 -1.071630e-02 -2.162938e-02 -8.630977e-03  
## 6651918|7-T/C 0.454491455 0.468915655 3.076076e-02 6.725321e-02 3.173010e-02  
## 6652335|27-T/C 0.438962394 0.454542197 3.427581e-02 7.281319e-02 3.332355e-02  
## 6652403|61-A/C 0.427338715 0.434921130 1.743400e-02 3.640565e-02 1.588880e-02  
## 6661676|25-C/T 0.445585688 0.450252506 1.036489e-02 2.238784e-02 1.010108e-02  
## 6657686|15-A/G 0.412242172 0.410016450 -5.428370e-03 -1.109492e-02 -4.544160e-03  
## 6661180|15-G/A 0.421883201 0.422256497 8.840494e-04 1.834701e-03 7.748516e-04  
## 6664065|56-A/T 0.419639814 0.413349485 -1.521795e-02 -3.156193e-02 -1.300640e-02  
## 6662654|14-C/T 0.406626844 0.403527467 -7.680708e-03 -1.555687e-02 -6.267982e-03  
## 6661258|19-T/G 0.452829470 0.473507049 4.366900e-02 9.494131e-02 4.534801e-02  
## 6661326|21-G/T 0.389556018 0.390270029 1.829532e-03 3.595145e-03 1.403591e-03  
## 6661503|51-G/A 0.426997499 0.436398061 2.154126e-02 4.491886e-02 1.968696e-02  
## 6665677|54-T/C 0.360834711 0.360020943 -2.260334e-03 -4.245580e-03 -1.527807e-03  
## 6651345|67-A/G 0.372902467 0.378736011 1.540267e-02 2.938368e-02 1.116294e-02  
## 6653158|39-C/T 0.393019381 0.388957382 -1.044330e-02 -2.068961e-02 -8.030567e-03  
## 6661434|33-C/T 0.375976515 0.386853984 2.811776e-02 5.376822e-02 2.091742e-02  
## 6650700|61-G/A 0.442954150 0.457167083 3.108914e-02 6.655904e-02 3.061780e-02  
## 6665573|50-G/T 0.381221339 0.377901088 -8.786031e-03 -1.706878e-02 -6.438976e-03  
## 100103686|15-C/T 0.447918931 0.447487367 -9.644172e-04 -2.096656e-03 -9.380460e-04  
## 6661407|28-A/T 0.379692011 0.380318548 1.647401e-03 3.185885e-03 1.212050e-03  
## 6662956|24-T/G 0.388972512 0.401048469 3.011097e-02 5.878109e-02 2.371603e-02  
## 6653198|44-C/T 0.448310730 0.444644362 -8.245618e-03 -1.796498e-02 -7.974853e-03  
## 100119886|12-A/G 0.350838214 0.358156939 2.043441e-02 3.762002e-02 1.352894e-02  
## 6653976|22-T/C 0.401621966 0.409917906 2.023805e-02 4.042220e-02 1.663685e-02  
## 6661123|44-T/C 0.372601357 0.370795212 -4.871007e-03 -9.325663e-03 -3.454542e-03  
## 6661423|44-C/T 0.397516335 0.436997503 9.034644e-02 1.767542e-01 7.863682e-02  
## 6661694|9-T/C 0.444627056 0.462299459 3.822718e-02 8.197115e-02 3.818494e-02  
## 6653208|48-G/A 0.441419403 0.428559859 -3.000641e-02 -6.485205e-02 -2.762619e-02  
## 6661587|35-T/C 0.428072211 0.442923047 3.352916e-02 6.988116e-02 3.115953e-02  
## 6653932|10-C/T 0.372592974 0.393666132 5.353053e-02 1.012998e-01 4.030524e-02  
## 6657861|14-G/A 0.385603457 0.401559540 3.973528e-02 7.699652e-02 3.116440e-02  
## 6664287|35-C/T 0.406243102 0.403703637 -6.290419e-03 -1.272913e-02 -5.132333e-03  
## 6653108|33-A/G 0.372962251 0.403149267 7.487801e-02 1.411843e-01 5.777072e-02  
## 6650863|33-C/T 0.374330967 0.379896210 1.464938e-02 2.801465e-02 1.067384e-02  
## 6653166|35-T/C 0.414585262 0.412254356 -5.654050e-03 -1.160296e-02 -4.777960e-03  
## 6652001|24-A/G 0.377172857 0.376889460 -7.519363e-04 -1.448972e-03 -5.460202e-04  
## 6657913|25-C/G 0.366487180 0.368201127 4.654919e-03 8.809146e-03 3.246557e-03  
## 100109898|15-G/A 0.370574683 0.371022074 1.205834e-03 2.298370e-03 8.529516e-04  
## 6661240|65-T/A 0.345831340 0.351101958 1.501164e-02 2.745477e-02 9.668364e-03  
## 6661268|13-G/A 0.380153701 0.383723499 9.303046e-03 1.797691e-02 6.910999e-03  
## 6653580|43-G/T 0.395698647 0.402276224 1.635090e-02 3.236319e-02 1.306152e-02  
## 6657145|22-C/A 0.383783501 0.390348030 1.681712e-02 3.263933e-02 1.278355e-02  
## 6661660|20-C/T 0.385781002 0.383416756 -6.166256e-03 -1.206189e-02 -4.619028e-03  
## 6652645|41-C/T 0.396123801 0.403990453 1.947237e-02 3.854465e-02 1.563231e-02  
## 6651100|28-C/T 0.394514391 0.407090271 3.089212e-02 6.084853e-02 2.492389e-02  
## 6661548|20-A/G 0.439052131 0.438212510 -1.916015e-03 -4.100379e-03 -1.796149e-03  
## 6657725|32-C/T 0.386244891 0.385650083 -1.542354e-03 -3.016505e-03 -1.162957e-03  
## 6652908|9-A/T 0.403570139 0.404585795 2.510359e-03 5.048237e-03 2.043471e-03  
## 6661838|60-T/G 0.387830647 0.389833175 5.136884e-03 1.005920e-02 3.925438e-03  
## 6652562|28-G/A 0.377484069 0.389285570 3.031579e-02 5.808640e-02 2.274930e-02  
## 6654077|33-C/T 0.394505947 0.395421105 2.314389e-03 4.584656e-03 1.813709e-03  
## 6661761|38-G/A 0.454036727 0.449378527 -1.036587e-02 -2.283100e-02 -1.023849e-02  
## 6658102|52-C/T 0.386228510 0.399857894 3.408557e-02 6.619032e-02 2.664715e-02  
## 6657350|31-T/A 0.388840572 0.389750936 2.335760e-03 4.584078e-03 1.787483e-03  
## 6651178|33-C/T 0.360863822 0.366554769 1.552550e-02 2.905943e-02 1.068495e-02  
## 6661253|38-T/C 0.361070401 0.390909513 7.633253e-02 1.412075e-01 5.604206e-02  
## 100104030|16-C/A 0.446014099 0.451975408 1.318945e-02 2.849478e-02 1.291291e-02  
## 6664895|24-C/A 0.487393105 0.489710746 4.732672e-03 1.106859e-02 5.425538e-03  
## 6653522|21-A/G 0.392049231 0.392474223 1.082855e-03 2.136923e-03 8.388690e-04  
## 6661899|11-A/G 0.422058157 0.431182842 2.116199e-02 4.375415e-02 1.894589e-02  
## 6650883|48-C/T 0.377610930 0.375134001 -6.602785e-03 -1.274736e-02 -4.775654e-03  
## 6661607|53-C/G 0.362483391 0.365679848 8.741136e-03 1.642476e-02 6.016704e-03  
## 6654004|30-T/A 0.397934910 0.406987384 2.224264e-02 4.413636e-02 1.804285e-02  
## 6653722|5-T/G 0.395466221 0.401867991 1.593003e-02 3.152070e-02 1.270752e-02  
## 6654003|26-C/A 0.387494623 0.393802528 1.601794e-02 3.128160e-02 1.235824e-02  
## 6652045|5-C/T 0.405118273 0.405157403 9.658072e-05 1.948196e-04 7.893413e-05  
## 6658305|27-T/C 0.412876320 0.413278468 9.730676e-04 1.988429e-03 8.219349e-04  
## 6657714|46-T/C 0.401979464 0.401419235 -1.395621e-03 -2.801262e-03 -1.124167e-03  
## 6661603|40-G/C 0.367608454 0.376902502 2.465902e-02 4.656231e-02 1.763600e-02  
## 6650949|5-A/T 0.315659067 0.322566215 2.141311e-02 3.738803e-02 1.211177e-02  
## 6664725|29-A/G 0.490272701 0.499843058 1.914672e-02 4.490327e-02 2.253053e-02  
## 6657697|38-A/G 0.350348658 0.356465608 1.716000e-02 3.158859e-02 1.129889e-02  
## 6661471|62-C/G 0.384944161 0.393342248 2.135058e-02 4.147877e-02 1.638502e-02  
## 6661765|40-G/A 0.351639837 0.356146310 1.265343e-02 2.336015e-02 8.340684e-03  
## 6661481|66-A/C 0.461830446 0.466518130 1.004823e-02 2.236042e-02 1.045251e-02  
## 6653282|53-T/C 0.387098590 0.394636707 1.910141e-02 3.725633e-02 1.475888e-02  
## 6652110|26-C/T 0.392501160 0.403904199 2.823204e-02 5.545398e-02 2.252457e-02  
## 6652196|51-C/T 0.417925569 0.416867943 -2.537078e-03 -5.233074e-03 -2.180394e-03  
## 6652944|56-G/A 0.387543166 0.395091005 1.910405e-02 3.728851e-02 1.478865e-02  
## 6658191|17-C/G 0.386650649 0.387592214 2.429267e-03 4.750482e-03 1.842144e-03  
## 6661286|15-G/A 0.327412479 0.324166921 -1.001200e-02 -1.789879e-02 -5.790576e-03  
## 6653684|7-T/C 0.387229077 0.382287842 -1.292543e-02 -2.537770e-02 -9.676507e-03  
## 6653203|66-A/G 0.360835463 0.371758892 2.938310e-02 5.484304e-02 2.050820e-02  
## 6661751|44-T/G 0.369011317 0.422114597 1.258030e-01 2.333774e-01 1.009906e-01  
## 6661711|66-G/A 0.360477407 0.365564519 1.391577e-02 2.603908e-02 9.545456e-03  
## 6650674|36-C/T 0.336117029 0.333677810 -7.310100e-03 -1.323270e-02 -4.409003e-03  
## 6653554|14-G/A 0.374064743 0.375518387 3.871033e-03 7.415536e-03 2.786826e-03  
## 6651804|55-G/C 0.380498543 0.379718468 -2.054352e-03 -3.981001e-03 -1.511038e-03  
## 6664076|29-C/A 0.347717215 0.350773310 8.712450e-03 1.600035e-02 5.622276e-03  
## 6663980|50-G/A 0.319556025 0.323589998 1.246631e-02 2.193034e-02 7.114131e-03  
## 100102214|5-C/T 0.395958675 0.392345303 -9.209675e-03 -1.832988e-02 -7.178395e-03  
## 6653379|50-A/G 0.365896270 0.363676779 -6.102921e-03 -1.156349e-02 -4.200241e-03  
## 6651865|33-T/G 0.380360464 0.395974822 3.943270e-02 7.576821e-02 3.023892e-02  
## 6661260|22-A/T 0.357125311 0.359302741 6.060154e-03 1.129828e-02 4.064425e-03  
## 6651954|62-T/C 0.362505638 0.366313057 1.039389e-02 1.952456e-02 7.166968e-03  
## 6656942|42-G/A 0.335473454 0.340227006 1.397171e-02 2.515976e-02 8.583951e-03  
## 6652635|57-G/A 0.360776211 0.352210393 -2.432017e-02 -4.587886e-02 -1.608041e-02  
## 6661149|41-C/T 0.391081822 0.393722011 6.705719e-03 1.319732e-02 5.203042e-03  
## 6650632|65-G/A 0.366536391 0.375733066 2.447662e-02 4.614133e-02 1.742169e-02  
## 6650568|31-G/C 0.349749311 0.356672797 1.941131e-02 3.568391e-02 1.277689e-02  
## 6650938|6-C/T 0.344111110 0.345524325 4.090059e-03 7.476966e-03 2.585587e-03  
## 6658511|21-A/C 0.352992402 0.359570377 1.829399e-02 3.380603e-02 1.220012e-02  
## 6654094|65-T/C 0.296008756 0.295397340 -2.069809e-03 -3.529589e-03 -1.042200e-03  
## 6653106|31-C/T 0.355883129 0.354657502 -3.455804e-03 -6.442671e-03 -2.283363e-03  
## 6661381|44-A/G 0.320101451 0.320719750 1.927847e-03 3.401279e-03 1.091278e-03  
## 6652779|66-A/G 0.336097653 0.340420820 1.269948e-02 2.289609e-02 7.814102e-03  
## 6650898|47-G/A 0.339487160 0.340720565 3.619989e-03 6.571930e-03 2.240813e-03  
## 6657805|7-A/G 0.356730762 0.366585861 2.688347e-02 4.988212e-02 1.838440e-02  
## 6661727|46-C/T 0.352707638 0.352301451 -1.152953e-03 -2.137925e-03 -7.530205e-04  
## 6662592|9-C/T 0.298039414 0.315395176 5.502862e-02 9.304725e-02 2.966964e-02  
## 6661085|13-C/T 0.318567714 0.321649793 9.582094e-03 1.684176e-02 5.427530e-03  
## 6661239|45-A/G 0.359157114 0.359711354 1.540792e-03 2.884296e-03 1.037834e-03  
## 6665990|9-G/C 0.494748080 0.495064480 6.391087e-04 1.517723e-03 7.514668e-04  
## 6650977|39-G/A 0.329477403 0.326928160 -7.797566e-03 -1.397670e-02 -4.562251e-03  
## 6652000|22-C/T 0.309012868 0.308005303 -3.271259e-03 -5.684737e-03 -1.749784e-03  
## 6658391|30-C/T 0.294321430 0.306915783 4.103521e-02 6.921197e-02 2.141658e-02  
## 6661184|41-C/G 0.491751734 0.500732658 1.793557e-02 4.219543e-02 2.120442e-02  
## 6651519|67-C/G 0.345295127 0.343505891 -5.208749e-03 -9.557004e-03 -3.279467e-03  
## 6652011|54-C/T 0.344713048 0.341107704 -1.056952e-02 -1.939652e-02 -6.602317e-03  
## 6661376|29-C/T 0.290377244 0.284870958 -1.932905e-02 -3.281304e-02 -9.311345e-03  
## 6650669|9-A/G 0.351257073 0.359923741 2.407918e-02 4.432654e-02 1.603101e-02  
## 100073501|45-A/G 0.372821951 0.368923686 -1.056659e-02 -2.026021e-02 -7.458676e-03  
## 6651742|50-G/A 0.347721574 0.353816610 1.722654e-02 3.158294e-02 1.121307e-02  
## 6653416|29-C/T 0.370433805 0.377538354 1.881809e-02 3.573418e-02 1.354180e-02  
## 6661643|49-G/A 0.322906652 0.331567368 2.612053e-02 4.605235e-02 1.534923e-02  
## 6650635|62-G/A 0.351881531 0.354740703 8.059890e-03 1.489898e-02 5.293793e-03  
## 6651529|9-C/T 0.308052789 0.311541007 1.119666e-02 1.937426e-02 6.049394e-03  
## 6652878|58-G/T 0.356681368 0.356841102 4.476330e-04 8.349074e-04 2.979559e-04  
## 6665222|67-C/A 0.323551261 0.325288344 5.340133e-03 9.463131e-03 3.081534e-03  
## 6661481|18-C/T 0.477642317 0.502484037 4.943783e-02 1.124604e-01 5.706830e-02  
## 6665990|48-C/G 0.490833429 0.499033062 1.643104e-02 3.859772e-02 1.932483e-02  
## 6661216|67-C/T 0.316509783 0.315503908 -3.188152e-03 -5.600992e-03 -1.766008e-03  
## 6663955|62-T/C 0.467929920 0.499924592 6.399900e-02 1.425155e-01 7.215893e-02  
## 6652246|10-G/A 0.303298390 0.310723218 2.389531e-02 4.096157e-02 1.278854e-02  
## 6661167|12-T/A 0.367008693 0.365549599 -3.991508e-03 -7.572990e-03 -2.766093e-03  
## 6661710|53-G/A 0.307943510 0.303502429 -1.463277e-02 -2.544714e-02 -7.700667e-03  
## 6664085|17-G/T 0.352917512 0.357650493 1.323354e-02 2.447652e-02 8.777207e-03  
## 6661652|62-A/C 0.428000752 0.432070079 9.418209e-03 1.972136e-02 8.537059e-03  
## 6657045|15-A/G 0.360351359 0.362131212 4.914938e-03 9.211517e-03 3.339057e-03  
## 6661805|6-C/G 0.487187141 0.485655817 -3.153107e-03 -7.383036e-03 -3.583353e-03  
## 6652339|26-G/T 0.383557120 0.381581182 -5.178290e-03 -1.009078e-02 -3.846465e-03  
## 6661277|47-G/A 0.319606937 0.322683476 9.534229e-03 1.678339e-02 5.426048e-03  
## 6661335|49-T/G 0.313098051 0.315829683 8.649067e-03 1.508361e-02 4.772091e-03  
## 6652597|28-C/T 0.328461543 0.341082214 3.700185e-02 6.563442e-02 2.255240e-02  
## 6661737|51-G/T 0.294958246 0.298562225 1.207111e-02 2.049588e-02 6.134068e-03  
## 6664079|62-A/T 0.282724297 0.283113075 1.373226e-03 2.296772e-03 6.504247e-04  
## 6661334|49-G/T 0.324356371 0.324555286 6.128838e-04 1.088400e-03 3.532892e-04  
## 6661187|52-C/T 0.326037204 0.322856471 -9.851849e-03 -1.757598e-02 -5.663339e-03  
## 6653800|24-G/A 0.309425874 0.309781393 1.147642e-03 1.993783e-03 6.177786e-04  
## 6665242|22-G/A 0.463992457 0.498425436 6.908351e-02 1.525546e-01 7.708767e-02  
## 6651247|35-C/G 0.332058925 0.330733437 -4.007723e-03 -7.205913e-03 -2.381326e-03  
## 6653693|39-C/A 0.412060659 0.416703826 1.114261e-02 2.269179e-02 9.476830e-03  
## 6661436|12-T/C 0.327834531 0.341753090 4.072695e-02 7.212133e-02 2.484845e-02  
## 6650629|61-C/A 0.280480759 0.282964826 8.778711e-03 1.461530e-02 4.142877e-03  
## 6653328|49-C/T 0.372001468 0.372610437 1.634330e-03 3.121911e-03 1.163637e-03  
## 6650603|26-A/G 0.363587315 0.360491750 -8.587064e-03 -1.621936e-02 -5.836902e-03  
## 6651494|48-G/A 0.334647436 0.321728080 -4.015613e-02 -7.301016e-02 -2.330077e-02  
## 6652060|23-C/T 0.288276729 0.301105137 4.260441e-02 7.122620e-02 2.162932e-02  
## 6657933|10-C/T 0.374890843 0.373743197 -3.070679e-03 -5.898296e-03 -2.203094e-03  
## 6651038|40-T/C 0.275259165 0.272687178 -9.432006e-03 -1.564669e-02 -4.258604e-03  
## 6664362|28-C/T 0.317234399 0.327730018 3.202520e-02 5.592791e-02 1.844666e-02  
## 6651571|67-C/T 0.312616095 0.314068912 4.625790e-03 8.068006e-03 2.536254e-03  
## 6664050|15-A/G 0.355603510 0.349092444 -1.865141e-02 -3.486284e-02 -1.212496e-02  
## 6652084|30-C/T 0.321964319 0.322880545 2.837661e-03 5.019296e-03 1.621553e-03  
## 6661846|32-C/T 0.282023621 0.286892166 1.696995e-02 2.826702e-02 8.137111e-03  
## 6653638|33-A/C 0.338154330 0.341964115 1.114089e-02 2.015477e-02 6.907565e-03  
## 6657305|12-A/C 0.305507826 0.312953597 2.379193e-02 4.091495e-02 1.286541e-02  
## 6663909|36-C/T 0.295356312 0.292989353 -8.078652e-03 -1.378012e-02 -4.030904e-03  
## 6661305|58-A/G 0.284633562 0.284616209 -6.097162e-05 -1.022788e-04 -2.910985e-05  
## 6657606|35-G/A 0.275020119 0.283335183 2.934709e-02 4.829240e-02 1.376325e-02  
## 6661206|19-A/C 0.265542286 0.262854415 -1.022570e-02 -1.674159e-02 -4.391601e-03  
## 6657339|6-G/A 0.302525222 0.301332893 -3.956848e-03 -6.813119e-03 -2.051392e-03  
## 6657292|22-T/A 0.317268195 0.323912316 2.051210e-02 3.590568e-02 1.167800e-02  
## 6661485|59-A/G 0.320135989 0.322290597 6.685294e-03 1.178418e-02 3.803009e-03  
## 6650475|43-C/T 0.317876524 0.315126857 -8.725590e-03 -1.537700e-02 -4.837249e-03  
## 6652083|41-G/A 0.305634642 0.315135008 3.014697e-02 5.178765e-02 1.641850e-02  
## 6663998|25-T/C 0.296536047 0.292481597 -1.386224e-02 -2.371256e-02 -6.916260e-03  
## 6661115|22-T/G 0.317326201 0.315567464 -5.573249e-03 -9.807557e-03 -3.091496e-03  
## 100102214|35-G/A 0.328540424 0.322760755 -1.790698e-02 -3.211751e-02 -1.032914e-02  
## 6651822|26-T/C 0.301093610 0.298302718 -9.355905e-03 -1.609391e-02 -4.791872e-03  
## 6653698|49-A/T 0.341800928 0.341325171 -1.393854e-03 -2.541922e-03 -8.673801e-04  
## 6651072|34-A/C 0.294585763 0.296184741 5.398582e-03 9.173775e-03 2.720066e-03  
## 6661221|40-G/A 0.293077171 0.293423508 1.180331e-03 2.003137e-03 5.879062e-04  
## 6664084|45-C/T 0.460436196 0.491842562 6.385451e-02 1.402229e-01 6.984835e-02  
## 6664046|47-A/G 0.289805428 0.288215611 -5.516070e-03 -9.330675e-03 -2.686279e-03  
## 6664412|13-G/A 0.379678396 0.389625669 2.553033e-02 4.913703e-02 1.924280e-02  
## 6652764|38-C/T 0.272931194 0.282090187 3.246832e-02 5.324201e-02 1.511658e-02  
## 6652859|41-C/T 0.325933328 0.331051015 1.545891e-02 2.743573e-02 9.110708e-03  
## 6662842|43-C/T 0.376437855 0.382954961 1.701794e-02 3.263871e-02 1.254170e-02  
## 6653459|28-T/C 0.303752743 0.302186335 -5.183586e-03 -8.943315e-03 -2.699746e-03  
## 6652467|20-G/T 0.307544285 0.319752544 3.818033e-02 6.566369e-02 2.115646e-02  
## 6658444|32-T/G 0.273624292 0.272499673 -4.127047e-03 -6.823670e-03 -1.857913e-03  
## 6663948|54-G/A 0.327025606 0.339318266 3.622752e-02 6.413366e-02 2.191940e-02  
## 6661848|65-T/G 0.259893503 0.260687625 3.046259e-03 4.936161e-03 1.287580e-03  
## 6661692|19-C/T 0.300993216 0.301479611 1.613359e-03 2.768794e-03 8.350044e-04  
## 6661666|47-C/A 0.235935475 0.235026549 -3.867333e-03 -6.078533e-03 -1.427512e-03  
## 6657189|5-T/A 0.315702110 0.320366324 1.455900e-02 2.545687e-02 8.179270e-03  
## 6663931|25-C/T 0.317278585 0.320422909 9.813044e-03 1.721432e-02 5.526689e-03  
## 6661747|23-A/G 0.292074857 0.303485960 3.760010e-02 6.326001e-02 1.934290e-02  
## 6664777|21-T/G 0.297988241 0.308688902 3.466487e-02 5.884721e-02 1.829142e-02  
## 6657196|41-G/A 0.269043579 0.274305939 1.918427e-02 3.137415e-02 8.639136e-03  
## 6662626|20-G/C 0.259229418 0.264884245 2.134830e-02 3.443582e-02 9.160451e-03  
## 6661431|59-G/A 0.285130738 0.286491065 4.748234e-03 7.962960e-03 2.283483e-03  
## 6651183|67-C/T 0.286275326 0.293658222 2.514112e-02 4.205880e-02 1.241302e-02  
## 100020564|19-A/G 0.251877333 0.254951823 1.205910e-02 1.929644e-02 4.931529e-03  
## 6658409|20-A/C 0.267098310 0.265327841 -6.672762e-03 -1.094010e-02 -2.898838e-03  
## 6661097|28-C/T 0.309941220 0.307890454 -6.660701e-03 -1.159829e-02 -3.566246e-03  
## 6657230|7-A/G 0.281296558 0.283672062 8.374121e-03 1.395867e-02 3.966316e-03  
## 6661119|56-G/A 0.396364179 0.429056192 7.619518e-02 1.491988e-01 6.499020e-02  
## 6661554|36-A/G 0.271640534 0.269188929 -9.107376e-03 -1.503213e-02 -4.039112e-03  
## 6650618|9-G/C 0.241983933 0.242492503 2.097261e-03 3.318740e-03 8.051070e-04  
## 6653999|19-C/T 0.200093544 0.201416961 6.570536e-03 9.844020e-03 1.985358e-03  
## 6663991|5-C/T 0.280420439 0.277235757 -1.148727e-02 -1.920075e-02 -5.310904e-03  
## 6652381|42-A/T 0.276851493 0.276847470 -1.453240e-05 -2.411529e-05 -6.676238e-06  
## 6651915|13-C/T 0.299622123 0.305459559 1.911034e-02 3.261824e-02 1.000163e-02  
## 6662884|19-C/T 0.252635809 0.251283429 -5.381888e-03 -8.650702e-03 -2.171438e-03  
## 6664330|6-A/G 0.270563091 0.278767915 2.943245e-02 4.813611e-02 1.349779e-02  
## 6658057|21-T/G 0.253513408 0.251468510 -8.131827e-03 -1.309345e-02 -3.287237e-03  
## 6664271|29-T/G 0.319707249 0.319974514 8.352675e-04 1.473121e-03 4.714399e-04  
## 6658345|31-A/G 0.266577194 0.270381878 1.407152e-02 2.295870e-02 6.225088e-03  
## 6664281|18-T/A 0.249702169 0.252493114 1.105355e-02 1.763966e-02 4.463740e-03  
## 6651466|33-G/A 0.240865872 0.243153961 9.410043e-03 1.484697e-02 3.616893e-03  
## 6651085|26-C/T 0.208076264 0.211929483 1.818161e-02 2.745072e-02 5.838773e-03  
## 6653605|24-T/C 0.270380676 0.274547935 1.517862e-02 2.488862e-02 6.853861e-03  
## 100044679|44-A/G 0.261199836 0.274914610 4.988740e-02 8.022938e-02 2.227629e-02  
## 100115090|8-A/G 0.228642030 0.227666752 -4.283800e-03 -6.670013e-03 -1.517239e-03  
## 6661464|30-G/T 0.236580886 0.243941260 3.017273e-02 4.714330e-02 1.156959e-02  
## 6650884|45-C/T 0.269124869 0.272789085 1.343241e-02 2.199515e-02 6.016156e-03  
## 6661861|5-T/C 0.216495780 0.220620358 1.869537e-02 2.852680e-02 6.317125e-03  
## 6651870|51-T/C 0.305395282 0.318938540 4.246353e-02 7.274228e-02 2.339735e-02  
## 6650549|15-C/T 0.246945286 0.249908178 1.185592e-02 1.884783e-02 4.721396e-03  
## 6662909|15-A/C 0.234505432 0.248687237 5.702667e-02 8.838771e-02 2.223160e-02  
## 6661345|10-T/C 0.179431605 0.188457864 4.789537e-02 6.937766e-02 1.320001e-02  
## 100096951|40-T/A 0.244080151 0.248535870 1.792787e-02 2.835828e-02 7.073320e-03  
## 6651934|39-C/A 0.309794318 0.315307086 1.748381e-02 3.029164e-02 9.584567e-03  
## 6653561|20-A/G 0.275886361 0.277811611 6.930058e-03 1.146859e-02 3.190522e-03  
## 6663982|40-G/A 0.235729852 0.235501037 -9.716072e-04 -1.525842e-03 -3.592675e-04  
## 6661677|22-C/T 0.304463609 0.308570620 1.330979e-02 2.290225e-02 7.085774e-03  
## 6661705|29-C/G 0.299547743 0.317672512 5.705489e-02 9.664244e-02 3.105097e-02  
## 6661413|63-C/T 0.221641470 0.225634673 1.769765e-02 2.718833e-02 6.156345e-03  
## 100065757|18-C/G 0.202532055 0.202962558 2.121098e-03 3.190395e-03 6.478055e-04  
## 6661266|30-A/G 0.236388307 0.243735549 3.014432e-02 4.708729e-02 1.154604e-02  
## 6661310|64-T/C 0.238509065 0.242232687 1.537209e-02 2.414995e-02 5.867892e-03  
## 6661349|63-A/G 0.244210758 0.245666261 5.924718e-03 9.395803e-03 2.310967e-03  
## 100116458|50-G/A 0.221846493 0.223545797 7.601594e-03 1.170472e-02 2.620518e-03  
## 6665749|7-G/A 0.229891087 0.229862587 -1.239877e-04 -1.932051e-04 -4.440952e-05  
## 6652731|67-C/G 0.255305240 0.259899598 1.767743e-02 2.838503e-02 7.403341e-03  
## 6653078|31-C/T 0.223328188 0.223436359 4.841265e-04 7.479293e-04 1.671308e-04  
## 6653889|13-C/T 0.214420637 0.220905023 2.935373e-02 4.457715e-02 9.905127e-03  
## 6650390|62-T/A 0.233238800 0.231594424 -7.100238e-03 -1.112785e-02 -2.573488e-03  
## 6665512|36-G/A 0.258402501 0.258605428 7.846975e-04 1.269542e-03 3.283620e-04  
## 6653694|33-C/T 0.256633236 0.274772702 6.601626e-02 1.051798e-01 2.928212e-02  
## 6661130|57-A/C 0.234073395 0.234102250 1.232562e-04 1.931043e-04 4.520728e-05  
## 6650397|43-A/G 0.271571198 0.278726744 2.567226e-02 4.207597e-02 1.178791e-02  
## 6652725|65-G/A 0.218251287 0.219066631 3.721896e-03 5.708936e-03 1.251568e-03  
## 6664898|31-T/A 0.222211190 0.227326866 2.250362e-02 3.456381e-02 7.892646e-03  
## 6664740|45-G/A 0.212226796 0.216954099 2.178942e-02 3.304739e-02 7.201011e-03  
## 6661717|60-G/A 0.179534518 0.189187565 5.102369e-02 7.387260e-02 1.411840e-02  
## 6661866|27-T/C 0.281103337 0.280651509 -1.609925e-03 -2.688192e-03 -7.542021e-04  
## 6661803|57-G/C 0.201732750 0.201554088 -8.864208e-04 -1.332754e-03 -2.685743e-04  
## 6653812|35-T/C 0.225472665 0.222339615 -1.409128e-02 -2.189377e-02 -4.854134e-03  
## 6653634|39-G/A 0.171755774 0.191220038 1.017899e-01 1.445356e-01 2.820076e-02  
## 6653421|13-A/G 0.211327620 0.213175351 8.667659e-03 1.316541e-02 2.811405e-03  
## 6653117|34-C/G 0.266379601 0.274571253 2.983434e-02 4.851126e-02 1.339928e-02  
## 6652078|22-T/A 0.202907378 0.202576790 -1.631917e-03 -2.457606e-03 -4.976915e-04  
## 6663918|8-C/G 0.222194632 0.222289918 4.286550e-04 6.612733e-04 1.470070e-04  
## 6651738|38-G/C 0.217130516 0.241262610 1.000242e-01 1.503123e-01 3.699022e-02  
## 100073717|6-G/A 0.176035822 0.174597061 -8.240461e-03 -1.202100e-02 -2.095373e-03  
## 6662614|36-C/T 0.234261108 0.233503066 -3.246387e-03 -5.090764e-03 -1.187937e-03  
## 6663009|7-C/T 0.235286074 0.233707857 -6.752947e-03 -1.061115e-02 -2.476560e-03  
## 6665630|52-T/C 0.230650707 0.233750216 1.325992e-02 2.062758e-02 4.834488e-03  
## 6661118|33-G/A 0.236580713 0.237496913 3.857735e-03 6.059203e-03 1.440152e-03  
## 6651890|7-G/A 0.205503125 0.209718261 2.009904e-02 3.023584e-02 6.366498e-03  
## 6650967|42-C/A 0.234405943 0.236502764 8.865945e-03 1.387198e-02 3.286578e-03  
## 6661605|18-C/T 0.231351245 0.235293687 1.675541e-02 2.607087e-02 6.154867e-03  
## 6651286|19-T/A 0.198908016 0.203421747 2.218903e-02 3.309132e-02 6.761367e-03  
## 6653631|43-C/T 0.224254006 0.222144460 -9.496278e-03 -1.471773e-02 -3.263252e-03  
## 6661436|18-C/T 0.247986455 0.254826446 2.684176e-02 4.260312e-02 1.091468e-02  
## 6661386|46-C/T 0.299707982 0.308546821 2.864667e-02 4.880846e-02 1.514598e-02  
## 6656991|15-A/G 0.263015718 0.272344239 3.425268e-02 5.539271e-02 1.518923e-02  
## 6658489|9-C/T 0.235876569 0.233149562 -1.169638e-02 -1.841139e-02 -4.282565e-03  
## 100018527|6-C/T 0.177613954 0.177267161 -1.956326e-03 -2.855728e-03 -5.060287e-04  
## 6663957|56-G/A 0.243055658 0.253090918 3.965081e-02 6.236471e-02 1.590911e-02  
## 6653138|31-G/A 0.165253343 0.168003287 1.636839e-02 2.345380e-02 3.953214e-03  
## 6653361|55-G/A 0.183585329 0.189702451 3.224587e-02 4.709261e-02 8.991197e-03  
## 6662597|30-A/G 0.172279266 0.179058716 3.786160e-02 5.447788e-02 9.828605e-03  
## 6653013|37-T/C 0.193377964 0.198228560 2.446971e-02 3.622596e-02 7.216162e-03  
## 6664770|35-T/G 0.202154339 0.203366635 5.961133e-03 8.955167e-03 1.823353e-03  
## 100018912|62-G/T 0.209852725 0.216860876 3.231635e-02 4.876380e-02 1.064331e-02  
## 6650463|42-T/A 0.205211752 0.205323856 5.459846e-04 8.242573e-04 1.692582e-04  
## 6664775|59-A/G 0.354186081 0.378861260 6.512986e-02 1.194630e-01 4.584945e-02  
## 6651694|29-A/T 0.187301820 0.189156006 9.802416e-03 1.444556e-02 2.737822e-03  
## 6664064|49-A/G 0.173350470 0.174654406 7.465802e-03 1.082152e-02 1.892848e-03  
## 6652918|18-G/A 0.217279619 0.217986162 3.241230e-03 4.965958e-03 1.083212e-03  
## 6651840|35-G/A 0.184568862 0.186768589 1.177782e-02 1.729168e-02 3.237150e-03  
## 6651055|13-G/A 0.207835039 0.218187467 4.744740e-02 7.119938e-02 1.568223e-02  
## 6653477|22-A/T 0.154737657 0.158396580 2.309976e-02 3.264340e-02 5.194490e-03  
## 6661719|26-T/A 0.191553231 0.197079185 2.803926e-02 4.138735e-02 8.202327e-03  
## 6661828|67-T/A 0.375558688 0.406229211 7.550054e-02 1.429324e-01 5.894009e-02  
## 6654030|47-G/A 0.184645427 0.183350483 -7.062670e-03 -1.040920e-02 -1.905837e-03  
## 6665066|58-G/C 0.467630580 0.495975170 5.714921e-02 1.273628e-01 6.389080e-02  
## 6653260|47-G/T 0.194827477 0.194934212 5.475411e-04 8.159462e-04 1.590732e-04  
## 6650860|49-G/A 0.189189590 0.197821195 4.363337e-02 6.401875e-02 1.277478e-02  
## 6654039|20-G/A 0.195724150 0.199923559 2.100508e-02 3.120900e-02 6.265626e-03  
## 6665336|52-C/T 0.210949354 0.216312850 2.479509e-02 3.752267e-02 8.156885e-03  
## 6650985|20-G/A 0.183500643 0.184999946 8.104344e-03 1.189159e-02 2.203509e-03  
## 6665243|28-G/C 0.368507119 0.431819298 1.466173e-01 2.706737e-01 1.203095e-01  
## 6662888|44-A/C 0.184254652 0.187421263 1.689569e-02 2.477065e-02 4.658234e-03  
## 6665236|63-T/C 0.207348423 0.214707785 3.427618e-02 5.153761e-02 1.114138e-02  
## 6663983|17-C/T 0.153623798 0.154044923 2.733785e-03 3.873867e-03 5.970758e-04  
## 100066027|14-A/T 0.153337912 0.159791741 4.038900e-02 5.678586e-02 9.147209e-03  
## 6653607|5-T/C 0.186618554 0.186633595 8.059543e-05 1.189023e-04 2.219153e-05  
## 6661170|39-C/T 0.219903095 0.223013113 1.394545e-02 2.139220e-02 4.784048e-03  
## 6661781|60-G/A 0.139751430 0.144710027 3.426575e-02 4.747352e-02 6.916974e-03  
## 100073694|44-G/A 0.183773912 0.183579567 -1.058645e-03 -1.556729e-03 -2.857231e-04  
## 6663947|55-T/C 0.176018757 0.178456650 1.366098e-02 1.984088e-02 3.550410e-03  
## 6661831|54-T/C 0.143753331 0.145895731 1.468446e-02 2.051949e-02 3.002499e-03  
## 6652266|47-T/C 0.184689485 0.187872769 1.694383e-02 2.485424e-02 4.685259e-03  
## 6663080|20-G/A 0.138616155 0.140233517 1.153335e-02 1.603021e-02 2.253158e-03  
## 6665672|66-T/A 0.196279980 0.199982491 1.851417e-02 2.754074e-02 5.528060e-03  
## 6658491|28-C/A 0.275301065 0.287107079 4.112060e-02 6.753454e-02 1.954911e-02  
## 6661680|19-G/T 0.130229721 0.132699373 1.861088e-02 2.558174e-02 3.407317e-03  
## 6662595|39-C/T 0.196933516 0.208338942 5.474457e-02 8.091734e-02 1.704281e-02  
## 6665990|6-A/T 0.389638417 0.408977271 4.728589e-02 9.209535e-02 3.802111e-02  
## 6657377|47-C/T 0.114729759 0.121436022 5.522466e-02 7.404027e-02 9.090463e-03  
## 6661828|68-T/A 0.344571688 0.363979789 5.332192e-02 9.659505e-02 3.553359e-02  
## 6651958|27-A/G 0.186049206 0.184807516 -6.718825e-03 -9.918830e-03 -1.830611e-03  
## 6653919|17-C/T 0.209461704 0.227185166 7.801329e-02 1.166012e-01 2.690338e-02  
## 100021874|46-A/G 0.108310431 0.111248443 2.640946e-02 3.535406e-02 3.953858e-03  
## 100016068|62-T/A 0.140205162 0.140552155 2.468783e-03 3.443935e-03 4.842915e-04  
## 6665489|31-C/T 0.156732283 0.161647598 3.040759e-02 4.300953e-02 6.994668e-03  
## 100082278|57-C/T 0.250341978 0.257653707 2.837812e-02 4.516935e-02 1.170410e-02  
## 6651291|51-G/T 0.141155485 0.141220308 4.590141e-04 6.412876e-04 9.057115e-05  
## 6653890|21-C/T 0.170418463 0.178591033 4.576137e-02 6.559405e-02 1.182172e-02  
## 6663954|56-C/A 0.295002017 0.302345200 2.428741e-02 4.114056e-02 1.249907e-02  
## 100021943|40-T/C 0.145022696 0.144740427 -1.950172e-03 -2.738225e-03 -3.961772e-04  
## 6652214|62-T/A 0.182813414 0.184084767 6.906347e-03 1.012766e-02 1.866922e-03  
## 100022950|33-A/C 0.155050305 0.156702070 1.054080e-02 1.493858e-02 2.345841e-03  
## 6651253|68-C/T 0.197617762 0.198692577 5.409438e-03 8.081323e-03 1.607436e-03  
## 6650643|36-C/A 0.300100889 0.298635328 -4.907528e-03 -8.422384e-03 -2.512753e-03  
## 6652860|42-G/A 0.144261489 0.143594928 -4.641954e-03 -6.515450e-03 -9.347170e-04  
## 6664014|62-G/A 0.140550168 0.140084519 -3.324055e-03 -4.644273e-03 -6.501583e-04  
## 6661808|48-C/T 0.151565207 0.151083393 -3.189060e-03 -4.513386e-03 -6.814628e-04  
## 6658138|27-A/C 0.141524527 0.144569587 2.106293e-02 2.931882e-02 4.256466e-03  
## 100017513|60-C/T 0.130640237 0.129402617 -9.564108e-03 -1.322689e-02 -1.708320e-03  
## 6661261|32-C/T 0.194388588 0.195243220 4.377268e-03 6.514464e-03 1.273018e-03  
## 6652821|67-C/T 0.099832793 0.103160450 3.225711e-02 4.272584e-02 4.436053e-03  
## 6666304|10-A/T 0.266849730 0.293370863 9.040139e-02 1.453387e-01 4.340905e-02  
## 6665455|61-G/T 0.232054583 0.240691639 3.588432e-02 5.567367e-02 1.349636e-02  
## 100082682|51-T/C 0.137048769 0.136495017 -4.056941e-03 -5.646069e-03 -7.700350e-04  
## 6653384|6-A/G 0.116178444 0.118706619 2.129767e-02 2.879406e-02 3.432605e-03  
## 100023325|25-A/G 0.044767300 0.043850106 -2.091658e-02 -2.638660e-02 -1.152215e-03  
## 100101067|36-C/T 0.158047868 0.171822684 8.016879e-02 1.124582e-01 1.963268e-02  
## 6651685|49-T/A 0.133590201 0.133787506 1.474769e-03 2.041991e-03 2.732735e-04  
## 6653586|60-T/C 0.148934408 0.149371109 2.923597e-03 4.119854e-03 6.157470e-04  
## 6666177|13-A/T 0.373790871 0.406856521 8.127104e-02 1.532482e-01 6.336347e-02  
## 6652540|8-G/T 0.188937300 0.190181024 6.539689e-03 9.663095e-03 1.840141e-03  
## 6651209|49-A/G 0.123389828 0.126206600 2.231874e-02 3.041656e-02 3.855906e-03  
## 100066244|11-A/T 0.134002315 0.134387334 2.864990e-03 3.967701e-03 5.335142e-04  
## 6652377|20-G/A 0.206783292 0.208437600 7.936705e-03 1.198784e-02 2.502682e-03  
## 6661200|23-T/G 0.118457577 0.118988399 4.461125e-03 6.067295e-03 7.225818e-04  
## 100064741|45-G/C 0.327872056 0.340546182 3.721706e-02 6.595544e-02 2.262806e-02  
## 6658040|18-T/A 0.100082341 0.100980601 8.895365e-03 1.184051e-02 1.197789e-03  
## 6653702|48-T/C 0.107867410 0.108448631 5.359414e-03 7.201183e-03 7.817956e-04  
## 6652310|50-C/T 0.138528436 0.142754354 2.960272e-02 4.099287e-02 5.886557e-03  
## 100080867|16-C/T 0.135982881 0.135157111 -6.109703e-03 -8.495913e-03 -1.146880e-03  
## 6665067|64-C/A 0.343782613 0.348692147 1.407985e-02 2.567500e-02 8.977880e-03  
## 6653076|28-C/T 0.109729086 0.107874736 -1.718985e-02 -2.325021e-02 -2.499487e-03  
## 6653648|6-G/A 0.151653561 0.156142502 2.874900e-02 4.043345e-02 6.349681e-03  
## 6651991|67-A/T 0.139952594 0.140473269 3.706577e-03 5.167852e-03 7.264833e-04  
## 6661634|15-T/G 0.105997043 0.106463156 4.378165e-03 5.871570e-03 6.256533e-04  
## 6664050|24-G/C 0.121300299 0.128395103 5.525759e-02 7.463790e-02 9.689049e-03  
## 6652868|58-A/G 0.107124003 0.109110873 1.820964e-02 2.438444e-02 2.670297e-03  
## 6661564|13-A/G 0.091905114 0.092273200 3.989082e-03 5.267162e-03 4.864056e-04  
## 6650547|43-C/G 0.113343160 0.114020639 5.941720e-03 8.031970e-03 9.168986e-04  
## 100064827|8-G/C 0.144252127 0.148033284 2.554261e-02 3.563590e-02 5.302249e-03  
## 6650552|61-G/A 0.097019246 0.097557413 5.516407e-03 7.322850e-03 7.151865e-04  
## 6661602|25-T/C 0.090937416 0.096514579 5.778570e-02 7.540800e-02 7.362084e-03  
## 6661456|61-G/A 0.113651317 0.113363321 -2.540472e-03 -3.441215e-03 -3.899093e-04  
## 6651197|66-T/A 0.098770677 0.099099736 3.320479e-03 4.418333e-03 4.381464e-04  
## 6652994|27-C/T 0.117788159 0.122271921 3.667042e-02 4.951659e-02 6.098892e-03  
## 6661887|13-A/T 0.109197719 0.111742035 2.276955e-02 3.053382e-02 3.427449e-03  
## 6661310|58-T/C 0.097313560 0.100178287 2.859628e-02 3.779872e-02 3.808268e-03  
## 6650745|19-T/G 0.096785774 0.096888700 1.062308e-03 1.411070e-03 1.367458e-04  
## 100017712|8-T/A 0.093282596 0.094801709 1.602410e-02 2.113944e-02 2.010478e-03  
## 6651911|52-G/A 0.119726110 0.135002346 1.131553e-01 1.508410e-01 2.082475e-02  
## 6650417|11-A/C 0.084404063 0.085610788 1.409548e-02 1.842191e-02 1.581560e-03  
## 6652308|53-T/G 0.070473710 0.070824390 4.951408e-03 6.385845e-03 4.527215e-04  
## 6661174|36-C/T 0.181079638 0.180138238 -5.225986e-03 -7.665879e-03 -1.379475e-03  
## 6651243|32-G/A 0.117567397 0.120146095 2.146301e-02 2.906231e-02 3.506712e-03  
## 6662595|43-G/A 0.115862944 0.116632716 6.599966e-03 8.946033e-03 1.044777e-03  
## 6661238|17-G/T 0.104888721 0.105638299 7.095702e-03 9.499127e-03 1.004896e-03  
## 6653091|46-C/G 0.088477706 0.089886460 1.567259e-02 2.056817e-02 1.854595e-03  
## 6651733|50-G/A 0.092266839 0.092959251 7.448548e-03 9.832143e-03 9.153502e-04  
## 6661209|58-G/A 0.142478388 0.142616954 9.715932e-04 1.359366e-03 1.939063e-04  
## 6662998|47-T/C 0.091963950 0.094642354 2.830027e-02 3.718926e-02 3.539601e-03  
## 6650989|12-C/T 0.110680435 0.110479151 -1.821925e-03 -2.459304e-03 -2.716028e-04  
## 6661260|32-A/C 0.134870323 0.138357166 2.520175e-02 3.478142e-02 4.836514e-03  
## 6664754|18-T/C 0.087210083 0.088530850 1.491872e-02 1.955457e-02 1.736348e-03  
## 6653705|22-C/A 0.117741247 0.119701239 1.637403e-02 2.219837e-02 2.665874e-03  
## 6651897|14-A/G 0.100214635 0.104165434 3.792811e-02 5.020207e-02 5.268988e-03  
## 6661468|27-G/A 0.111806549 0.118020543 5.265180e-02 7.039430e-02 8.395460e-03  
## 6662877|32-C/T 0.070530457 0.070241415 -4.114972e-03 -5.317048e-03 -3.731696e-04  
## 6652769|52-G/A 0.058563797 0.059975058 2.353080e-02 2.985300e-02 1.798861e-03  
## 6657468|35-T/C 0.049212317 0.050686852 2.909106e-02 3.650378e-02 1.861027e-03  
## 6664040|37-G/T 0.061361921 0.064401884 4.720301e-02 5.978221e-02 3.886434e-03  
## 6654036|20-C/G 0.070018718 0.071484486 2.050470e-02 2.635015e-02 1.891352e-03  
## 6652581|49-T/C 0.041562194 0.042684334 2.628928e-02 3.274300e-02 1.404962e-03  
## 6663926|28-C/T 0.272079085 0.314435285 1.347056e-01 2.162406e-01 6.982550e-02  
## 6650558|18-A/C 0.077553924 0.078494450 1.198206e-02 1.555007e-02 1.223519e-03  
## 6650767|11-C/T 0.056671652 0.056528664 -2.529476e-03 -3.219354e-03 -1.818937e-04  
## 6650470|54-G/A 0.072601595 0.073346408 1.015472e-02 1.311299e-02 9.637443e-04  
## 6652008|64-T/A 0.042242234 0.042565236 7.588403e-03 9.493303e-03 4.046979e-04  
## 100066158|21-G/A 0.071333988 0.071462606 1.799799e-03 2.324821e-03 1.661976e-04  
## 6661900|39-T/C 0.456515414 0.475736987 4.040378e-02 8.849540e-02 4.244074e-02  
## 100022191|13-A/T 0.100901047 0.111150160 9.220961e-02 1.208408e-01 1.367918e-02  
## 6665045|39-A/T 0.066897115 0.067059455 2.420840e-03 3.111770e-03 2.087747e-04  
## 6652766|56-A/G 0.076805620 0.078269641 1.870484e-02 2.422258e-02 1.902985e-03  
## 6652767|24-T/A 0.053930304 0.053712267 -4.059351e-03 -5.153087e-03 -2.765593e-04  
## 6651271|49-G/A 0.053391711 0.054745027 2.472034e-02 3.118341e-02 1.715577e-03  
## 6661314|26-G/A 0.050912251 0.050535008 -7.464999e-03 -9.452649e-03 -4.769765e-04  
## 6653619|65-T/C 0.044935703 0.045422079 1.070792e-02 1.342532e-02 6.111117e-04  
## 100116986|5-T/C 0.051601230 0.052714396 2.111692e-02 2.660667e-02 1.408478e-03  
## 100116987|6-T/G 0.048832597 0.049865943 2.072249e-02 2.603575e-02 1.303678e-03  
## 6653081|42-A/G 0.048066850 0.048256868 3.937638e-03 4.959852e-03 2.395354e-04  
## 6664720|40-A/G 0.062102093 0.063738371 2.567179e-02 3.267817e-02 2.093547e-03  
## 6652605|24-T/C 0.042737098 0.042936220 4.637635e-03 5.808232e-03 2.496149e-04  
## 6661530|52-T/G 0.033806611 0.034382741 1.675638e-02 2.074171e-02 7.155467e-04  
## 6653380|28-A/G 0.031642547 0.031896893 7.973999e-03 9.865740e-03 3.151883e-04  
## 6661534|38-G/A 0.056332031 0.057305339 1.698458e-02 2.152505e-02 1.237690e-03  
## 100100705|17-C/A 0.046530256 0.049421709 5.850573e-02 7.278142e-02 3.639071e-03  
## 6661784|26-C/G 0.068058598 0.068577813 7.571168e-03 9.734158e-03 6.685581e-04  
## 6653485|62-T/C 0.023838887 0.024295519 1.879488e-02 2.301812e-02 5.613393e-04  
## 6658269|15-G/A 0.030744937 0.030493818 -8.235106e-03 -1.021241e-02 -3.109024e-04  
## 6657310|18-C/G 0.018845130 0.018925687 4.256522e-03 5.201505e-03 9.852586e-05  
## 6653319|56-C/A 0.028786637 0.029489131 2.382214e-02 2.929430e-02 8.679791e-04  
## 6662895|13-G/A 0.040873391 0.040373734 -1.237577e-02 -1.552223e-02 -6.251390e-04  
## 6650569|12-C/A 0.040154658 0.041073208 2.236372e-02 2.783466e-02 1.148372e-03  
## 100018011|33-A/T 0.042304247 0.044236063 4.367060e-02 5.424580e-02 2.420579e-03  
## 6653025|64-G/A 0.025480414 0.025426349 -2.126353e-03 -2.619454e-03 -6.657483e-05  
## 100020592|58-C/G 0.046882680 0.047113627 4.901927e-03 6.165612e-03 2.907691e-04  
## 6651157|23-G/A 0.022136430 0.022109376 -1.223639e-03 -1.501975e-03 -3.319960e-05  
## 6652995|7-T/C 0.023666585 0.023640662 -1.096540e-03 -1.348040e-03 -3.186158e-05  
## 6664385|5-T/G 0.013478331 0.013480551 1.647269e-04 2.003664e-04 2.701138e-06  
## 100080823|15-G/A 0.025538261 0.025444310 -3.692401e-03 -4.550364e-03 -1.156954e-04  
## 100098565|15-A/G 0.032853458 0.032306345 -1.693516e-02 -2.108394e-02 -6.788379e-04  
## 6662594|6-A/G 0.024181609 0.024164107 -7.243059e-04 -8.908349e-04 -2.152311e-05  
## 6662608|14-T/C 0.034682517 0.034710201 7.975843e-04 9.913304e-04 3.441477e-05  
## 100111015|17-T/A 0.031267189 0.031507494 7.626924e-03 9.433323e-03 2.976738e-04  
## 6651630|13-G/A 0.029891698 0.030689334 2.599066e-02 3.198355e-02 9.866559e-04  
## 100015677|15-G/A 0.021542313 0.021564723 1.039175e-03 1.274200e-03 2.748348e-05  
## 100021199|37-T/C 0.004973980 0.004913964 -1.221336e-02 -1.476536e-02 -7.237922e-05  
## 6651723|7-T/C 0.018225626 0.018279770 2.961958e-03 3.618189e-03 6.617884e-05  
## 6651946|25-T/C 0.029796691 0.029809549 4.313684e-04 5.334938e-04 1.590458e-05  
## 6652107|59-C/T 0.011470198 0.011490244 1.744562e-03 2.117027e-03 2.433364e-05  
## 6662703|23-A/G 0.021689676 0.021693744 1.875265e-04 2.300122e-04 4.990013e-06  
## 6656926|24-G/A 0.028962085 0.029447066 1.646961e-02 2.028617e-02 5.993360e-04  
## 6662639|8-G/T 0.015468352 0.015323157 -9.475526e-03 -1.157121e-02 -1.769714e-04  
## 6644134|13-A/C 0.027647016 0.028447092 2.812508e-02 3.451556e-02 9.873905e-04  
## 100015999|30-C/T 0.029421430 0.029747257 1.095320e-02 1.351267e-02 4.028454e-04  
## 6651264|67-C/T 0.019524945 0.019239728 -1.482437e-02 -1.819745e-02 -3.490760e-04  
## 100082192|45-T/C 0.018190149 0.018199820 5.313716e-04 6.493907e-04 1.182005e-05  
## 6658187|20-A/G 0.016312143 0.016607579 1.778924e-02 2.162414e-02 3.604023e-04  
## 6658030|16-T/G 0.014586357 0.014556139 -2.075976e-03 -2.529096e-03 -3.679859e-05  
## 6664447|43-A/G 0.024289206 0.024123959 -6.849929e-03 -8.436098e-03 -2.032333e-04  
## 6657081|38-A/G 0.003650034 0.003627663 -6.166907e-03 -7.436570e-03 -2.694410e-05  
## 6657519|27-C/A 0.014318686 0.014282890 -2.506204e-03 -3.052663e-03 -4.357900e-05  
## 6657646|21-G/A 0.026060432 0.026374057 1.189141e-02 1.461675e-02 3.864198e-04  
## 6658294|22-A/G 0.013021941 0.013281435 1.953804e-02 2.366253e-02 3.155003e-04  
## 6663106|39-T/C 0.011073676 0.011104872 2.809219e-03 3.406897e-03 3.785441e-05  
## 6665877|8-T/C 0.011706967 0.011673383 -2.876952e-03 -3.495249e-03 -4.077790e-05  
## 6657134|12-C/T 0.029892425 0.029947343 1.833833e-03 2.267576e-03 6.793278e-05  
## 6662930|5-G/T 0.013238058 0.013317454 5.961829e-03 7.241539e-03 9.655385e-05  
## 100073664|24-C/A 0.008949762 0.008899034 -5.700308e-03 -6.910020e-03 -6.142240e-05  
## 100093267|33-A/T 0.055031307 0.055267406 4.271945e-03 5.420241e-03 2.998186e-04  
## 6665045|33-A/T 0.020446925 0.020316033 -6.442765e-03 -7.902883e-03 -1.603484e-04  
## 6653064|39-T/C 0.011073676 0.011104872 2.809219e-03 3.406897e-03 3.785441e-05  
## 6652028|11-T/C 0.010067671 0.010047960 -1.961743e-03 -2.378966e-03 -2.389438e-05  
## 6652053|54-A/G 0.018697307 0.018687622 -5.182656e-04 -6.338342e-04 -1.184363e-05  
## 6661327|40-C/T 0.038147259 0.038601353 1.176370e-02 1.464185e-02 5.665249e-04  
## 100020810|55-A/G 0.029161916 0.029345916 6.270038e-03 7.740345e-03 2.274324e-04  
## 6661141|23-C/T 0.009553868 0.009534579 -2.023127e-03 -2.452163e-03 -2.337088e-05  
## 100018274|35-A/G 0.032379594 0.032637608 7.905425e-03 9.788482e-03 3.199777e-04  
## 100020489|64-T/C 0.011557323 0.011445793 -9.744157e-03 -1.185281e-02 -1.354004e-04  
## 100021048|30-T/C 0.031959806 0.033104412 3.457563e-02 4.256622e-02 1.418874e-03  
## 100021494|48-T/C 0.008321843 0.008331418 1.149293e-03 1.390405e-03 1.158671e-05  
## 100015195|36-C/T 0.008745340 0.008767498 2.527342e-03 3.058022e-03 2.682475e-05  
## 6652099|5-C/T 0.018026115 0.018099472 4.053030e-03 4.948907e-03 8.964521e-05  
## 100019298|65-T/C 0.030805167 0.032118321 4.088491e-02 5.021072e-02 1.625871e-03  
## 100020731|53-A/G 0.015844431 0.015829101 -9.684353e-04 -1.181061e-03 -1.869151e-05  
## 100065190|44-T/C 0.009319126 0.009300472 -2.005731e-03 -2.430493e-03 -2.259566e-05  
## 6651997|59-A/G 0.003924549 0.003884066 -1.042303e-02 -1.258315e-02 -4.877191e-05  
## 6658436|20-C/T 0.009739199 0.009719815 -1.994348e-03 -2.417719e-03 -2.349041e-05  
## 6650975|51-G/A 0.010224244 0.010135627 -8.743116e-03 -1.061869e-02 -1.074388e-04  
## 6657565|7-G/A 0.017332795 0.017405643 4.185310e-03 5.106685e-03 8.895954e-05  
## 6658077|34-T/C 0.003573865 0.003550727 -6.516529e-03 -7.858124e-03 -2.786569e-05  
## 6652620|41-C/T 0.015052152 0.015002451 -3.312840e-03 -4.038837e-03 -6.055230e-05  
## 6657312|42-G/A 0.006332846 0.006288539 -7.045686e-03 -8.520714e-03 -5.350734e-05  
## 6657368|39-G/A 0.011365950 0.011385066 1.678990e-03 2.037267e-03 2.320220e-05  
## 6657412|9-T/G 0.018279214 0.018240740 -2.109257e-03 -2.579325e-03 -4.702895e-05  
## 6657526|48-C/T 0.013698893 0.013762741 4.639196e-03 5.639125e-03 7.768182e-05  
## 6658588|11-C/T 0.012737902 0.012761282 1.832058e-03 2.226020e-03 2.841727e-05  
## 6662668|7-A/T 0.009483296 0.009593370 1.147395e-02 1.386873e-02 1.333532e-04  
## 6662868|15-G/A 0.025409761 0.025939796 2.043326e-02 2.505680e-02 6.526245e-04  
## 6663029|17-G/A 0.026604577 0.026698556 3.520025e-03 4.336427e-03 1.158578e-04  
## 6664446|24-T/C 0.016517682 0.016421502 -5.856979e-03 -7.154798e-03 -1.173549e-04  
## 100086116|7-C/A 0.009671527 0.009658536 -1.345006e-03 -1.630209e-03 -1.574119e-05  
## 100093344|14-G/C 0.004207357 0.004173448 -8.124907e-03 -9.807019e-03 -4.086258e-05  
## 100098451|30-G/T 0.015469348 0.015467241 -1.362396e-04 -1.660608e-04 -2.568432e-06  
## 100104877|27-G/A 0.010729913 0.010634386 -8.982817e-03 -1.091591e-02 -1.158754e-04  
## 6656935|13-T/G 0.007389707 0.007404457 1.992084e-03 2.407338e-03 1.783213e-05  
## 6657240|11-C/T 0.018310523 0.018401548 4.946597e-03 6.040658e-03 1.112674e-04  
## 6657387|17-A/T 0.010407048 0.010329531 -7.504436e-03 -9.113706e-03 -9.399901e-05  
## 6658126|24-C/G 0.016652638 0.016671258 1.116901e-03 1.362674e-03 2.272256e-05  
## 6662893|11-C/G 0.015935436 0.015915029 -1.282248e-03 -1.564015e-03 -2.488497e-05  
## 100098564|20-T/C 0.003361090 0.003337959 -6.929616e-03 -8.355162e-03 -2.785054e-05  
## 100108662|16-G/A 0.004833758 0.004773880 -1.254273e-02 -1.516242e-02 -7.220200e-05  
## 100090375|13-A/C 0.024569410 0.024676404 4.335860e-03 5.329466e-03 1.316261e-04  
## 6654111|67-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018022|29-C/T 0.012303613 0.012338668 2.841086e-03 3.449812e-03 4.259027e-05  
## 100018793|30-G/A 0.016795053 0.016779948 -9.001626e-04 -1.098845e-03 -1.843524e-05  
## 100019919|22-G/A 0.015467572 0.015497282 1.917092e-03 2.335757e-03 3.621177e-05  
## 100020224|39-A/G 0.006796718 0.006747444 -7.302742e-03 -8.836166e-03 -5.953445e-05  
## 100021950|26-G/A 0.019341178 0.019563399 1.135901e-02 1.386815e-02 2.719244e-04  
## 100065898|33-G/A 0.020273269 0.020263322 -4.908712e-04 -6.012934e-04 -1.218301e-05  
## 100016342|65-A/G 0.025861281 0.025505237 -1.395964e-02 -1.724444e-02 -4.385955e-04  
## 6653141|47-T/A 0.019924380 0.019760639 -8.286208e-03 -1.016244e-02 -2.004834e-04  
## 100020182|5-A/G 0.005827785 0.005760570 -1.166825e-02 -1.411692e-02 -8.113173e-05  
## 100017739|16-A/G 0.003424269 0.003405179 -5.606208e-03 -6.758143e-03 -2.298688e-05  
## 100019425|22-T/C 0.011955262 0.011961572 5.275274e-04 6.406249e-04 7.663690e-06  
## 100019993|60-T/C 0.006844960 0.006800549 -6.530484e-03 -7.900911e-03 -5.366036e-05  
## 100020111|24-T/C 0.007636535 0.007574794 -8.150809e-03 -9.872332e-03 -7.465898e-05  
## 100022090|7-C/A 0.003105606 0.003089617 -5.174867e-03 -6.235640e-03 -1.924580e-05  
## 100020509|41-C/T 0.006917026 0.006939875 3.292413e-03 3.975796e-03 2.760969e-05  
## 100019969|57-T/C 0.009766780 0.009797731 3.158987e-03 3.825757e-03 3.750742e-05  
## 100021750|68-T/G 0.003287612 0.003271247 -5.002724e-03 -6.029103e-03 -1.970295e-05  
## 6650682|7-C/T 0.003652138 0.003628013 -6.649588e-03 -8.019420e-03 -2.905587e-05  
## 100073640|6-A/G 0.014280622 0.014380104 6.917985e-03 8.410214e-03 1.211071e-04  
## 6658242|13-G/A 0.012620430 0.012787166 1.303931e-02 1.580595e-02 2.026404e-04  
## 6661085|49-C/T 0.011461634 0.011488816 2.365984e-03 2.870741e-03 3.299702e-05  
## 6650645|14-C/G 0.011708095 0.011871984 1.380469e-02 1.671573e-02 1.989968e-04  
## 100022464|43-T/A 0.009375420 0.009298211 -8.303672e-03 -1.007544e-02 -9.352801e-05  
## 100065437|41-T/C 0.011885157 0.011908762 1.982189e-03 2.406284e-03 2.866722e-05  
## 6652497|42-C/A 0.006154219 0.006113619 -6.640836e-03 -8.029014e-03 -4.902114e-05  
## 6653265|58-G/C 0.019308670 0.019161570 -7.676837e-03 -9.408026e-03 -1.799958e-04  
## 6653475|24-G/A 0.003423042 0.003404974 -5.306215e-03 -6.396117e-03 -2.175550e-05  
## 100021941|30-C/T 0.007469530 0.007426839 -5.748176e-03 -6.957721e-03 -5.161447e-05  
## 6658496|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661755|16-A/C 0.023438244 0.023564494 5.357622e-03 6.576404e-03 1.551357e-04  
## 6661423|60-C/T 0.025974536 0.025008102 -3.864485e-02 -4.798133e-02 -1.190648e-03  
## 100015613|67-G/A 0.024162149 0.024213445 2.118500e-03 2.604043e-03 6.307956e-05  
## 6652888|64-A/G 0.013545144 0.013627350 6.032376e-03 7.329406e-03 1.000009e-04  
## 6657111|13-T/C 0.018664197 0.018322340 -1.865797e-02 -2.290085e-02 -4.180313e-04  
## 6658119|34-T/A 0.012307941 0.012358801 4.115296e-03 4.995782e-03 6.179270e-05  
## 6661367|26-G/T 0.009443167 0.009510369 7.066171e-03 8.548160e-03 8.141105e-05  
## 100111976|26-A/G 0.006986299 0.006951420 -5.017496e-03 -6.069446e-03 -4.214893e-05  
## 100016385|11-T/C 0.013760450 0.013811023 3.661836e-03 4.452253e-03 6.153520e-05  
## 100073644|37-C/T 0.012703058 0.012680042 -1.815134e-03 -2.206987e-03 -2.797453e-05  
## 6650454|46-A/G 0.007969687 0.007923647 -5.810482e-03 -7.036772e-03 -5.569210e-05  
## 6650627|13-T/C 0.007114436 0.006972776 -2.031616e-02 -2.465425e-02 -1.712101e-04  
## 6651042|67-C/T 0.004213879 0.004174535 -9.424722e-03 -1.137897e-02 -4.741239e-05  
## 6652424|44-T/C 0.009209414 0.009186894 -2.451361e-03 -2.970432e-03 -2.727567e-05  
## 6653438|30-C/T 0.007746381 0.007703593 -5.554237e-03 -6.724588e-03 -5.174594e-05  
## 6653954|43-A/G 0.008492943 0.008359935 -1.591021e-02 -1.931726e-02 -1.609772e-04  
## 6657314|43-G/A 0.004078842 0.004067341 -2.827588e-03 -3.408931e-03 -1.385744e-05  
## 6657355|38-G/A 0.015580293 0.015222978 -2.347205e-02 -2.874720e-02 -4.355636e-04  
## 6657359|15-A/G 0.018052024 0.018440769 2.108076e-02 2.565381e-02 4.750705e-04  
## 6657460|29-G/A 0.003576286 0.003551130 -7.083758e-03 -8.543123e-03 -3.029476e-05  
## 6657482|8-A/G 0.006798146 0.006747682 -7.478829e-03 -9.049559e-03 -6.097220e-05  
## 6657781|17-C/A 0.006264632 0.006188138 -1.236141e-02 -1.496420e-02 -9.237158e-05  
## 6661090|62-A/T 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 6661394|35-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662671|17-A/G 0.005267035 0.005218117 -9.374656e-03 -1.133040e-02 -5.901248e-05  
## 6662872|17-G/T 0.007651430 0.007600025 -6.763891e-03 -8.190331e-03 -6.216252e-05  
## 6663077|27-G/T 0.006641953 0.006662548 3.091174e-03 3.731904e-03 2.487936e-05  
## 100080773|11-T/C 0.013100635 0.013154494 4.094346e-03 4.974362e-03 6.548880e-05  
## 6650529|9-A/G 0.006271067 0.006286268 2.418089e-03 2.918607e-03 1.835602e-05  
## 6651847|21-G/A 0.005845690 0.005763554 -1.425098e-02 -1.725090e-02 -9.914311e-05  
## 6652313|42-C/T 0.009499046 0.009422575 -8.115734e-03 -9.848263e-03 -9.264537e-05  
## 6656897|6-A/T 0.010593273 0.010427433 -1.590415e-02 -1.935086e-02 -2.011380e-04  
## 6657147|18-G/A 0.013012968 0.012852589 -1.247835e-02 -1.520941e-02 -1.949924e-04  
## 6657176|29-T/G 0.012435213 0.012481637 3.719437e-03 4.516166e-03 5.641107e-05  
## 6657326|12-G/A 0.018177514 0.018294851 6.413657e-03 7.828837e-03 1.434111e-04  
## 6657353|6-A/G 0.014674248 0.014630052 -3.020972e-03 -3.681379e-03 -5.382623e-05  
## 6657411|13-G/A 0.007257344 0.007248205 -1.260861e-03 -1.524478e-03 -1.104695e-05  
## 6657545|31-T/C 0.024469779 0.024911630 1.773672e-02 2.174083e-02 5.435207e-04  
## 6657603|29-G/A 0.007075662 0.007089442 1.943798e-03 2.348267e-03 1.665437e-05  
## 6657689|26-G/A 0.007126498 0.006974787 -2.175139e-02 -2.640388e-02 -1.833602e-04  
## 6657743|8-C/G 0.006042333 0.006057561 2.513751e-03 3.033314e-03 1.838372e-05  
## 6657998|8-A/G 0.013705872 0.013786403 5.841341e-03 7.098723e-03 9.798020e-05  
## 6658208|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658287|13-A/G 0.006509963 0.006531617 3.315193e-03 4.001647e-03 2.615455e-05  
## 6658348|17-A/T 0.007301633 0.007262384 -5.404460e-03 -6.540123e-03 -4.744555e-05  
## 6658475|20-C/A 0.006850498 0.006799115 -7.557323e-03 -9.145165e-03 -6.208504e-05  
## 6658498|16-G/A 0.009527407 0.009524409 -3.147240e-04 -3.813257e-04 -3.631673e-06  
## 6658580|46-G/C 0.005147003 0.005066588 -1.587157e-02 -1.920538e-02 -9.699686e-05  
## 6661448|44-G/T 0.006266650 0.006285532 3.004031e-03 3.625392e-03 2.280120e-05  
## 6661799|23-C/T 0.010569614 0.010548995 -1.954528e-03 -2.371416e-03 -2.500627e-05  
## 6662617|41-T/G 0.006153246 0.006169574 2.646554e-03 3.193838e-03 1.971505e-05  
## 6662633|33-G/C 0.003049384 0.003033483 -5.241753e-03 -6.315965e-03 -1.913929e-05  
## 6662813|9-G/T 0.007946268 0.007889471 -7.198997e-03 -8.720548e-03 -6.870146e-05  
## 6662843|9-A/G 0.006271067 0.006286268 2.418089e-03 2.918607e-03 1.835602e-05  
## 6662968|7-T/C 0.010030763 0.009932028 -9.941065e-03 -1.207416e-02 -1.196824e-04  
## 6662976|12-A/C 0.006386097 0.006406230 3.142751e-03 3.793156e-03 2.431510e-05  
## 6664360|25-T/C 0.005089368 0.005056982 -6.404146e-03 -7.734193e-03 -3.906158e-05  
## 6664442|16-C/T 0.007313712 0.007255884 -7.969816e-03 -9.649623e-03 -6.990494e-05  
## 6664875|15-A/G 0.029506732 0.029715575 7.028062e-03 8.677892e-03 2.582310e-04  
## 100021224|39-C/T 0.027505259 0.027560890 2.018494e-03 2.489695e-03 6.864592e-05  
## 100073899|13-T/C 0.015816724 0.015863634 2.957086e-03 3.603400e-03 5.719683e-05  
## 100098800|29-G/T 0.009362475 0.009308837 -5.762089e-03 -6.987908e-03 -6.497433e-05  
## 100100663|9-T/A 0.006463421 0.006416743 -7.274403e-03 -8.798873e-03 -5.637796e-05  
## 6650431|37-G/A 0.003911493 0.003881890 -7.626115e-03 -9.201308e-03 -3.566398e-05  
## 6656974|5-A/T 0.012427819 0.012480405 4.213459e-03 5.115468e-03 6.389691e-05  
## 6657112|32-C/T 0.012042873 0.011868257 -1.471291e-02 -1.792345e-02 -2.120941e-04  
## 6657945|33-T/A 0.012304226 0.012358182 4.366009e-03 5.299850e-03 6.555370e-05  
## 6658433|38-T/A 0.003223826 0.003208244 -4.856681e-03 -5.852551e-03 -1.875818e-05  
## 6664304|20-G/T 0.011032206 0.011048045 1.433693e-03 1.739125e-03 1.921944e-05  
## 6664309|9-T/C 0.026133311 0.026649197 1.935844e-02 2.376150e-02 6.356766e-04  
## 100116189|14-C/A 0.009485043 0.009593661 1.132189e-02 1.368538e-02 1.315902e-04  
## 100045177|15-A/G 0.018052024 0.018440769 2.108076e-02 2.565381e-02 4.750705e-04  
## 100073820|20-A/G 0.005818838 0.005759078 -1.037664e-02 -1.255089e-02 -7.213156e-05  
## 100086048|24-A/T 0.015407083 0.015466752 3.857916e-03 4.698317e-03 7.272378e-05  
## 100098455|12-T/G 0.006513086 0.006469292 -6.769600e-03 -8.187861e-03 -5.289795e-05  
## 100098486|16-T/A 0.003908174 0.003881336 -6.914493e-03 -8.341482e-03 -3.233132e-05  
## 100098772|34-A/T 0.006212247 0.006171643 -6.579204e-03 -7.954865e-03 -4.902998e-05  
## 100112391|7-C/G 0.012079179 0.012301262 1.805372e-02 2.185045e-02 2.697587e-04  
## 6651055|18-T/C 0.018893289 0.018742772 -8.030684e-03 -9.838199e-03 -1.840990e-04  
## 100086270|5-G/C 0.026121773 0.026124509 1.047347e-04 1.290500e-04 3.371439e-06  
## 100112446|22-G/C 0.115489172 0.118089263 2.201802e-02 2.974048e-02 3.527497e-03  
## 6661857|31-C/T 0.008464400 0.008533240 8.067356e-03 9.747741e-03 8.331402e-05  
## 6658676|11-C/G 0.006913166 0.006939231 3.756258e-03 4.535480e-03 3.149639e-05  
## 100016220|5-A/G 0.007314448 0.007257722 -7.815896e-03 -9.462976e-03 -6.857229e-05  
## 100021127|7-A/G 0.003818051 0.003792907 -6.628998e-03 -7.995886e-03 -3.028745e-05  
## 6665873|25-A/G 0.020618127 0.020797466 8.623088e-03 1.054736e-02 2.197366e-04  
## 6654134|52-T/A 0.132694263 0.140715629 5.700409e-02 7.798153e-02 1.109832e-02  
## 100016595|6-G/A 0.004570300 0.004515470 -1.214254e-02 -1.467359e-02 -6.609724e-05  
## 100021410|63-C/T 0.010812746 0.010731638 -7.557819e-03 -9.182399e-03 -9.839323e-05  
## 100023315|21-T/C 0.006996762 0.006951151 -6.561601e-03 -7.939821e-03 -5.511847e-05  
## 6653760|49-C/A 0.013630714 0.013602195 -2.096668e-03 -2.551840e-03 -3.469607e-05  
## 100021585|32-T/G 0.006326712 0.006285653 -6.532107e-03 -7.898756e-03 -4.958398e-05  
## 100023219|12-A/G 0.012664983 0.012653485 -9.087009e-04 -1.104629e-03 -1.397487e-05  
## 6658683|43-C/T 0.015776725 0.015628030 -9.514654e-03 -1.162272e-02 -1.812946e-04  
## 100064732|20-A/G 0.073956402 0.074103454 1.984408e-03 2.570446e-03 1.905545e-04  
## 100016355|33-T/C 0.012570498 0.012614105 3.457038e-03 4.198355e-03 5.299510e-05  
## 100019393|16-C/T 0.015624616 0.015640165 9.941824e-04 1.211714e-03 1.895518e-05  
## 100020119|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022894|28-G/A 0.009522030 0.009303054 -2.353807e-02 -2.865211e-02 -2.652974e-04  
## 100082537|56-C/T 0.008095456 0.008042106 -6.633896e-03 -8.036309e-03 -6.454310e-05  
## 100016273|19-A/G 0.007064171 0.007087527 3.295456e-03 3.980058e-03 2.822736e-05  
## 100023327|12-C/T 0.006436752 0.006414672 -3.442015e-03 -4.160040e-03 -2.666693e-05  
## 100015858|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022410|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017258|51-G/T 0.017036247 0.017034978 -7.450108e-05 -9.095211e-05 -1.549344e-06  
## 100019095|48-C/T 0.009686041 0.009784275 1.004000e-02 1.214146e-02 1.190339e-04  
## 100020063|20-G/A 0.010948641 0.011084033 1.221499e-02 1.478414e-02 1.642682e-04  
## 100015954|31-A/G 0.005771246 0.005751146 -3.494908e-03 -4.221185e-03 -2.425968e-05  
## 100021964|13-G/C 0.004920693 0.004905083 -3.182446e-03 -3.840265e-03 -1.882483e-05  
## 100085852|36-T/C 0.008009363 0.007648025 -4.724587e-02 -5.769800e-02 -4.371061e-04  
## 6651226|18-G/C 0.004316132 0.004280609 -8.298549e-03 -1.001805e-02 -4.281219e-05  
## 100021819|62-A/C 0.004179594 0.004168821 -2.584042e-03 -3.115475e-03 -1.298115e-05  
## 100022277|8-T/G 0.004180164 0.004168916 -2.697983e-03 -3.252926e-03 -1.355386e-05  
## 100064827|60-G/T 0.003164934 0.003148034 -5.368489e-03 -6.469587e-03 -2.034461e-05  
## 100018209|24-G/C 0.003570275 0.003550129 -5.674767e-03 -6.841885e-03 -2.426200e-05  
## 100022569|31-G/A 0.007456575 0.007411122 -6.132990e-03 -7.423984e-03 -5.495257e-05  
## 6653298|40-A/G 0.003356865 0.003337255 -5.875907e-03 -7.083161e-03 -2.361054e-05  
## 100015576|20-G/A 0.003431819 0.003406437 -7.451110e-03 -8.985513e-03 -3.056297e-05  
## 100016155|45-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018361|5-C/T 0.005412455 0.005382363 -5.590871e-03 -6.753106e-03 -3.630702e-05  
## 100018644|13-A/G 0.010252565 0.010231772 -2.032242e-03 -2.464954e-03 -2.521060e-05  
## 100065285|54-G/A 0.007231227 0.007172283 -8.218340e-03 -9.950197e-03 -7.124833e-05  
## 100066085|48-C/G 0.003421426 0.003404705 -4.911169e-03 -5.919451e-03 -2.013419e-05  
## 100066350|63-A/G 0.007023376 0.006968190 -7.919649e-03 -9.585982e-03 -6.669114e-05  
## 100082653|31-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019242|15-T/C 0.004793158 0.004767114 -5.463287e-03 -6.594725e-03 -3.140345e-05  
## 100065918|65-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082574|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100112503|22-T/C 0.003226190 0.003208638 -5.470000e-03 -6.592457e-03 -2.112967e-05  
## 6651116|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664424|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017539|66-C/A 0.012652430 0.012686156 2.658513e-03 3.229380e-03 4.099020e-05  
## 100019104|53-C/T 0.010264773 0.010391351 1.218111e-02 1.473304e-02 1.534692e-04  
## 100020067|42-A/C 0.003163982 0.003147875 -5.116628e-03 -6.165751e-03 -1.938915e-05  
## 100020868|41-A/G 0.006388945 0.006406704 2.772068e-03 3.346015e-03 2.144882e-05  
## 100064882|50-T/C 0.011164686 0.011171913 6.468826e-04 7.849221e-04 8.770215e-06  
## 6658317|12-A/T 0.003493802 0.003475819 -5.173852e-03 -6.236844e-03 -2.165571e-05  
## 6661605|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664288|12-C/T 0.004431363 0.004393531 -8.610817e-03 -1.039688e-02 -4.560035e-05  
## 100016786|17-G/A 0.010355242 0.010248601 -1.040542e-02 -1.264347e-02 -1.293082e-04  
## 100020956|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016197|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017640|9-C/G 0.003293627 0.003272249 -6.533060e-03 -7.875869e-03 -2.573813e-05  
## 100018738|55-G/T 0.007680978 0.007593294 -1.154752e-02 -1.399661e-02 -1.060349e-04  
## 6651375|43-G/A 0.007498629 0.007457946 -5.455005e-03 -6.602667e-03 -4.918861e-05  
## 6651394|40-A/T 0.003049481 0.003033499 -5.268458e-03 -6.348177e-03 -1.923690e-05  
## 6657692|30-G/C 0.003572438 0.003550489 -6.182021e-03 -7.454238e-03 -2.643347e-05  
## 6661438|21-G/A 0.018101761 0.018449059 1.882470e-02 2.291980e-02 4.244408e-04  
## 100015230|14-A/T 0.009143244 0.009239923 1.046324e-02 1.264529e-02 1.170860e-04  
## 100015429|54-A/G 0.011155715 0.011170418 1.316248e-03 1.596897e-03 1.784270e-05  
## 100016348|67-T/C 0.009323604 0.009269983 -5.784359e-03 -7.014672e-03 -6.495067e-05  
## 100022665|32-G/A 0.010694951 0.010615563 -7.478475e-03 -9.084774e-03 -9.629575e-05  
## 6650646|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651058|8-C/T 0.003163516 0.003147798 -4.993351e-03 -6.017046e-03 -1.892153e-05  
## 6652871|25-G/T 0.007331450 0.007260556 -9.764345e-03 -1.182685e-02 -8.570180e-05  
## 6653284|49-A/G 0.006721938 0.006673653 -7.235226e-03 -8.753694e-03 -5.833458e-05  
## 100020780|47-T/C 0.004563987 0.004514418 -1.098011e-02 -1.326567e-02 -5.975529e-05  
## 100082291|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657270|16-C/A 0.007759696 0.007711411 -6.261448e-03 -7.581993e-03 -5.839465e-05  
## 6658306|32-A/G 0.003503101 0.003477369 -7.399882e-03 -8.924282e-03 -3.098709e-05  
## 6663971|20-C/T 0.011163552 0.011171724 7.315096e-04 8.875917e-04 9.917380e-06  
## 100018785|45-G/A 0.003648303 0.003627374 -5.769594e-03 -6.956892e-03 -2.520613e-05  
## 100019578|24-A/G 0.007368444 0.007325635 -5.843759e-03 -7.072832e-03 -5.175243e-05  
## 100021429|16-A/G 0.017458996 0.017492991 1.943341e-03 2.372525e-03 4.151869e-05  
## 6651301|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653801|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662791|9-T/C 0.006514348 0.006532348 2.755424e-03 3.326357e-03 2.174089e-05  
## 6665675|15-G/A 0.003422463 0.003404878 -5.164782e-03 -6.225453e-03 -2.117501e-05  
## 6665677|34-G/A 0.003904634 0.003880747 -6.155424e-03 -7.424603e-03 -2.877753e-05  
## 6651053|25-C/T 0.006686165 0.006669916 -2.436071e-03 -2.944397e-03 -1.962931e-05  
## 6651062|23-G/C 0.003164966 0.003148039 -5.376901e-03 -6.479735e-03 -2.037653e-05  
## 6657266|49-A/G 0.006160789 0.006170831 1.627401e-03 1.964348e-03 1.212561e-05  
## 6661781|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662884|20-G/A 0.003431819 0.003406437 -7.451110e-03 -8.985513e-03 -3.056297e-05  
## 6661633|24-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064957|57-C/G 0.003580329 0.003551804 -8.031064e-03 -9.687466e-03 -3.435272e-05  
## 6650480|42-G/T 0.007183566 0.007144265 -5.501041e-03 -6.656336e-03 -4.750231e-05  
## 6651168|20-T/C 0.006934413 0.006876776 -8.381425e-03 -1.014495e-02 -6.964758e-05  
## 6651202|6-G/T 0.004657312 0.004634243 -4.977833e-03 -6.007330e-03 -2.781171e-05  
## 6651669|51-A/T 0.003163107 0.003147730 -4.885226e-03 -5.886625e-03 -1.851140e-05  
## 6651901|52-A/G 0.003982925 0.003970699 -3.079012e-03 -3.711876e-03 -1.472967e-05  
## 6652133|6-G/A 0.013689595 0.013855673 1.198628e-02 1.454830e-02 2.020597e-04  
## 6652277|34-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652429|23-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652852|41-C/T 0.010925957 0.011080252 1.392522e-02 1.684793e-02 1.871992e-04  
## 6653859|66-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657107|30-C/T 0.003165422 0.003148115 -5.497427e-03 -6.625145e-03 -2.083379e-05  
## 6657341|14-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657827|41-T/C 0.003421538 0.003404723 -4.938496e-03 -5.952421e-03 -2.024633e-05  
## 6657863|36-T/C 0.012418884 0.011990449 -3.573134e-02 -4.372930e-02 -5.205869e-04  
## 6657972|11-T/G 0.003287972 0.003271307 -5.094352e-03 -6.139644e-03 -2.006420e-05  
## 6658332|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661576|17-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662852|8-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665753|18-G/A 0.009016076 0.008812621 -2.308681e-02 -2.808591e-02 -2.463676e-04  
## 6665974|16-T/A 0.004000105 0.003973562 -6.679766e-03 -8.058678e-03 -3.197888e-05  
## 6665974|39-G/C 0.003109388 0.003090248 -6.193654e-03 -7.464814e-03 -2.303955e-05  
## 100022319|61-G/T 0.003996667 0.003972990 -5.959668e-03 -7.188868e-03 -2.852725e-05  
## 100066473|44-C/T 0.006746286 0.006466261 -4.330551e-02 -5.277668e-02 -3.383120e-04  
## 6650457|59-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650512|39-G/A 0.004516393 0.004506486 -2.198435e-03 -2.651257e-03 -1.194260e-05  
## 6650541|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650816|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651070|58-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651408|58-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651681|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651690|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651751|52-A/G 0.003224431 0.003208345 -5.013815e-03 -6.042100e-03 -1.936571e-05  
## 6651951|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652480|24-G/A 0.016450454 0.016513918 3.843041e-03 4.685181e-03 7.743016e-05  
## 6652536|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653136|38-A/G 0.003650034 0.003627663 -6.166907e-03 -7.436570e-03 -2.694410e-05  
## 6653193|66-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653366|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653406|51-T/C 0.004080266 0.004067578 -3.119344e-03 -3.760895e-03 -1.528819e-05  
## 6653654|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653743|54-T/C 0.006387522 0.006345993 -6.544108e-03 -7.913770e-03 -5.015500e-05  
## 6653795|65-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656968|20-T/C 0.004780772 0.004765049 -3.299511e-03 -3.981060e-03 -1.895743e-05  
## 6657138|49-C/T 0.012731448 0.012805669 5.795896e-03 7.036609e-03 9.021293e-05  
## 6657141|6-G/A 0.004570300 0.004515470 -1.214254e-02 -1.467359e-02 -6.609724e-05  
## 6657590|27-T/C 0.005821764 0.005759566 -1.079907e-02 -1.306298e-02 -7.507459e-05  
## 6657970|16-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658518|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658664|15-C/A 0.015264353 0.015377561 7.361886e-03 8.958013e-03 1.379552e-04  
## 6661383|36-A/G 0.003504305 0.003477569 -7.688057e-03 -9.272369e-03 -3.219573e-05  
## 6661406|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661709|47-A/C 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 6661820|30-C/T 0.009669636 0.009781541 1.144036e-02 1.383083e-02 1.355963e-04  
## 6661892|24-C/T 0.006266149 0.006285448 3.070411e-03 3.705451e-03 2.330472e-05  
## 6662654|9-C/A 0.012419046 0.012416141 -2.339766e-04 -2.843160e-04 -3.529943e-06  
## 6662663|5-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663104|29-A/G 0.008220895 0.008166839 -6.618886e-03 -8.019116e-03 -6.540413e-05  
## 6664717|21-A/G 0.004412924 0.004390458 -5.117057e-03 -6.174004e-03 -2.707896e-05  
## 6665800|40-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665804|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018586|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045576|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064632|55-G/A 0.006515956 0.006532616 2.550219e-03 3.078764e-03 2.012264e-05  
## 100124805|23-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650420|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650787|62-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650795|22-T/C 0.003226190 0.003208638 -5.470000e-03 -6.592457e-03 -2.112967e-05  
## 6651016|52-G/A 0.004416677 0.004391084 -5.828494e-03 -7.033420e-03 -3.084833e-05  
## 6651805|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652208|23-C/T 0.003225594 0.003208539 -5.315440e-03 -6.405979e-03 -2.053198e-05  
## 6652257|65-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652383|57-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652388|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652788|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652943|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653199|35-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653447|32-A/G 0.005071039 0.005053927 -3.385856e-03 -4.086503e-03 -2.063890e-05  
## 6653467|25-G/A 0.003353571 0.003336706 -5.054279e-03 -6.091700e-03 -2.030567e-05  
## 6653565|10-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653569|24-A/T 0.003163107 0.003147730 -4.885226e-03 -5.886625e-03 -1.851140e-05  
## 6654084|42-A/G 0.003356014 0.003337113 -5.663795e-03 -6.827173e-03 -2.275724e-05  
## 6656901|37-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656919|48-T/A 0.003163679 0.003147825 -5.036623e-03 -6.069243e-03 -1.908567e-05  
## 6656965|28-C/T 0.005989106 0.005958502 -5.136168e-03 -6.206913e-03 -3.694591e-05  
## 6657179|25-G/A 0.003353571 0.003336706 -5.054279e-03 -6.091700e-03 -2.030567e-05  
## 6657434|21-C/A 0.003163982 0.003147875 -5.116628e-03 -6.165751e-03 -1.938915e-05  
## 6657454|17-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657477|8-A/G 0.009157593 0.009242315 9.166732e-03 1.108143e-02 1.026058e-04  
## 6657523|10-C/T 0.009315979 0.009268713 -5.099570e-03 -6.183335e-03 -5.725310e-05  
## 6657578|8-C/T 0.003163516 0.003147798 -4.993351e-03 -6.017046e-03 -1.892153e-05  
## 6657628|10-A/G 0.003818424 0.003792970 -6.711036e-03 -8.094977e-03 -3.066279e-05  
## 6657698|41-A/G 0.012569306 0.012613907 3.535817e-03 4.293955e-03 5.420185e-05  
## 6657753|24-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657784|15-C/G 0.004078765 0.004067328 -2.811860e-03 -3.389958e-03 -1.378032e-05  
## 6657818|27-A/G 0.009034059 0.008815618 -2.477883e-02 -3.015511e-02 -2.645185e-04  
## 6657821|26-T/C 0.008766603 0.008405545 -4.295472e-02 -5.245215e-02 -4.371012e-04  
## 6657854|14-G/A 0.008222044 0.008167031 -6.735941e-03 -8.161135e-03 -6.656245e-05  
## 6657918|33-T/A 0.003163107 0.003147730 -4.885226e-03 -5.886625e-03 -1.851140e-05  
## 6657923|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657975|18-C/G 0.003733243 0.003708627 -6.637516e-03 -8.005493e-03 -2.964997e-05  
## 6658063|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658152|11-T/C 0.006714531 0.006665752 -7.317936e-03 -8.853844e-03 -5.893115e-05  
## 6658175|49-T/C 0.007925982 0.007934754 1.105463e-03 1.336858e-03 1.060998e-05  
## 6658353|18-G/T 0.004987816 0.004916270 -1.455296e-02 -1.760233e-02 -8.628591e-05  
## 6658417|35-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658431|14-A/G 0.003493329 0.003475740 -5.060426e-03 -6.099972e-03 -2.118046e-05  
## 6658485|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658531|35-G/A 0.014790900 0.015091413 1.991283e-02 2.415792e-02 3.660292e-04  
## 6661099|20-G/A 0.003431819 0.003406437 -7.451110e-03 -8.985513e-03 -3.056297e-05  
## 6661250|41-T/C 0.003353798 0.003336744 -5.110990e-03 -6.160123e-03 -2.053374e-05  
## 6661252|5-A/G 0.007314448 0.007257722 -7.815896e-03 -9.462976e-03 -6.857229e-05  
## 6661823|31-T/C 0.006477528 0.006421468 -8.730032e-03 -1.056278e-02 -6.771014e-05  
## 6661826|50-T/A 0.003227050 0.003208782 -5.693127e-03 -6.861683e-03 -2.199257e-05  
## 6661853|33-G/A 0.003353621 0.003336715 -5.066810e-03 -6.106819e-03 -2.035606e-05  
## 6662682|18-G/C 0.008424321 0.008335469 -1.065954e-02 -1.292769e-02 -1.075286e-04  
## 6662708|45-C/A 0.003426564 0.003405561 -6.167123e-03 -7.435164e-03 -2.528967e-05  
## 6662717|10-T/A 0.003163262 0.003147755 -4.926339e-03 -5.936214e-03 -1.866734e-05  
## 6662720|17-G/A 0.005256032 0.005216283 -7.620164e-03 -9.206544e-03 -4.795075e-05  
## 6663956|7-C/T 0.012562462 0.012777504 1.682974e-02 2.038401e-02 2.613334e-04  
## 6664324|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664897|36-T/G 0.003287891 0.003271293 -5.073735e-03 -6.114771e-03 -1.998291e-05  
## 6664904|21-A/G 0.003577006 0.003551250 -7.252502e-03 -8.746932e-03 -3.101749e-05  
## 6665135|35-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665977|58-C/T 0.003850325 0.003798287 -1.370062e-02 -1.654964e-02 -6.268803e-05  
## 100062054|9-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066053|65-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073867|18-T/C 0.007673422 0.007590728 -1.089412e-02 -1.320280e-02 -1.000005e-04  
## 100098449|11-T/C 0.003423733 0.003405089 -5.475167e-03 -6.600000e-03 -2.244898e-05  
## 100102329|39-G/C 0.003567515 0.003549669 -5.027704e-03 -6.060940e-03 -2.149270e-05  
## 100104849|27-A/C 0.006265964 0.006285418 3.094990e-03 3.735094e-03 2.349116e-05  
## 100118311|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651728|12-T/C 0.021094111 0.022034204 4.266516e-02 5.185893e-02 1.152421e-03  
## 6651869|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651992|39-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652070|15-A/G 0.005829628 0.005760877 -1.193421e-02 -1.443949e-02 -8.298556e-05  
## 6652698|58-A/G 0.003427794 0.003405766 -6.467920e-03 -7.798289e-03 -2.652479e-05  
## 6653498|29-C/G 0.003294933 0.003272467 -6.865101e-03 -8.276720e-03 -2.704810e-05  
## 6656984|39-A/T 0.003357748 0.003337402 -6.096266e-03 -7.349126e-03 -2.449709e-05  
## 6656988|16-A/T 0.005133744 0.005064378 -1.369676e-02 -1.656631e-02 -8.366824e-05  
## 6657054|5-A/G 0.005827785 0.005760570 -1.166825e-02 -1.411692e-02 -8.113173e-05  
## 6657255|43-C/T 0.006487522 0.006423134 -1.002445e-02 -1.213221e-02 -7.777060e-05  
## 6657257|18-T/G 0.003991599 0.003972145 -4.897671e-03 -5.906544e-03 -2.343867e-05  
## 6657264|21-A/C 0.003164675 0.003147991 -5.300015e-03 -6.386980e-03 -2.008484e-05  
## 6657486|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657731|27-T/C 0.007306890 0.007256462 -6.949356e-03 -8.412301e-03 -6.095871e-05  
## 6657762|30-T/G 0.003163107 0.003147730 -4.885226e-03 -5.886625e-03 -1.851140e-05  
## 6658275|5-T/C 0.004791899 0.004766904 -5.243441e-03 -6.329063e-03 -3.013839e-05  
## 6658351|8-T/A 0.006266898 0.006285573 2.971087e-03 3.585658e-03 2.255131e-05  
## 6658356|40-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662713|37-C/T 0.008322821 0.008255082 -8.205740e-03 -9.945852e-03 -8.196908e-05  
## 6662735|7-T/C 0.004434147 0.004393995 -9.137824e-03 -1.103439e-02 -4.839647e-05  
## 6662802|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664285|14-G/T 0.010954898 0.011085076 1.174352e-02 1.421492e-02 1.579436e-04  
## 6664286|5-A/G 0.011082562 0.011106353 2.142105e-03 2.598221e-03 2.886912e-05  
## 6664411|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100116189|12-G/A 0.010331972 0.010402551 6.784792e-03 8.215601e-03 8.557917e-05  
## 100020566|50-G/A 0.006212247 0.006171643 -6.579204e-03 -7.954865e-03 -4.902998e-05  
## 100073416|9-G/C 0.003567300 0.003549633 -4.977281e-03 -6.000093e-03 -2.127692e-05  
## 100073555|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073946|24-C/A 0.003729330 0.003707975 -5.759252e-03 -6.944972e-03 -2.572212e-05  
## 100082262|34-C/T 0.003226521 0.003208694 -5.555983e-03 -6.696202e-03 -2.146218e-05  
## 100082279|42-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093533|7-G/T 0.007144690 0.007105726 -5.483477e-03 -6.634800e-03 -4.709337e-05  
## 100093556|10-T/A 0.003105231 0.003089555 -5.073885e-03 -6.113832e-03 -1.886985e-05  
## 100093571|9-A/T 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 100093658|5-T/C 0.003658646 0.003629098 -8.141906e-03 -9.822158e-03 -3.558753e-05  
## 100102354|38-T/G 0.003164636 0.003147984 -5.289593e-03 -6.374407e-03 -2.004530e-05  
## 100102368|8-T/C 0.003499826 0.003476823 -6.616165e-03 -7.977839e-03 -2.770083e-05  
## 100108745|39-G/C 0.003109388 0.003090248 -6.193654e-03 -7.464814e-03 -2.303955e-05  
## 100124806|24-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652013|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019613|42-A/G 0.003423798 0.003405100 -5.491225e-03 -6.619379e-03 -2.251489e-05  
## 6653942|18-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021748|48-G/A 0.013082594 0.012864193 -1.697741e-02 -2.071328e-02 -2.655549e-04  
## 100022307|64-C/T 0.003357737 0.003337401 -6.093392e-03 -7.345657e-03 -2.448552e-05  
## 6661279|61-A/G 0.003808845 0.003791373 -4.608318e-03 -5.556245e-03 -2.104638e-05  
## 100016043|65-A/G 0.007029554 0.006958629 -1.019233e-02 -1.234254e-02 -8.571211e-05  
## 100021551|26-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651509|9-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015681|31-G/A 0.003167177 0.003148408 -5.961491e-03 -7.185086e-03 -2.259461e-05  
## 100022444|19-C/T 0.007063296 0.006964253 -1.422157e-02 -1.723631e-02 -1.196966e-04  
## 100065978|51-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015971|32-G/A 0.010975098 0.010990461 1.397834e-03 1.695541e-03 1.863998e-05  
## 100018341|11-C/T 0.003572166 0.003550444 -6.118066e-03 -7.377026e-03 -2.615967e-05  
## 100018791|30-T/A 0.003811354 0.003791791 -5.159264e-03 -6.221224e-03 -2.356524e-05  
## 100021444|27-G/T 0.003108680 0.003090130 -6.002945e-03 -7.234684e-03 -2.232927e-05  
## 6651402|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652371|36-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016955|21-T/C 0.013025861 0.013086009 4.596416e-03 5.583362e-03 7.313109e-05  
## 100017267|60-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017271|28-T/A 0.006268632 0.006285862 2.741100e-03 3.308256e-03 2.080664e-05  
## 100017633|14-G/T 0.007562546 0.007495679 -8.920714e-03 -1.080571e-02 -8.085161e-05  
## 100018216|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018585|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018930|7-A/G 0.003576968 0.003551244 -7.243555e-03 -8.736126e-03 -3.097917e-05  
## 100019458|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020508|64-T/C 0.022640800 0.022809447 7.393740e-03 9.064618e-03 2.070647e-04  
## 100021998|13-T/C 0.008106071 0.007964768 -1.774094e-02 -2.153953e-02 -1.709487e-04  
## 100065288|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657675|5-C/T 0.006685038 0.006669729 -2.295365e-03 -2.774249e-03 -1.849499e-05  
## 100018006|38-A/G 0.008175785 0.008119388 -6.945986e-03 -8.415582e-03 -6.823445e-05  
## 100018907|18-T/C 0.007673422 0.007590728 -1.089412e-02 -1.320280e-02 -1.000005e-04  
## 100018908|67-C/T 0.005784340 0.005753329 -5.390202e-03 -6.512896e-03 -3.743044e-05  
## 100019522|42-C/T 0.006266542 0.006285514 3.018358e-03 3.642672e-03 2.290988e-05  
## 100021552|23-G/T 0.003353390 0.003336676 -5.009053e-03 -6.037136e-03 -2.012379e-05  
## 100021990|59-T/C 0.003294596 0.003272411 -6.779438e-03 -8.173299e-03 -2.671013e-05  
## 100066166|11-T/A 0.003105572 0.003089612 -5.165649e-03 -6.224520e-03 -1.921148e-05  
## 6651977|40-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661494|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661600|20-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023675|41-A/G 0.007624241 0.007582560 -5.496956e-03 -6.654342e-03 -5.040148e-05  
## 100064707|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066332|9-G/A 0.003106293 0.003089732 -5.360001e-03 -6.458967e-03 -1.993508e-05  
## 100111975|14-G/C 0.036156475 0.038360137 5.744668e-02 7.070959e-02 2.743594e-03  
## 100015765|23-G/A 0.003648264 0.003627368 -5.760678e-03 -6.946129e-03 -2.516713e-05  
## 100017875|29-A/G 0.003360162 0.003337805 -6.698162e-03 -8.075712e-03 -2.691904e-05  
## 100019456|25-T/C 0.009299401 0.009209833 -9.725237e-03 -1.180279e-02 -1.084903e-04  
## 100019962|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020185|57-C/A 0.004697266 0.004640902 -1.214498e-02 -1.467841e-02 -6.795562e-05  
## 100020870|33-C/G 0.006512796 0.006532089 2.953548e-03 3.565386e-03 2.330318e-05  
## 100021266|13-G/A 0.004431134 0.004393493 -8.567478e-03 -1.034446e-02 -4.537043e-05  
## 6651172|33-A/G 0.003229732 0.003209229 -6.388780e-03 -7.701218e-03 -2.468339e-05  
## 100015703|20-A/G 0.018018612 0.018435201 2.259747e-02 2.749030e-02 5.090796e-04  
## 6653988|60-A/T 0.003226050 0.003208615 -5.433828e-03 -6.548815e-03 -2.098979e-05  
## 100018373|30-C/T 0.003288328 0.003271366 -5.184805e-03 -6.248772e-03 -2.042082e-05  
## 100020483|16-G/A 0.014893810 0.015108564 1.421409e-02 1.726570e-02 2.616016e-04  
## 100022388|34-C/T 0.012340155 0.012354795 1.185001e-03 1.439428e-03 1.778805e-05  
## 100022854|43-G/T 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 100023104|56-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023409|22-T/C 0.006580124 0.006534722 -6.947882e-03 -8.404362e-03 -5.484385e-05  
## 100086339|36-T/G 0.003106938 0.003089840 -5.533930e-03 -6.668793e-03 -2.058270e-05  
## 6651925|23-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100120327|18-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100120327|6-G/A 0.009015386 0.009010072 -5.897681e-04 -7.142443e-04 -6.434634e-06  
## 100016290|59-A/C 0.005409352 0.005381845 -5.110992e-03 -6.172858e-03 -3.318741e-05  
## 100020594|60-T/A 0.003163453 0.003147787 -4.976767e-03 -5.997042e-03 -1.885862e-05  
## 100022242|47-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022320|10-T/C 0.003051902 0.003033903 -5.932768e-03 -7.149600e-03 -2.166545e-05  
## 100022502|23-T/A 0.003163197 0.003147745 -4.909063e-03 -5.915376e-03 -1.860181e-05  
## 6651745|39-T/C 0.006246326 0.006185087 -9.901076e-03 -1.197970e-02 -7.394873e-05  
## 6661848|25-T/G 0.004183716 0.004169508 -3.407488e-03 -4.108965e-03 -1.712069e-05  
## 100016236|36-G/T 0.009190888 0.009122739 -7.470266e-03 -9.061011e-03 -8.253774e-05  
## 100016349|39-A/G 0.011831888 0.011841958 8.503504e-04 1.032463e-03 1.222846e-05  
## 100016910|15-T/A 0.014292490 0.014459376 1.154176e-02 1.401858e-02 2.031678e-04  
## 100020122|19-C/G 0.003293627 0.003272249 -6.533060e-03 -7.875869e-03 -2.573813e-05  
## 100021092|17-T/C 0.019863763 0.019943000 3.973200e-03 4.860605e-03 9.701207e-05  
## 100022165|12-A/G 0.003566772 0.003549545 -4.853425e-03 -5.850637e-03 -2.074694e-05  
## 100023470|59-G/A 0.006712416 0.006665399 -7.053827e-03 -8.533833e-03 -5.680116e-05  
## 6661692|56-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016458|65-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018964|48-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021554|25-A/G 0.011338443 0.011149000 -1.699193e-02 -2.069449e-02 -2.299388e-04  
## 100023185|19-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650701|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652394|37-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653506|13-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664058|35-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016479|45-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017508|19-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018962|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022682|11-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066335|57-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082668|8-A/T 0.003051343 0.003033810 -5.779253e-03 -6.964379e-03 -2.110418e-05  
## 6658494|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015625|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016249|62-A/C 0.011034158 0.011048371 1.286348e-03 1.560438e-03 1.724474e-05  
## 100016393|18-A/T 0.003052243 0.003033960 -6.026087e-03 -7.262196e-03 -2.200666e-05  
## 100016660|55-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017075|58-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017124|8-A/G 0.007583450 0.007534508 -6.495788e-03 -7.864728e-03 -5.917987e-05  
## 100017541|11-T/A 0.003105572 0.003089612 -5.165649e-03 -6.224520e-03 -1.921148e-05  
## 100018026|11-T/C 0.003290799 0.003271778 -5.813523e-03 -7.007408e-03 -2.290003e-05  
## 100019630|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019855|44-T/C 0.003050457 0.003033662 -5.536154e-03 -6.671098e-03 -2.021545e-05  
## 100019873|44-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019915|44-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022465|65-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022648|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044512|21-C/T 0.003732846 0.003708561 -6.548518e-03 -7.898009e-03 -2.925188e-05  
## 6650696|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653452|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015340|55-T/G 0.003166399 0.003148278 -5.755761e-03 -6.936839e-03 -2.181396e-05  
## 100017500|23-A/C 0.003643045 0.003626498 -4.562845e-03 -5.500453e-03 -1.992918e-05  
## 100020588|47-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022422|51-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022425|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023388|34-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023484|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023525|29-A/G 0.003572336 0.003550472 -6.157942e-03 -7.425167e-03 -2.633038e-05  
## 100064648|32-T/C 0.003163644 0.003147819 -5.027309e-03 -6.058008e-03 -1.905034e-05  
## 100065646|5-C/A 0.003424955 0.003405293 -5.774030e-03 -6.960686e-03 -2.367580e-05  
## 100073396|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073814|33-T/C 0.003226096 0.003208623 -5.445817e-03 -6.563279e-03 -2.103615e-05  
## 6650655|58-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651105|51-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651192|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652274|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652608|18-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652649|33-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653266|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661462|57-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016352|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016515|37-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016629|18-T/C 0.015161200 0.015122458 -2.561858e-03 -3.123156e-03 -4.720560e-05  
## 100017186|6-T/C 0.008340043 0.008003764 -4.201516e-02 -5.127307e-02 -4.069291e-04  
## 100018441|46-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019819|59-T/G 0.003353471 0.003336690 -5.029386e-03 -6.061668e-03 -2.020556e-05  
## 100021768|16-G/T 0.005774925 0.005751759 -4.027500e-03 -4.864991e-03 -2.795972e-05  
## 100022658|14-G/A 0.003572835 0.003550555 -6.274954e-03 -7.566440e-03 -2.683135e-05  
## 100022749|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023505|21-C/G 0.004077818 0.004067170 -2.617918e-03 -3.156017e-03 -1.282934e-05  
## 100064613|60-T/C 0.003353353 0.003336670 -5.000013e-03 -6.026230e-03 -2.008743e-05  
## 6650443|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650647|27-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650672|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650875|47-G/A 0.007884795 0.007927889 5.435739e-03 6.567587e-03 5.212371e-05  
## 6652044|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652814|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653050|59-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653245|23-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653382|37-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015237|28-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016165|7-G/A 0.009160799 0.009242849 8.877151e-03 1.073202e-02 9.937052e-05  
## 100017157|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017486|22-T/G 0.004180617 0.004168992 -2.788434e-03 -3.362043e-03 -1.400851e-05  
## 100019175|10-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019665|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020841|64-T/C 0.008718634 0.008662885 -6.435412e-03 -7.800456e-03 -6.748747e-05  
## 100120329|23-A/G 0.006780484 0.006799015 2.725568e-03 3.291216e-03 2.238922e-05  
## 6650705|36-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651136|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651295|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651888|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652092|41-A/G 0.004398451 0.004388046 -2.371147e-03 -2.859303e-03 -1.254080e-05  
## 6652390|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653344|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017290|62-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017981|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018180|55-T/C 0.011666155 0.011593130 -6.298921e-03 -7.657574e-03 -8.866342e-05  
## 100018460|39-T/G 0.006274321 0.006232200 -6.758534e-03 -8.172495e-03 -5.086378e-05  
## 100018667|65-G/A 0.003428967 0.003405962 -6.754395e-03 -8.144164e-03 -2.770124e-05  
## 100019573|61-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020403|29-G/T 0.012571688 0.012565367 -5.030855e-04 -6.114503e-04 -7.682325e-06  
## 100023540|56-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065318|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066600|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066622|14-T/C 0.003167578 0.003148475 -6.067411e-03 -7.312904e-03 -2.299655e-05  
## 100086014|36-T/C 0.008009363 0.007648025 -4.724587e-02 -5.769800e-02 -4.371061e-04  
## 100098840|27-G/A 0.004946035 0.004909307 -7.481431e-03 -9.035862e-03 -4.429344e-05  
## 6650711|25-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651249|51-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653001|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653114|14-T/A 0.003981701 0.003970495 -2.822326e-03 -3.402251e-03 -1.350100e-05  
## 6653811|17-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661187|29-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015694|44-A/T 0.007869401 0.007925324 7.056132e-03 8.522493e-03 6.763883e-05  
## 100016554|8-A/G 0.009499358 0.009596047 1.007592e-02 1.218251e-02 1.171395e-04  
## 100017386|12-G/A 0.005249308 0.005215162 -6.547394e-03 -7.908689e-03 -4.119109e-05  
## 100017844|43-G/A 0.010346872 0.010327536 -1.872274e-03 -2.271069e-03 -2.344576e-05  
## 100020562|42-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021051|67-G/T 0.004180652 0.004168998 -2.795444e-03 -3.370500e-03 -1.404375e-05  
## 100065266|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650693|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651276|7-A/G 0.003576968 0.003551244 -7.243555e-03 -8.736126e-03 -3.097917e-05  
## 6651724|68-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652175|66-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652356|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653008|30-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653473|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653869|47-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654016|14-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664729|22-C/T 0.006530946 0.006535114 6.378204e-04 7.703178e-04 5.034757e-06  
## 6661750|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016089|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017364|16-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017568|38-A/G 0.014589262 0.014669869 5.494713e-03 6.683931e-03 9.816014e-05  
## 100017636|20-G/A 0.003431819 0.003406437 -7.451110e-03 -8.985513e-03 -3.056297e-05  
## 100018230|62-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020647|25-G/A 0.013023614 0.013085635 4.739633e-03 5.757153e-03 7.540741e-05  
## 100023048|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023313|65-G/T 0.006756925 0.006681710 -1.125692e-02 -1.363089e-02 -9.087262e-05  
## 100023842|66-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650662|57-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650857|56-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650871|15-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652354|41-T/G 0.003286525 0.003271066 -4.726074e-03 -5.695373e-03 -1.861233e-05  
## 6652712|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652897|32-G/A 0.004179208 0.004168757 -2.507046e-03 -3.022597e-03 -1.259415e-05  
## 6653119|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653277|45-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653413|34-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653686|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653906|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656936|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658216|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661637|61-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664071|59-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652420|13-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017654|43-G/C 0.003163107 0.003147730 -4.885226e-03 -5.886625e-03 -1.851140e-05  
## 100021742|38-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044665|10-T/G 0.006268562 0.006285851 2.750358e-03 3.319424e-03 2.087688e-05  
## 100064985|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065246|12-A/G 0.003166837 0.003148351 -5.871556e-03 -7.076562e-03 -2.225334e-05  
## 100066557|28-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082397|38-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650620|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650692|56-G/A 0.006491810 0.006423849 -1.057948e-02 -1.280543e-02 -8.208607e-05  
## 6650978|6-G/A 0.005618686 0.005566077 -9.451674e-03 -1.142770e-02 -6.348722e-05  
## 6651221|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651235|33-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651703|33-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651891|44-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652170|11-A/G 0.010665166 0.010587853 -7.302025e-03 -8.869843e-03 -9.377545e-05  
## 6652463|46-A/C 0.010271961 0.010392549 1.160330e-02 1.403590e-02 1.462073e-04  
## 6652496|43-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653226|65-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653778|39-T/A 0.003167849 0.003148520 -6.139009e-03 -7.399307e-03 -2.326826e-05  
## 6654074|20-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658572|16-A/G 0.003424269 0.003405179 -5.606208e-03 -6.758143e-03 -2.298688e-05  
## 6661139|49-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661309|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661345|40-C/G 0.003286416 0.003271048 -4.698428e-03 -5.662024e-03 -1.850335e-05  
## 6662659|12-A/C 0.003286949 0.003271136 -4.834097e-03 -5.825678e-03 -1.903816e-05  
## 100120331|53-T/G 0.006266596 0.006285523 3.011242e-03 3.634089e-03 2.285590e-05  
## 100020242|53-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021807|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065925|36-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066073|6-T/C 0.006521859 0.006231009 -4.667770e-02 -5.691226e-02 -3.513102e-04  
## 100102122|31-C/A 0.003163107 0.003147730 -4.885226e-03 -5.886625e-03 -1.851140e-05  
## 6650428|57-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652370|62-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653373|60-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653417|48-C/G 0.003421426 0.003404705 -4.911169e-03 -5.919451e-03 -2.013419e-05  
## 6653777|46-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653792|53-C/A 0.003105648 0.003089624 -5.186302e-03 -6.249433e-03 -1.928837e-05  
## 6654058|18-T/C 0.004543464 0.004510998 -7.197062e-03 -8.688399e-03 -3.913693e-05  
## 6661147|26-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661226|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661658|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661670|43-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663906|23-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664040|9-G/T 0.003649830 0.003627629 -6.120177e-03 -7.380149e-03 -2.673967e-05  
## 100017806|36-A/G 0.003504305 0.003477569 -7.688057e-03 -9.272369e-03 -3.219573e-05  
## 100019553|65-G/A 0.004649830 0.004632996 -3.633381e-03 -4.383611e-03 -2.029450e-05  
## 100020150|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022824|15-T/C 0.004793158 0.004767114 -5.463287e-03 -6.594725e-03 -3.140345e-05  
## 100045255|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064683|52-A/G 0.003050168 0.003033614 -5.456850e-03 -6.575431e-03 -1.992555e-05  
## 100065044|38-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065331|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082376|10-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100114017|32-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650513|52-C/T 0.004663536 0.004635281 -6.095647e-03 -7.358019e-03 -3.406490e-05  
## 6650793|26-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650805|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650968|18-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651099|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651150|45-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651383|67-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651541|66-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651588|49-C/T 0.013746428 0.013865145 8.562303e-03 1.040016e-02 1.444467e-04  
## 6651711|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651715|59-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651731|68-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652027|41-G/A 0.003105415 0.003089586 -5.123420e-03 -6.173582e-03 -1.905426e-05  
## 6652109|27-A/G 0.009034059 0.008815618 -2.477883e-02 -3.015511e-02 -2.645185e-04  
## 6652130|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652152|19-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652278|43-G/C 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 6652658|29-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652840|16-G/A 0.004833758 0.004773880 -1.254273e-02 -1.516242e-02 -7.220200e-05  
## 6652867|64-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652883|26-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653149|58-C/T 0.004337556 0.004284179 -1.245888e-02 -1.505330e-02 -6.433033e-05  
## 6653187|24-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653229|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653591|11-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653796|8-T/C 0.003499826 0.003476823 -6.616165e-03 -7.977839e-03 -2.770083e-05  
## 6653829|21-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653872|47-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653967|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657086|36-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657671|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657902|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661102|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661477|67-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661483|14-G/C 0.011738429 0.011877040 1.167047e-02 1.413791e-02 1.683085e-04  
## 6661530|26-C/G 0.003991606 0.003972146 -4.899078e-03 -5.908242e-03 -2.344541e-05  
## 6661560|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661564|45-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662672|28-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664046|51-T/C 0.006156297 0.006170082 2.234241e-03 2.696492e-03 1.664501e-05  
## 6664055|23-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100120332|58-C/A 0.006266451 0.006285499 3.030452e-03 3.657258e-03 2.300162e-05  
## 100120330|33-G/T 0.006384668 0.006405992 3.328657e-03 4.017381e-03 2.575244e-05  
## 100015220|59-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016151|11-T/C 0.004083547 0.004068125 -3.790962e-03 -4.571273e-03 -1.858241e-05  
## 100016562|12-G/A 0.010842645 0.010748080 -8.798352e-03 -1.069257e-02 -1.147224e-04  
## 100016798|34-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021467|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065538|21-A/T 0.010269332 0.010392111 1.181462e-02 1.429088e-02 1.488634e-04  
## 100065912|28-G/A 0.015298204 0.015175963 -8.054905e-03 -9.831893e-03 -1.489681e-04  
## 100098480|21-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650742|33-G/A 0.003353621 0.003336715 -5.066810e-03 -6.106819e-03 -2.035606e-05  
## 6650889|38-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651263|53-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651318|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651340|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651392|24-C/T 0.003163200 0.003147745 -4.909962e-03 -5.916461e-03 -1.860522e-05  
## 6651403|11-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651475|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651645|50-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651662|13-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651726|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651740|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651858|23-A/G 0.003425557 0.003405393 -5.921076e-03 -7.138168e-03 -2.427948e-05  
## 6651880|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651889|58-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651919|45-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652026|29-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652151|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652259|45-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652382|40-G/A 0.014657514 0.014732758 5.107267e-03 6.213541e-03 9.163611e-05  
## 6652492|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652504|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652541|50-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652568|29-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652593|5-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652667|36-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652794|64-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652856|20-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653235|13-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653395|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653420|50-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653458|58-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653463|23-A/G 0.008473561 0.008534767 7.171369e-03 8.666756e-03 7.407484e-05  
## 6653479|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653599|33-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653745|15-T/C 0.012588153 0.012781786 1.514914e-02 1.835511e-02 2.353219e-04  
## 6653871|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653881|45-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657644|31-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657994|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658139|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658379|30-A/G 0.004526086 0.004508101 -3.989309e-03 -4.812777e-03 -2.167917e-05  
## 6658529|38-A/G 0.003650034 0.003627663 -6.166907e-03 -7.436570e-03 -2.694410e-05  
## 6658559|22-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658652|28-T/C 0.003576743 0.003551207 -7.190835e-03 -8.672449e-03 -3.075336e-05  
## 6658660|28-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661093|40-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661130|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661369|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661393|35-C/A 0.003495810 0.003476153 -5.654563e-03 -6.816989e-03 -2.367010e-05  
## 6661665|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661672|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661712|36-C/T 0.004319601 0.004281187 -8.972804e-03 -1.083352e-02 -4.629709e-05  
## 6663057|27-A/C 0.003163107 0.003147730 -4.885226e-03 -5.886625e-03 -1.851140e-05  
## 6663982|51-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665517|21-A/T 0.014791429 0.014852626 4.120247e-03 5.014396e-03 7.453832e-05  
## 6665665|51-T/C 0.003107188 0.003089881 -5.601043e-03 -6.749762e-03 -2.083260e-05  
## 6665807|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100104824|10-C/A 0.007543822 0.007570435 3.515417e-03 4.247580e-03 3.217864e-05  
## 100020394|66-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020441|43-A/C 0.009154487 0.009241797 9.447316e-03 1.141994e-02 1.057402e-04  
## 100021095|9-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021324|61-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044982|27-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633176|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650394|45-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650524|64-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650526|41-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650616|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650617|39-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650695|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650768|33-C/T 0.003163399 0.003147778 -4.962348e-03 -5.979650e-03 -1.880393e-05  
## 6650776|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650824|6-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650856|61-G/C 0.004180750 0.004169014 -2.815100e-03 -3.394213e-03 -1.414255e-05  
## 6650931|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650932|50-A/G 0.003224619 0.003208377 -5.062410e-03 -6.100722e-03 -1.955360e-05  
## 6650935|64-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650950|61-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650971|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651076|54-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651094|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651112|44-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651140|51-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651141|28-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651166|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651232|36-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651234|42-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651248|33-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651256|30-A/G 0.004526086 0.004508101 -3.989309e-03 -4.812777e-03 -2.167917e-05  
## 6651296|34-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651362|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651505|25-A/G 0.008577141 0.008373968 -2.426245e-02 -2.951003e-02 -2.459169e-04  
## 6651536|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651549|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651584|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651585|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651603|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651650|53-C/T 0.003896814 0.003879443 -4.477566e-03 -5.398934e-03 -2.092610e-05  
## 6651682|41-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651722|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651790|34-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651836|41-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651920|32-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651945|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651948|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651949|50-A/C 0.003570730 0.003550204 -5.781529e-03 -6.970757e-03 -2.471900e-05  
## 6651978|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651988|28-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651995|36-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651996|46-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652021|23-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652050|59-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652102|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652139|9-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652157|32-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652164|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652198|12-T/A 0.003163107 0.003147730 -4.885226e-03 -5.886625e-03 -1.851140e-05  
## 6652209|23-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652232|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652236|58-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652248|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652256|38-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652399|58-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652408|36-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652455|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652563|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652666|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652708|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652718|43-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652723|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652744|49-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652761|57-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652809|41-A/G 0.003421253 0.003404676 -4.868958e-03 -5.868522e-03 -1.996096e-05  
## 6652820|37-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652865|19-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653005|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653010|64-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653038|53-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653130|47-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653175|37-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653237|34-C/T 0.003642753 0.003626449 -4.495776e-03 -5.419529e-03 -1.963597e-05  
## 6653376|49-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653396|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653462|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653499|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653523|14-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653530|62-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653604|19-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653643|33-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653655|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653725|23-C/A 0.004181383 0.004169119 -2.941514e-03 -3.546725e-03 -1.477802e-05  
## 6653838|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653994|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656884|31-A/G 0.005405018 0.005381123 -4.440582e-03 -5.362419e-03 -2.883021e-05  
## 6656889|19-A/G 0.003570478 0.003550162 -5.722333e-03 -6.899301e-03 -2.446561e-05  
## 6657085|18-T/G 0.003812249 0.003791941 -5.355785e-03 -6.458455e-03 -2.446385e-05  
## 6657130|23-G/T 0.007368720 0.007325681 -5.875086e-03 -7.110794e-03 -5.203020e-05  
## 6657217|6-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657267|27-G/T 0.003108680 0.003090130 -6.002945e-03 -7.234684e-03 -2.232927e-05  
## 6657331|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657391|26-A/G 0.007606675 0.007580911 -3.398646e-03 -4.112432e-03 -3.115479e-05  
## 6657478|16-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657485|17-C/T 0.005264859 0.005217754 -9.027762e-03 -1.091035e-02 -5.682475e-05  
## 6657548|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657600|33-G/A 0.003353621 0.003336715 -5.066810e-03 -6.106819e-03 -2.035606e-05  
## 6657637|34-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657667|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657873|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658002|34-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658172|30-C/A 0.006266272 0.006285469 3.054139e-03 3.685826e-03 2.318129e-05  
## 6658300|7-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658375|19-C/G 0.003647700 0.003627274 -5.631389e-03 -6.790054e-03 -2.460165e-05  
## 6658441|13-C/T 0.003651323 0.003627878 -6.462639e-03 -7.793661e-03 -2.823790e-05  
## 6658569|13-G/A 0.010996040 0.011091933 8.645234e-03 1.047152e-02 1.163502e-04  
## 6661094|36-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661297|9-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661311|33-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661392|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661396|55-T/C 0.004007657 0.003974821 -8.261048e-03 -9.969618e-03 -3.956198e-05  
## 6661401|35-G/A 0.004544437 0.004511160 -7.376609e-03 -8.905480e-03 -4.011478e-05  
## 6661459|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661496|33-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661598|62-A/G 0.006043597 0.006057771 2.339868e-03 2.823593e-03 1.711268e-05  
## 6661609|59-A/C 0.004009759 0.003975172 -8.700955e-03 -1.050146e-02 -4.167244e-05  
## 6661636|18-T/A 0.003165696 0.003148161 -5.569791e-03 -6.712453e-03 -2.110834e-05  
## 6661653|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661756|25-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661788|59-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661804|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661860|33-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662701|6-A/G 0.003424171 0.003405162 -5.582320e-03 -6.729314e-03 -2.288882e-05  
## 6662705|5-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662826|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663036|30-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663052|30-A/G 0.004780974 0.004765083 -3.334828e-03 -4.023702e-03 -1.916048e-05  
## 6663927|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664053|24-C/T 0.003049231 0.003033458 -5.199678e-03 -6.265213e-03 -1.898549e-05  
## 6664315|17-A/G 0.004333982 0.004283584 -1.176544e-02 -1.421343e-02 -6.074117e-05  
## 6664393|35-G/A 0.004544437 0.004511160 -7.376609e-03 -8.905480e-03 -4.011478e-05  
## 100101004|14-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664748|30-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665122|15-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665280|39-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665349|39-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100109477|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665749|9-T/C 0.003289746 0.003271603 -5.545730e-03 -6.684255e-03 -2.184397e-05  
## 6665804|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665805|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665809|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665975|52-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666169|13-T/A 0.003163107 0.003147730 -4.885226e-03 -5.886625e-03 -1.851140e-05  
## 6666355|23-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100123948|55-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022390|44-G/A 0.004525758 0.004508047 -3.928887e-03 -4.739823e-03 -2.135055e-05  
## 100023236|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073694|7-G/A 0.003990156 0.003971904 -4.595121e-03 -5.541328e-03 -2.198940e-05  
## 100082381|22-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100098535|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100098787|33-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100123797|15-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6632181|18-G/A 0.009016076 0.008812621 -2.308681e-02 -2.808591e-02 -2.463676e-04  
## 6650384|58-A/G 0.003427794 0.003405766 -6.467920e-03 -7.798289e-03 -2.652479e-05  
## 6650392|28-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650405|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650425|36-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650440|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650441|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650503|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650511|35-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650582|52-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650601|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650694|13-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650707|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650750|63-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650751|7-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650881|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650887|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650895|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650942|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651068|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651106|54-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651126|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651199|46-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651277|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651309|58-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651440|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651559|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651568|46-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651596|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651608|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651626|23-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651670|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651678|31-T/G 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 6651702|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651729|48-A/G 0.009167950 0.009244041 8.231327e-03 9.952603e-03 9.215374e-05  
## 6651775|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651799|50-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651833|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651834|42-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651856|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651902|48-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651916|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651940|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651955|38-C/A 0.003286650 0.003271087 -4.757973e-03 -5.733851e-03 -1.873808e-05  
## 6652103|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652221|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652233|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652271|50-T/C 0.003289322 0.003271532 -5.437852e-03 -6.554086e-03 -2.141858e-05  
## 6652312|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652323|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652348|30-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652387|29-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652570|42-C/A 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 6652579|68-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652611|59-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652679|46-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652770|46-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652916|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652924|5-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653139|25-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653290|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653405|19-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653547|59-T/C 0.011687694 0.011868584 1.524106e-02 1.844933e-02 2.196348e-04  
## 6653608|25-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653635|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653678|35-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653689|26-T/A 0.003586018 0.003552752 -9.363222e-03 -1.129746e-02 -4.006191e-05  
## 6653786|26-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653788|50-G/A 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 6653837|14-C/T 0.021302625 0.021442594 6.527617e-03 7.993204e-03 1.716188e-04  
## 6653866|26-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653923|19-A/T 0.003163107 0.003147730 -4.885226e-03 -5.886625e-03 -1.851140e-05  
## 6653998|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654062|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654076|43-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656943|6-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656950|8-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657301|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657373|32-C/A 0.003353096 0.003336627 -4.935824e-03 -5.948788e-03 -1.982929e-05  
## 6657396|21-C/T 0.004092535 0.004069623 -5.630079e-03 -6.791505e-03 -2.760774e-05  
## 6657408|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657466|14-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657470|5-C/T 0.012665905 0.012590959 -5.952364e-03 -7.243091e-03 -9.108889e-05  
## 6657514|43-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657532|34-T/C 0.003902411 0.003880376 -5.678509e-03 -6.848684e-03 -2.654529e-05  
## 6657551|9-T/C 0.003289746 0.003271603 -5.545730e-03 -6.684255e-03 -2.184397e-05  
## 6657596|44-G/A 0.003730241 0.003708127 -5.963857e-03 -7.192002e-03 -2.663705e-05  
## 6657604|9-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657613|10-A/C 0.004079132 0.004067389 -2.887030e-03 -3.480636e-03 -1.414893e-05  
## 6657630|52-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657681|17-C/T 0.006709068 0.006673734 -5.294579e-03 -6.403190e-03 -4.268793e-05  
## 6657715|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657723|9-A/T 0.003981583 0.003970476 -2.797631e-03 -3.372465e-03 -1.338280e-05  
## 6657726|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657729|7-G/A 0.004086275 0.004068580 -4.349327e-03 -5.245170e-03 -2.132183e-05  
## 6657752|22-T/A 0.003049231 0.003033458 -5.199678e-03 -6.265213e-03 -1.898549e-05  
## 6657881|18-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658064|41-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658065|28-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658111|29-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658148|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658186|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658226|42-C/T 0.003049422 0.003033489 -5.252076e-03 -6.328416e-03 -1.917702e-05  
## 6658296|10-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658347|20-C/G 0.003986471 0.003971290 -3.822574e-03 -4.608972e-03 -1.828957e-05  
## 6658374|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658438|42-C/G 0.003356628 0.003337216 -5.816852e-03 -7.011888e-03 -2.337296e-05  
## 6658501|21-A/C 0.003164675 0.003147991 -5.300015e-03 -6.386980e-03 -2.008484e-05  
## 6658566|40-C/T 0.003049324 0.003033473 -5.225372e-03 -6.296206e-03 -1.907941e-05  
## 6661096|38-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661098|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661155|52-A/G 0.003050168 0.003033614 -5.456850e-03 -6.575431e-03 -1.992555e-05  
## 6661165|8-T/C 0.004780996 0.004765087 -3.338653e-03 -4.028320e-03 -1.918248e-05  
## 6661251|38-A/G 0.003650034 0.003627663 -6.166907e-03 -7.436570e-03 -2.694410e-05  
## 6661269|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661341|8-C/T 0.007868242 0.007925130 7.178213e-03 8.669722e-03 6.880732e-05  
## 6661391|21-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661466|12-C/T 0.004431363 0.004393531 -8.610817e-03 -1.039688e-02 -4.560035e-05  
## 6661555|18-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661659|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661684|52-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661698|59-T/A 0.003228160 0.003208967 -5.981208e-03 -7.209319e-03 -2.310679e-05  
## 6661775|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661797|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662590|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662615|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662790|12-G/C 0.007242039 0.007202302 -5.517203e-03 -6.676307e-03 -4.803172e-05  
## 6662818|19-G/A 0.003814565 0.003792327 -5.864161e-03 -7.072234e-03 -2.678877e-05  
## 6662832|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662835|7-G/C 0.003817203 0.003792766 -6.443074e-03 -7.771329e-03 -2.943685e-05  
## 6662944|22-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662946|24-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662996|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663047|41-G/A 0.003223695 0.003208223 -4.822631e-03 -5.811479e-03 -1.862653e-05  
## 6663054|17-C/T 0.006709068 0.006673734 -5.294579e-03 -6.403190e-03 -4.268793e-05  
## 6663939|28-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663975|44-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663987|39-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664296|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664312|54-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664428|37-G/A 0.004792627 0.004767025 -5.370554e-03 -6.482664e-03 -3.086983e-05  
## 100082074|52-T/C 0.008870334 0.008788330 -9.330937e-03 -1.131846e-02 -9.928472e-05  
## 6664722|41-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665235|64-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665278|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665282|36-G/A 0.005844795 0.005763405 -1.412193e-02 -1.709423e-02 -9.824270e-05  
## 6665346|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665662|22-T/C 0.003226190 0.003208638 -5.470000e-03 -6.592457e-03 -2.112967e-05  
## 6665663|28-T/A 0.003224718 0.003208393 -5.088111e-03 -6.131726e-03 -1.965297e-05  
## 6665849|25-C/T 0.004547581 0.004511684 -7.956429e-03 -9.606619e-03 -4.327306e-05  
## 6665877|33-T/C 0.003226096 0.003208623 -5.445817e-03 -6.563279e-03 -2.103615e-05  
## 6665879|38-A/T 0.003051343 0.003033810 -5.779253e-03 -6.964379e-03 -2.110418e-05  
## 6666358|65-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016475|46-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016905|48-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018192|15-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018375|55-C/G 0.003164519 0.003147965 -5.258775e-03 -6.337229e-03 -1.992839e-05  
## 100021981|25-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045028|11-A/G 0.004935486 0.004907548 -5.692816e-03 -6.873088e-03 -3.369161e-05  
## 100065468|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065569|37-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073412|16-T/C 0.014461771 0.013984369 -3.413822e-02 -4.185275e-02 -5.812882e-04  
## 100073701|13-G/T 0.003163582 0.003147809 -5.010929e-03 -6.038250e-03 -1.898821e-05  
## 100074011|18-G/C 0.004316132 0.004280609 -8.298549e-03 -1.001805e-02 -4.281219e-05  
## 100082459|38-C/A 0.003286650 0.003271087 -4.757973e-03 -5.733851e-03 -1.873808e-05  
## 100086150|10-G/T 0.003224066 0.003208285 -4.919092e-03 -5.927835e-03 -1.899947e-05  
## 100086229|17-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100086237|9-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091190|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091207|45-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091251|13-T/C 0.020435083 0.020766958 1.598091e-02 1.951478e-02 4.065579e-04  
## 100096444|12-A/C 0.009143975 0.009240045 1.039715e-02 1.256558e-02 1.163480e-04  
## 100098472|22-C/G 0.003163291 0.003147760 -4.933800e-03 -5.945214e-03 -1.869564e-05  
## 100103647|6-C/A 0.010265025 0.010391393 1.216088e-02 1.470863e-02 1.532149e-04  
## 100107103|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650387|53-A/G 0.004083108 0.004068052 -3.701067e-03 -4.462792e-03 -1.814143e-05  
## 6650481|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650788|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651332|37-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651818|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651863|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652372|10-T/C 0.003421756 0.003404760 -4.992000e-03 -6.016976e-03 -2.046590e-05  
## 6652511|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652754|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652755|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653571|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653574|37-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653585|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657101|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657124|22-T/C 0.003226190 0.003208638 -5.470000e-03 -6.592457e-03 -2.112967e-05  
## 6657595|21-A/G 0.003577006 0.003551250 -7.252502e-03 -8.746932e-03 -3.101749e-05  
## 6657640|37-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657747|20-T/A 0.003653928 0.003628312 -7.060113e-03 -8.515229e-03 -3.085228e-05  
## 6657809|8-A/C 0.003109185 0.003090214 -6.138985e-03 -7.398842e-03 -2.283593e-05  
## 6657847|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657859|39-G/C 0.003109388 0.003090248 -6.193654e-03 -7.464814e-03 -2.303955e-05  
## 6657980|25-A/G 0.011338443 0.011149000 -1.699193e-02 -2.069449e-02 -2.299388e-04  
## 6658003|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658141|5-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658173|38-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658437|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658509|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658625|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661101|21-T/C 0.003642612 0.003626426 -4.463516e-03 -5.380605e-03 -1.949494e-05  
## 6661509|18-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661745|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661802|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661814|14-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662656|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662837|7-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662873|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662947|5-G/A 0.007345351 0.007303890 -5.676650e-03 -6.870186e-03 -5.012211e-05  
## 6663032|15-G/A 0.006649395 0.006602738 -7.066249e-03 -8.548341e-03 -5.636269e-05  
## 6664269|17-T/G 0.007837087 0.007770192 -8.609161e-03 -1.043056e-02 -8.090788e-05  
## 6664285|27-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664757|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664912|6-T/C 0.008340043 0.008003764 -4.201516e-02 -5.127307e-02 -4.069291e-04  
## 6665124|27-C/T 0.004008637 0.003974985 -8.466160e-03 -1.021758e-02 -4.054596e-05  
## 6665664|30-A/C 0.003164066 0.003147889 -5.138844e-03 -6.192550e-03 -1.947343e-05  
## 6665874|13-A/G 0.003164656 0.003147988 -5.294809e-03 -6.380699e-03 -2.006509e-05  
## 6665876|47-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666225|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065638|51-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065980|45-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073421|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073630|15-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073757|34-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073948|30-G/A 0.003358460 0.003337521 -6.273740e-03 -7.563347e-03 -2.521116e-05  
## 100074014|19-T/A 0.003422678 0.003404913 -5.217382e-03 -6.288924e-03 -2.139090e-05  
## 100074068|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082248|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100086042|5-C/T 0.019867111 0.019940691 3.689950e-03 4.514362e-03 9.008594e-05  
## 100093665|8-T/G 0.003287511 0.003271230 -4.977023e-03 -5.998097e-03 -1.960162e-05  
## 100098602|36-T/A 0.005301946 0.005223935 -1.493329e-02 -1.806943e-02 -9.411162e-05  
## 100098836|24-A/C 0.007877606 0.007926691 6.192408e-03 7.480628e-03 5.937006e-05  
## 100102147|13-C/T 0.004527349 0.004508312 -4.222635e-03 -5.094510e-03 -2.294824e-05  
## 100121015|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066223|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106210|14-T/G 0.012042769 0.012065608 1.892883e-03 2.298278e-03 2.774062e-05  
## 6665285|9-C/T 0.005831774 0.005761234 -1.224387e-02 -1.481510e-02 -8.514428e-05  
## 6661710|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653668|61-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024870|39-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663929|41-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019092|30-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661298|58-T/C 0.003916137 0.003882664 -8.621196e-03 -1.040405e-02 -4.032577e-05  
## 100016534|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023056|37-G/A 0.007730952 0.007748440 2.257032e-03 2.728309e-03 2.114968e-05  
## 100082643|25-G/C 0.009968024 0.009871160 -9.812818e-03 -1.191733e-02 -1.174070e-04  
## 100064775|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023265|24-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651137|52-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652727|6-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021017|32-G/T 0.003497059 0.003476362 -5.953695e-03 -7.178053e-03 -2.492380e-05  
## 100073776|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015600|63-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665051|27-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019246|34-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651056|34-C/T 0.008258641 0.008320885 7.480397e-03 9.037707e-03 7.531422e-05  
## 6661829|9-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665126|22-A/C 0.006919548 0.006940295 2.989365e-03 3.610074e-03 2.506996e-05  
## 100016268|6-T/C 0.012357503 0.011980219 -3.149227e-02 -3.850610e-02 -4.584059e-04  
## 100020350|21-A/G 0.003577006 0.003551250 -7.252502e-03 -8.746932e-03 -3.101749e-05  
## 100023328|20-T/C 0.004780772 0.004765049 -3.299511e-03 -3.981060e-03 -1.895743e-05  
## 100066210|28-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661110|21-T/A 0.003227045 0.003208781 -5.691783e-03 -6.860061e-03 -2.198738e-05  
## 100018023|63-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020236|59-G/A 0.003289762 0.003271605 -5.549728e-03 -6.689079e-03 -2.185974e-05  
## 100021188|32-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021960|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023459|46-A/G 0.011836941 0.011842800 4.947335e-04 6.007323e-04 7.115056e-06  
## 100017280|64-T/G 0.012049580 0.012061173 9.612463e-04 1.167340e-03 1.408219e-05  
## 100018247|39-T/A 0.003423785 0.003405098 -5.487869e-03 -6.615328e-03 -2.250112e-05  
## 100021898|39-C/T 0.009346447 0.009273791 -7.834612e-03 -9.505128e-03 -8.801044e-05  
## 100022093|45-A/T 0.003352020 0.003336448 -4.667321e-03 -5.624873e-03 -1.874958e-05  
## 100023129|9-T/A 0.003354800 0.003336911 -5.360974e-03 -6.461752e-03 -2.153917e-05  
## 100023441|20-A/G 0.005281995 0.005220610 -1.175822e-02 -1.421822e-02 -7.405323e-05  
## 100065302|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066548|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650550|11-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016077|58-A/G 0.003729067 0.003707931 -5.700207e-03 -6.873688e-03 -2.545810e-05  
## 100018469|20-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019543|16-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020860|10-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022172|17-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045257|30-G/T 0.003163519 0.003147798 -4.994250e-03 -6.018131e-03 -1.892494e-05  
## 6650546|47-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653399|26-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015390|53-T/G 0.004178565 0.004168650 -2.378560e-03 -2.867613e-03 -1.194839e-05  
## 100017298|53-C/T 0.008264798 0.008321911 6.862970e-03 8.292814e-03 6.910679e-05  
## 100017444|58-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017989|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018126|55-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018257|27-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018350|18-A/T 0.003052243 0.003033960 -6.026087e-03 -7.262196e-03 -2.200666e-05  
## 100020244|19-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021605|34-G/T 0.003049762 0.003033546 -5.345612e-03 -6.441244e-03 -1.951892e-05  
## 100023076|20-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023357|49-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653628|59-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661821|17-T/A 0.018054121 0.018441119 2.098559e-02 2.553853e-02 4.729357e-04  
## 100015255|25-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015707|14-A/T 0.003286687 0.003271093 -4.767189e-03 -5.744968e-03 -1.877440e-05  
## 100015710|46-C/T 0.005758539 0.005749029 -1.654280e-03 -1.997295e-03 -1.147871e-05  
## 100016017|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017899|6-A/G 0.003054056 0.003034262 -6.523529e-03 -7.862475e-03 -2.382568e-05  
## 100019473|54-C/T 0.004981092 0.004915149 -1.341613e-02 -1.622349e-02 -7.952689e-05  
## 100020145|63-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021743|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022776|55-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023242|39-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082188|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015628|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020893|36-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021540|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021665|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022938|66-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023291|60-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661242|40-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661353|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016201|10-C/T 0.006049954 0.005968643 -1.362305e-02 -1.649210e-02 -9.816724e-05  
## 100016537|37-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016842|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016876|65-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016987|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017504|59-C/A 0.003105480 0.003089596 -5.140905e-03 -6.194673e-03 -1.911936e-05  
## 100019821|57-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020901|34-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021671|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021969|10-T/C 0.003421756 0.003404760 -4.992000e-03 -6.016976e-03 -2.046590e-05  
## 100022199|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022545|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022573|13-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022831|52-G/A 0.003737374 0.003709315 -7.564333e-03 -9.125057e-03 -3.379651e-05  
## 100066558|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016263|30-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016306|10-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017198|10-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017275|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017509|15-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018032|68-T/C 0.003361697 0.003338061 -7.080933e-03 -8.537872e-03 -2.845957e-05  
## 100018336|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018672|56-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019100|44-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019286|14-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019912|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020907|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021161|47-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021810|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023367|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064740|15-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653264|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663072|37-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016098|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016143|59-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016740|12-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016777|38-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018407|47-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018609|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019034|62-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019293|6-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019468|41-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019644|45-T/C 0.004463637 0.004398910 -1.471436e-02 -1.778875e-02 -7.802083e-05  
## 100019745|64-C/T 0.006718106 0.006666347 -7.764184e-03 -9.394626e-03 -6.253059e-05  
## 100021138|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022777|45-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066874|50-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091157|27-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652941|42-T/C 0.004179450 0.004168797 -2.555316e-03 -3.080824e-03 -1.283677e-05  
## 6653902|40-C/T 0.003049324 0.003033473 -5.225372e-03 -6.296206e-03 -1.907941e-05  
## 6664728|12-C/T 0.005415639 0.005382893 -6.083332e-03 -7.348688e-03 -3.950908e-05  
## 100015633|60-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016193|8-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017485|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018162|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019061|21-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019334|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019756|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020056|55-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020924|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022009|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022323|36-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022703|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023049|42-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023218|64-G/T 0.003225318 0.003208493 -5.243774e-03 -6.319518e-03 -2.025486e-05  
## 100023269|66-A/G 0.003570742 0.003550206 -5.784347e-03 -6.974158e-03 -2.473106e-05  
## 100024832|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044738|8-C/T 0.004178684 0.004168670 -2.402351e-03 -2.896310e-03 -1.206796e-05  
## 100065081|38-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065706|32-G/A 0.003105869 0.003089661 -5.245829e-03 -6.321239e-03 -1.951000e-05  
## 100096952|53-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651239|56-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651495|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652638|14-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653296|13-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661158|36-C/T 0.009217331 0.009252271 3.776374e-03 4.570355e-03 4.231810e-05  
## 100015381|11-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015413|40-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015882|61-G/T 0.004411767 0.004390265 -4.897552e-03 -5.908894e-03 -2.591620e-05  
## 100017512|41-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018395|5-T/C 0.003658646 0.003629098 -8.141906e-03 -9.822158e-03 -3.558753e-05  
## 100019423|68-C/G 0.003163578 0.003147808 -5.009922e-03 -6.037034e-03 -1.898439e-05  
## 100019434|60-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019704|32-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019785|27-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021066|30-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021425|47-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021475|63-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021915|65-G/A 0.003428967 0.003405962 -6.754395e-03 -8.144164e-03 -2.770124e-05  
## 100022373|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022606|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022910|49-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100025041|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044554|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064948|49-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065362|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650752|20-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652176|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653696|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662909|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015291|39-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016129|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017225|65-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017536|38-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017676|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019216|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019420|52-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019494|63-G/T 0.003163384 0.003147776 -4.958538e-03 -5.975054e-03 -1.878948e-05  
## 100020318|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020532|11-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020604|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020745|51-A/C 0.003225596 0.003208540 -5.316072e-03 -6.406741e-03 -2.053443e-05  
## 100021499|21-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021838|13-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021978|37-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022031|7-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022223|45-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023499|68-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023507|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634782|49-G/A 0.003290569 0.003271740 -5.755207e-03 -6.937034e-03 -2.267005e-05  
## 6650656|12-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652475|14-A/T 0.011155741 0.011170422 1.314299e-03 1.594532e-03 1.781628e-05  
## 6661333|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015448|67-A/T 0.003422704 0.003404918 -5.223580e-03 -6.296402e-03 -2.141633e-05  
## 100015469|19-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015537|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015992|7-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016029|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016274|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016854|18-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017144|48-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017489|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017909|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018611|43-C/A 0.013596327 0.013840129 1.761558e-02 2.135483e-02 2.965949e-04  
## 100018927|63-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019035|27-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019236|16-C/T 0.008699073 0.008759787 6.930999e-03 8.378571e-03 7.349624e-05  
## 100020671|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021001|60-T/A 0.004077943 0.004067191 -2.643561e-03 -3.186947e-03 -1.295507e-05  
## 100021318|46-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021549|61-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021863|20-C/T 0.004182042 0.004169229 -3.073093e-03 -3.705476e-03 -1.543948e-05  
## 100023205|16-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044711|34-G/A 0.003904634 0.003880747 -6.155424e-03 -7.424603e-03 -2.877753e-05  
## 100064599|63-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065680|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100118396|21-A/G 0.007018467 0.006954769 -9.158978e-03 -1.108877e-02 -7.697856e-05  
## 6651534|52-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651570|59-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652200|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652872|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654031|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661376|52-G/A 0.004416677 0.004391084 -5.828494e-03 -7.033420e-03 -3.084833e-05  
## 6662917|14-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666226|12-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015950|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016109|31-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016805|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016861|15-T/C 0.003824042 0.003793906 -7.943193e-03 -9.583646e-03 -3.630169e-05  
## 100017893|45-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018244|41-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018636|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018890|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018982|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019094|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019137|21-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019699|26-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020118|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020890|29-C/T 0.014967896 0.015120912 1.011947e-02 1.230299e-02 1.864090e-04  
## 100021219|23-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021521|57-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022288|6-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022337|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022554|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023064|19-G/A 0.003814565 0.003792327 -5.864161e-03 -7.072234e-03 -2.678877e-05  
## 100045690|24-G/A 0.003423042 0.003404974 -5.306215e-03 -6.396117e-03 -2.175550e-05  
## 6650514|37-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651982|15-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653247|28-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653292|47-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653430|58-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653481|64-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653533|6-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653865|59-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661831|60-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015200|15-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015297|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015382|10-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017834|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020258|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021617|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021932|18-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022038|23-C/A 0.003353575 0.003336707 -5.055285e-03 -6.092915e-03 -2.030972e-05  
## 100022622|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022667|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022800|24-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022903|55-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023130|51-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023154|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023531|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045599|24-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065227|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065691|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066039|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066092|14-C/T 0.004979333 0.004914856 -1.311870e-02 -1.586284e-02 -7.775902e-05  
## 100074069|38-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106301|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650690|47-A/G 0.004000618 0.003973648 -6.787310e-03 -8.188603e-03 -3.249446e-05  
## 6651361|32-G/A 0.004179208 0.004168757 -2.507046e-03 -3.022597e-03 -1.259415e-05  
## 6652061|58-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652327|54-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653204|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653393|35-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653673|65-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653746|33-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661305|25-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664067|16-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664716|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015645|28-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016045|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016331|42-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017699|11-G/A 0.004402257 0.004388680 -3.093496e-03 -3.730918e-03 -1.636367e-05  
## 100018593|39-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018814|46-A/G 0.003496179 0.003476215 -5.742981e-03 -6.923709e-03 -2.404066e-05  
## 100019003|20-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019081|63-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019377|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019413|55-T/G 0.003642955 0.003626483 -4.542184e-03 -5.475524e-03 -1.983886e-05  
## 100019588|52-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021006|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021094|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022208|18-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022310|31-G/A 0.003227493 0.003208856 -5.808135e-03 -7.000461e-03 -2.243738e-05  
## 100022384|48-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022899|42-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100108128|12-A/T 0.003290321 0.003271698 -5.691927e-03 -6.860671e-03 -2.242049e-05  
## 6650846|64-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650911|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651088|5-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651399|12-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652520|9-A/G 0.006519389 0.006474406 -6.947957e-03 -8.403938e-03 -5.433490e-05  
## 6653133|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653564|53-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653709|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653720|68-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653797|40-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653874|10-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653907|59-A/G 0.005596510 0.005562381 -6.135655e-03 -7.413321e-03 -4.118512e-05  
## 6653965|43-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065805|29-G/T 0.005065845 0.005053062 -2.529861e-03 -3.052835e-03 -1.541836e-05  
## 6661880|32-C/T 0.005295174 0.005222807 -1.385601e-02 -1.676218e-02 -8.730303e-05  
## 100015400|35-T/C 0.004107054 0.004072043 -8.597994e-03 -1.037799e-02 -4.218695e-05  
## 100016174|6-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016241|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016653|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017080|12-A/T 0.003227660 0.003208883 -5.851314e-03 -7.052566e-03 -2.260438e-05  
## 100017172|64-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017659|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017936|42-T/C 0.003224353 0.003208332 -4.993374e-03 -6.017441e-03 -1.928667e-05  
## 100018252|52-A/G 0.006268075 0.006285769 2.814932e-03 3.397313e-03 2.136675e-05  
## 100018331|42-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019441|49-A/T 0.003165508 0.003148130 -5.520063e-03 -6.652455e-03 -2.091967e-05  
## 100020597|8-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020814|67-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022284|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022341|63-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023203|29-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023334|6-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023527|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082625|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631600|18-G/A 0.031668358 0.033055838 4.197380e-02 5.158279e-02 1.719426e-03  
## 6634219|54-C/T 0.011839006 0.011893803 4.607142e-03 5.589657e-03 6.654353e-05  
## 6650605|38-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650666|57-T/A 0.009837865 0.009809579 -2.883518e-03 -3.496618e-03 -3.428056e-05  
## 6650850|54-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651176|17-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651223|56-T/G 0.003050692 0.003033701 -5.600803e-03 -6.749090e-03 -2.045179e-05  
## 6651266|67-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651497|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651500|53-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652020|49-C/T 0.012731448 0.012805669 5.795896e-03 7.036609e-03 9.021293e-05  
## 6652396|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652765|20-C/T 0.003288988 0.003271476 -5.352813e-03 -6.451479e-03 -2.108326e-05  
## 6653179|35-C/A 0.004292083 0.004276601 -3.620299e-03 -4.366247e-03 -1.865918e-05  
## 6653588|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653617|17-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653803|13-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653921|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654071|34-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658453|44-C/T 0.008313551 0.007999348 -3.927847e-02 -4.790563e-02 -3.802034e-04  
## 6662623|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015396|38-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015614|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015961|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016361|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016600|22-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017130|57-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017328|47-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018645|27-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018647|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019579|57-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019755|66-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020516|10-T/C 0.003421756 0.003404760 -4.992000e-03 -6.016976e-03 -2.046590e-05  
## 100021870|45-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022119|34-G/A 0.003298218 0.003273015 -7.700377e-03 -9.285330e-03 -3.034422e-05  
## 100022158|40-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022170|46-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022467|38-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022708|55-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023428|39-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064901|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066583|50-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082198|48-A/G 0.004089465 0.004069111 -5.002041e-03 -6.033132e-03 -2.452493e-05  
## 100082209|53-T/A 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 100114666|37-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650551|48-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650640|8-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651037|14-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651123|16-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651198|35-C/T 0.005594591 0.005562061 -5.848443e-03 -7.065881e-03 -3.925489e-05  
## 6651548|20-C/G 0.003355091 0.003336960 -5.433388e-03 -6.549132e-03 -2.183044e-05  
## 6652349|48-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652912|31-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652960|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653047|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653111|54-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653182|48-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653306|31-C/A 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 6653329|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653695|53-T/C 0.003352354 0.003336503 -4.750673e-03 -5.725423e-03 -1.908474e-05  
## 6657908|24-T/C 0.005068958 0.005053581 -3.042907e-03 -3.672327e-03 -1.854710e-05  
## 6658488|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661172|54-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661256|38-C/G 0.003163613 0.003147814 -5.019017e-03 -6.048005e-03 -1.901889e-05  
## 6665238|10-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016051|64-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016065|42-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016173|67-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016227|33-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016734|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017686|33-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017703|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017977|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018439|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020203|19-G/A 0.010279048 0.010393730 1.103380e-02 1.334861e-02 1.390480e-04  
## 100021102|63-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021231|28-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021723|29-T/G 0.003288083 0.003271325 -5.122653e-03 -6.173788e-03 -2.017578e-05  
## 100022522|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022709|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045624|6-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650668|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650746|17-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650807|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650886|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650934|11-G/A 0.003568359 0.003549809 -5.225507e-03 -6.299648e-03 -2.233918e-05  
## 6651435|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651778|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651783|65-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652191|59-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652464|36-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652873|35-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653077|56-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653537|32-A/G 0.006932452 0.006942446 1.439504e-03 1.738962e-03 1.207613e-05  
## 6653577|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653747|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661083|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661240|52-C/A 0.023811174 0.024338899 2.168239e-02 2.653844e-02 6.487174e-04  
## 6661424|62-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661830|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665513|19-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661486|13-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015240|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016947|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018671|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019864|8-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019949|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020694|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022684|13-T/A 0.007867225 0.007924961 7.285288e-03 8.798848e-03 6.983213e-05  
## 100022926|58-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023200|68-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044609|42-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065342|51-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066803|48-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100085950|35-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100108060|20-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630419|14-G/A 0.003572835 0.003550555 -6.274954e-03 -7.566440e-03 -2.683135e-05  
## 6650581|35-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650628|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650650|35-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650684|65-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650719|47-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650735|38-G/C 0.014800474 0.015093008 1.938212e-02 2.351679e-02 3.563150e-04  
## 6650879|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651049|16-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651124|38-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651144|62-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651167|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651516|36-T/G 0.003287891 0.003271293 -5.073735e-03 -6.114771e-03 -1.998291e-05  
## 6651679|24-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651984|7-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652023|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652091|50-T/A 0.009673669 0.009782213 1.109603e-02 1.341553e-02 1.315248e-04  
## 6652242|32-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652409|10-T/C 0.003051902 0.003033903 -5.932768e-03 -7.149600e-03 -2.166545e-05  
## 6653236|64-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653348|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653637|32-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653657|58-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653943|15-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653959|63-A/G 0.003294518 0.003272398 -6.759606e-03 -8.149357e-03 -2.663189e-05  
## 6654028|68-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654050|51-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654072|32-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657061|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661522|65-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665120|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100120328|20-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100120333|61-G/A 0.008097233 0.008124607 3.369264e-03 4.073377e-03 3.311689e-05  
## 100065668|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015835|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016061|39-G/C 0.007627927 0.007583189 -5.899635e-03 -7.142406e-03 -5.409831e-05  
## 100016656|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017602|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019319|48-T/C 0.015215222 0.015221055 3.832759e-04 4.670013e-04 7.108798e-06  
## 100019777|21-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021190|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022177|66-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023241|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044452|9-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065422|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066442|52-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650473|26-A/G 0.004822639 0.004772027 -1.060602e-02 -1.281608e-02 -6.102897e-05  
## 6650482|38-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650496|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650610|24-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650644|49-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650834|54-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650842|16-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651138|26-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651261|54-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651453|19-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651597|59-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651744|34-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651756|62-G/A 0.004080522 0.004067621 -3.171569e-03 -3.823902e-03 -1.554432e-05  
## 6651812|33-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651980|42-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652201|21-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652243|14-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652864|38-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653219|11-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653248|20-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653427|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653971|28-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657006|6-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657540|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661088|54-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082471|46-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661706|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664071|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016295|41-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018466|44-G/A 0.010939247 0.011082467 1.292311e-02 1.563883e-02 1.737648e-04  
## 100020140|32-T/C 0.003105606 0.003089617 -5.174867e-03 -6.235640e-03 -1.924580e-05  
## 100020690|9-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020765|38-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021275|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045738|12-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082496|60-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650712|28-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650913|49-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650972|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651222|59-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651438|51-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651492|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651654|52-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651829|48-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651860|44-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651877|63-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651935|33-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651974|35-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651986|27-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652262|36-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652560|9-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652688|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652875|8-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653021|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653263|25-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653294|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653410|59-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653536|55-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653603|22-T/C 0.003226190 0.003208638 -5.470000e-03 -6.592457e-03 -2.112967e-05  
## 6653802|50-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653830|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653963|35-C/T 0.012558197 0.012471119 -6.982353e-03 -8.497251e-03 -1.058222e-04  
## 6654043|16-A/G 0.003424269 0.003405179 -5.606208e-03 -6.758143e-03 -2.298688e-05  
## 6658028|40-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661349|14-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661568|63-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661747|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663960|60-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663980|14-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019622|48-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019802|12-C/T 0.005415639 0.005382893 -6.083332e-03 -7.348688e-03 -3.950908e-05  
## 100020020|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021576|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022394|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023389|57-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023502|39-T/A 0.003167849 0.003148520 -6.139009e-03 -7.399307e-03 -2.326826e-05  
## 100073839|28-C/G 0.009141399 0.009239616 1.062994e-02 1.284630e-02 1.189472e-04  
## 6635439|23-T/C 0.012190259 0.012244953 4.466675e-03 5.421314e-03 6.644304e-05  
## 6650563|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650688|61-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650747|16-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650772|42-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650861|34-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651030|62-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651225|58-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651322|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651329|44-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651331|12-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651353|65-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651374|45-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651589|18-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651687|45-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651748|42-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651933|62-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652449|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652527|63-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652542|24-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652684|46-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652730|63-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652782|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652925|43-T/C 0.009192684 0.009248163 5.998966e-03 7.256842e-03 6.719298e-05  
## 6653316|17-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653365|26-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653370|22-C/T 0.003298128 0.003272999 -7.677410e-03 -9.257593e-03 -3.025357e-05  
## 6653474|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653556|52-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653733|18-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653741|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653765|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653879|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654049|52-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657335|32-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658312|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661127|7-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661289|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661380|15-T/G 0.004182664 0.004169333 -3.197380e-03 -3.855438e-03 -1.606432e-05  
## 6661529|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661563|46-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661785|56-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661832|23-C/T 0.003165313 0.003148097 -5.468736e-03 -6.590530e-03 -2.072494e-05  
## 6663079|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665675|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666102|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121706|16-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015265|55-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015554|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017634|45-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018229|31-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018597|37-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018998|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019106|32-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093589|24-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6632259|35-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6632582|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650532|52-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650756|47-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650830|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650851|66-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650928|5-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650987|34-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651080|35-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651107|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651110|32-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651196|62-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651288|46-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651442|63-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651613|49-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651658|42-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651720|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651765|63-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651802|34-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651873|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651874|53-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651906|20-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651943|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651957|58-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652104|41-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652143|61-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652149|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652158|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652181|32-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652211|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652240|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652269|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652459|65-C/T 0.004546814 0.004511556 -7.815104e-03 -9.435709e-03 -4.250319e-05  
## 6652473|56-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652516|46-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652757|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652797|7-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652811|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652891|17-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652914|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652922|32-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653051|5-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653071|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653276|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653337|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653343|21-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653392|28-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653404|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653456|52-A/G 0.003050168 0.003033614 -5.456850e-03 -6.575431e-03 -1.992555e-05  
## 6653484|18-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653641|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653669|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653732|48-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653735|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653739|44-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653814|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653826|65-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653844|35-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653895|16-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653898|20-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653961|15-T/C 0.006419958 0.006411873 -1.260905e-03 -1.523247e-03 -9.764402e-06  
## 6654048|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657273|10-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657733|25-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657825|20-A/C 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 6658114|32-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658233|5-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658363|20-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661157|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661223|43-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661238|20-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661454|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661478|59-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661581|31-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661584|33-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661734|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662610|35-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663909|13-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664051|46-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665119|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666170|15-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666170|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666170|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018529|16-G/A 0.004833758 0.004773880 -1.254273e-02 -1.516242e-02 -7.220200e-05  
## 100019109|54-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020873|6-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020968|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021983|42-A/C 0.003982685 0.003970659 -3.028648e-03 -3.651122e-03 -1.448858e-05  
## 100022525|11-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065722|64-T/C 0.003815220 0.003792436 -6.007787e-03 -7.245661e-03 -2.744568e-05  
## 6650393|5-T/C 0.003658646 0.003629098 -8.141906e-03 -9.822158e-03 -3.558753e-05  
## 6650424|56-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650439|56-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650466|32-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650505|17-A/G 0.004333982 0.004283584 -1.176544e-02 -1.421343e-02 -6.074117e-05  
## 6650506|45-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650533|15-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650557|47-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650621|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650631|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650685|22-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650724|18-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650838|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650866|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650867|54-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650893|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650917|35-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650920|31-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651018|30-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651060|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651146|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651378|67-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651387|24-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651391|45-G/A 0.003648303 0.003627374 -5.769594e-03 -6.956892e-03 -2.520613e-05  
## 6651444|17-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651450|54-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651457|37-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651484|65-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651503|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651510|59-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651537|19-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651552|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651562|32-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651569|33-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651580|22-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651606|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651612|31-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651615|24-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651705|42-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651737|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651892|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651930|26-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651938|17-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652055|48-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652132|43-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652144|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652212|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652231|38-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652386|55-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652398|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652413|28-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652427|27-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652438|68-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652494|24-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652515|15-A/G 0.009291483 0.009264630 -2.898450e-03 -3.512796e-03 -3.252589e-05  
## 6652518|57-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652535|53-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652564|55-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652619|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652816|67-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652945|37-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653041|46-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653142|49-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653144|56-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653148|46-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653163|62-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653369|63-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653408|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653429|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653439|17-G/C 0.010547135 0.010438411 -1.041569e-02 -1.265843e-02 -1.318587e-04  
## 6653493|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653501|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653502|28-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653504|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653563|7-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653593|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653740|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653755|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653790|16-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653834|11-T/C 0.003290799 0.003271778 -5.813523e-03 -7.007408e-03 -2.290003e-05  
## 6653851|28-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653936|33-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653989|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654038|30-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654047|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654066|45-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657075|25-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657215|14-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657652|33-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658198|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658380|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658597|10-T/C 0.003421756 0.003404760 -4.992000e-03 -6.016976e-03 -2.046590e-05  
## 6661103|59-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661108|53-A/G 0.003355589 0.003337043 -5.557707e-03 -6.699149e-03 -2.233050e-05  
## 6661557|11-G/A 0.003356421 0.003337181 -5.765327e-03 -6.949706e-03 -2.316569e-05  
## 6661627|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661879|7-T/C 0.004434147 0.004393995 -9.137824e-03 -1.103439e-02 -4.839647e-05  
## 6662888|24-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662892|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664359|17-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664391|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664780|11-C/T 0.004779224 0.004764791 -3.028946e-03 -3.654404e-03 -1.740192e-05  
## 6665039|22-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666100|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666102|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654102|57-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016395|29-T/C 0.004029335 0.003978434 -1.279419e-02 -1.545469e-02 -6.132814e-05  
## 100020724|58-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022521|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022955|34-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045457|17-G/A 0.003927348 0.003884532 -1.102222e-02 -1.330815e-02 -5.158196e-05  
## 100073683|46-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093512|17-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100102305|42-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121708|34-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650447|47-T/C 0.004563987 0.004514418 -1.098011e-02 -1.326567e-02 -5.975529e-05  
## 6650456|36-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650499|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650502|55-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650518|44-C/T 0.016990059 0.016720565 -1.611747e-02 -1.973888e-02 -3.289813e-04  
## 6650566|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650589|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650595|24-C/T 0.003163200 0.003147745 -4.909962e-03 -5.916461e-03 -1.860522e-05  
## 6650602|41-G/A 0.009142109 0.009239734 1.056579e-02 1.276895e-02 1.182310e-04  
## 6650625|38-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650630|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650642|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650708|55-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650731|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650777|15-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650798|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650874|54-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650892|52-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650926|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650951|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650983|20-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651002|11-G/T 0.004187779 0.004170185 -4.218871e-03 -5.088229e-03 -2.120096e-05  
## 6651006|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651015|9-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651028|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651064|34-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651075|68-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651082|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651108|57-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651169|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651211|35-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651214|29-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651218|36-A/G 0.004196313 0.004171608 -5.922277e-03 -7.145144e-03 -2.977143e-05  
## 6651236|9-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651265|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651293|36-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651299|48-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651311|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651316|37-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651339|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651360|17-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651411|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651455|40-A/G 0.004291411 0.004276489 -3.489454e-03 -4.208328e-03 -1.798431e-05  
## 6651480|6-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651535|17-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651553|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651633|11-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651642|43-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651652|13-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651653|46-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651666|39-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651668|54-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651692|43-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651779|57-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651819|25-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651894|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651913|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651928|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651950|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651962|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651979|59-G/T 0.003730180 0.003708116 -5.950002e-03 -7.175275e-03 -2.657509e-05  
## 6652004|68-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652041|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652076|24-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652082|47-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652128|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652178|42-C/T 0.018369348 0.018529968 8.668120e-03 1.057805e-02 1.963508e-04  
## 6652228|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652229|59-T/C 0.003648773 0.003627453 -5.877591e-03 -7.087270e-03 -2.567851e-05  
## 6652252|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652279|53-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652302|43-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652328|42-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652402|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652405|52-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652430|41-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652442|59-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652444|19-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652476|42-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652478|11-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652495|5-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652517|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652531|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652633|57-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652685|43-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652711|52-C/T 0.005769535 0.005750861 -3.247138e-03 -3.921724e-03 -2.253864e-05  
## 6652775|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652812|20-T/C 0.003361090 0.003337959 -6.929616e-03 -8.355162e-03 -2.785054e-05  
## 6652825|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652846|44-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652876|5-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652899|47-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652923|25-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652938|38-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652954|34-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652977|48-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653056|35-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653113|5-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653221|12-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653285|45-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653299|45-T/C 0.004463637 0.004398910 -1.471436e-02 -1.778875e-02 -7.802083e-05  
## 6653300|45-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653301|16-C/T 0.003814102 0.003792249 -5.762547e-03 -6.949542e-03 -2.632402e-05  
## 6653302|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653314|19-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653350|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653402|19-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653488|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653495|56-A/T 0.005459529 0.005390208 -1.286046e-02 -1.555729e-02 -8.364132e-05  
## 6653519|51-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653534|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653576|42-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653592|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653671|64-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653680|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653685|30-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653711|10-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653718|49-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653737|54-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653753|52-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653780|36-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653880|38-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653900|13-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653944|44-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653977|55-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653997|67-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654006|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654014|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654041|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654055|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654086|14-G/A 0.003499184 0.003476716 -6.462561e-03 -7.792377e-03 -2.705686e-05  
## 6654088|35-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656956|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657047|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657188|43-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657327|42-G/C 0.003105259 0.003089560 -5.081347e-03 -6.122833e-03 -1.889763e-05  
## 6657536|7-A/G 0.003576968 0.003551244 -7.243555e-03 -8.736126e-03 -3.097917e-05  
## 6657721|47-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657808|17-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657912|46-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658001|44-A/T 0.003049984 0.003033583 -5.406391e-03 -6.514561e-03 -1.974109e-05  
## 6658011|9-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658107|14-C/G 0.009262803 0.009207977 -5.954110e-03 -7.220331e-03 -6.640547e-05  
## 6658156|5-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658199|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658229|33-G/T 0.003105354 0.003089575 -5.107040e-03 -6.153824e-03 -1.899328e-05  
## 6658234|5-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658254|27-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658284|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658292|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658327|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658407|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658414|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658562|19-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658586|32-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658643|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658671|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661089|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661118|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661135|53-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661189|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661215|39-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661222|65-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661248|53-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661249|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661292|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661362|55-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661374|18-A/G 0.004105370 0.004071762 -8.253908e-03 -9.961965e-03 -4.049579e-05  
## 6661410|32-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661422|22-C/T 0.003298128 0.003272999 -7.677410e-03 -9.257593e-03 -3.025357e-05  
## 6661440|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661444|36-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661467|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661491|67-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661502|37-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661590|51-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661599|28-A/G 0.003654743 0.003628447 -7.246993e-03 -8.740961e-03 -3.167015e-05  
## 6661630|50-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661635|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661640|37-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661680|9-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661723|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661736|14-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661758|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661804|60-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661810|40-A/C 0.003223698 0.003208223 -4.823531e-03 -5.812564e-03 -1.863001e-05  
## 6661811|44-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661811|67-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661833|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661841|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661855|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661864|19-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661882|41-A/G 0.004398451 0.004388046 -2.371147e-03 -2.859303e-03 -1.254080e-05  
## 6661883|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661885|20-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662600|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662722|30-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662742|10-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662844|10-A/C 0.003164375 0.003147941 -5.220690e-03 -6.291284e-03 -1.978391e-05  
## 6662885|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662886|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662910|18-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662926|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663096|18-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663907|45-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663910|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663965|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663983|49-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663986|51-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664025|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664038|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664063|32-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664295|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664431|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664713|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665122|10-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665220|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665221|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100109498|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100109477|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100109477|9-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665568|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665571|10-T/C 0.004181929 0.004169210 -3.050546e-03 -3.678273e-03 -1.532614e-05  
## 6665805|26-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666099|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666516|59-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100124929|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016665|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016860|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019055|15-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019486|67-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020835|48-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044994|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064828|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064931|32-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065941|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073522|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100081694|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093694|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100114698|38-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121709|38-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631771|63-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6643511|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650389|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650408|50-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650436|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650531|50-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650573|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650637|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650654|52-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650710|46-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650720|22-A/T 0.003224348 0.003208331 -4.992122e-03 -6.015931e-03 -1.928183e-05  
## 6650779|16-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650822|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650832|27-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650901|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650902|39-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650937|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650960|65-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651019|62-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651142|65-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651204|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651227|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651280|20-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651418|16-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651508|15-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651574|38-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651577|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651598|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651697|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651725|7-T/C 0.005596616 0.005562399 -6.151465e-03 -7.432448e-03 -4.129138e-05  
## 6651760|20-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651762|50-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651788|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651792|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651793|43-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651862|51-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651882|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651884|35-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651903|16-A/G 0.003424269 0.003405179 -5.606208e-03 -6.758143e-03 -2.298688e-05  
## 6651924|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651929|41-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651993|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651998|13-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652029|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652043|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652138|37-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652167|65-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652206|59-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652238|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652289|28-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652298|67-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652307|44-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652334|58-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652336|15-C/A 0.003573071 0.003550595 -6.330383e-03 -7.633364e-03 -2.706867e-05  
## 6652366|34-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652425|29-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652524|49-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652588|40-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652613|43-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652632|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652778|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652802|13-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652819|42-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652826|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653026|52-G/C 0.008262117 0.008321464 7.131759e-03 8.617117e-03 7.180930e-05  
## 6653068|62-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653116|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653218|66-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653354|23-C/A 0.004181383 0.004169119 -2.941514e-03 -3.546725e-03 -1.477802e-05  
## 6653444|44-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653464|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653494|25-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653568|59-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653672|51-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653690|24-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653700|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653713|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653736|20-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653875|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653968|66-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653974|33-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653991|65-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657021|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657102|16-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657128|18-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657132|5-A/C 0.005102448 0.005059162 -8.555999e-03 -1.033754e-02 -5.220982e-05  
## 6657178|34-G/A 0.003904634 0.003880747 -6.155424e-03 -7.424603e-03 -2.877753e-05  
## 6657193|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657201|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657204|30-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657318|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657354|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657383|35-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657458|5-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657566|43-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657607|43-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657631|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657655|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657745|21-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657813|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657950|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658016|18-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658025|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658074|26-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658086|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658116|19-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658140|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658176|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658256|13-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658270|50-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658309|15-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658382|35-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658386|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658396|48-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658416|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658448|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658539|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658593|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658605|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658616|40-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658646|18-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661133|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661179|34-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661195|26-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661294|16-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661342|14-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661347|62-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661359|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661360|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661375|25-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661390|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661411|10-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661415|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661429|43-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661461|24-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661525|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661561|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661611|46-A/C 0.003811935 0.003791888 -5.286880e-03 -6.375274e-03 -2.414877e-05  
## 6661622|45-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100097038|21-G/A 0.019621662 0.019553802 -3.470446e-03 -4.250836e-03 -8.306231e-05  
## 6661741|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661767|9-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661768|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661780|15-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661784|18-A/G 0.004667543 0.004635949 -6.815180e-03 -8.227782e-03 -3.809158e-05  
## 6661801|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662572|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662577|20-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662598|13-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662619|18-C/T 0.010540075 0.010437235 -9.853207e-03 -1.197340e-02 -1.247229e-04  
## 6662621|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662686|27-C/T 0.004008637 0.003974985 -8.466160e-03 -1.021758e-02 -4.054596e-05  
## 6662729|33-C/T 0.003981951 0.003970537 -2.874625e-03 -3.465333e-03 -1.375132e-05  
## 6662743|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662903|44-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664062|57-T/C 0.004957381 0.004911197 -9.403717e-03 -1.136205e-02 -5.569632e-05  
## 6664077|54-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664087|35-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664282|11-G/A 0.003356421 0.003337181 -5.765327e-03 -6.949706e-03 -2.316569e-05  
## 6664352|17-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664715|34-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665049|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665121|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665508|35-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665515|61-A/G 0.003988035 0.003971551 -4.150475e-03 -5.004666e-03 -1.985979e-05  
## 6665540|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665849|33-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666095|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666174|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666520|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015941|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016251|35-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016732|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045346|24-C/T 0.003163200 0.003147745 -4.909962e-03 -5.916461e-03 -1.860522e-05  
## 100045582|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045632|7-G/A 0.004086275 0.004068580 -4.349327e-03 -5.245170e-03 -2.132183e-05  
## 100064767|54-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064928|53-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065927|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100074119|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082416|45-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100085968|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091287|38-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093420|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100104859|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121707|24-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650478|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650577|59-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650765|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651007|49-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651119|61-A/G 0.003356407 0.003337179 -5.761709e-03 -6.945339e-03 -2.315113e-05  
## 6651133|33-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651237|16-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651693|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651704|49-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651952|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652155|42-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652275|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652283|16-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652292|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652303|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652553|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652626|33-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652630|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652656|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652758|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653200|23-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653877|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653984|20-G/T 0.003105606 0.003089617 -5.174867e-03 -6.235640e-03 -1.924580e-05  
## 6656875|8-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656924|30-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656996|5-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657117|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657154|6-G/A 0.013689595 0.013855673 1.198628e-02 1.454830e-02 2.020597e-04  
## 6657156|29-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657483|18-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657561|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657735|31-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657741|7-G/A 0.003990156 0.003971904 -4.595121e-03 -5.541328e-03 -2.198940e-05  
## 6657814|9-A/G 0.003165683 0.003148159 -5.566457e-03 -6.708430e-03 -2.109569e-05  
## 6657850|12-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657942|13-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657997|45-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658062|30-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658550|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658582|12-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658632|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661273|54-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661308|52-T/C 0.008046198 0.007954790 -1.149098e-02 -1.393305e-02 -1.105797e-04  
## 6661408|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661538|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661791|66-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661818|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662638|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662824|38-C/T 0.004287111 0.004275772 -2.651927e-03 -3.197710e-03 -1.366543e-05  
## 6662887|8-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663037|41-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664882|7-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665050|32-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665295|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019888|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045453|46-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045704|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064586|17-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066059|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100074054|47-T/A 0.008028497 0.007951839 -9.640243e-03 -1.168445e-02 -9.273371e-05  
## 100082120|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100086057|9-A/G 0.004181547 0.004169147 -2.974277e-03 -3.586252e-03 -1.494272e-05  
## 100086096|24-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093333|41-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100098548|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100104693|28-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100104890|20-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106918|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100086278|15-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100098561|7-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100112393|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665409|19-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106209|11-T/A 0.011415432 0.011441356 2.265804e-03 2.749115e-03 3.146786e-05  
## 6652014|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016895|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661843|44-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652389|64-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661649|50-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657666|21-A/T 0.008071844 0.008120375 5.976504e-03 7.221533e-03 5.871165e-05  
## 6661268|63-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023082|28-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017188|42-C/G 0.003356628 0.003337216 -5.816852e-03 -7.011888e-03 -2.337296e-05  
## 6661288|45-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021319|48-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045470|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661435|57-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065514|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630387|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065726|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653782|5-C/T 0.008739415 0.008766511 3.090859e-03 3.739420e-03 3.280193e-05  
## 100021899|36-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066454|16-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065272|30-T/C 0.025214837 0.025569994 1.388960e-02 1.705129e-02 4.372125e-04  
## 100066129|22-G/A 0.005780409 0.005752674 -4.821303e-03 -5.824818e-03 -3.347597e-05  
## 6653374|61-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664733|54-T/A 0.009805735 0.009712993 -9.548268e-03 -1.159353e-02 -1.123928e-04  
## 100022349|67-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015942|46-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016792|52-G/C 0.003290544 0.003271736 -5.748888e-03 -6.929408e-03 -2.264512e-05  
## 100018206|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064825|31-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066202|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073401|49-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633382|47-T/C 0.016262174 0.016599251 2.030679e-02 2.467078e-02 4.111797e-04  
## 100021640|61-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022856|29-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023978|37-A/T 0.004518623 0.004506858 -2.610544e-03 -3.148516e-03 -1.418250e-05  
## 6652591|64-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661464|50-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015796|50-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016769|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019373|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023055|35-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100097014|5-T/G 0.003166399 0.003148278 -5.755761e-03 -6.936839e-03 -2.181396e-05  
## 6661225|60-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661548|33-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017088|61-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023509|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015492|43-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018948|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020108|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020234|29-G/C 0.006275979 0.006287087 1.766684e-03 2.132656e-03 1.341293e-05  
## 100021104|60-G/C 0.003109136 0.003090206 -6.125830e-03 -7.382968e-03 -2.278694e-05  
## 100022438|10-G/T 0.003049822 0.003033556 -5.362094e-03 -6.461126e-03 -1.957917e-05  
## 100065777|27-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634350|32-G/T 0.003497059 0.003476362 -5.953695e-03 -7.178053e-03 -2.492380e-05  
## 100015248|33-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016465|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016470|38-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017055|22-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020326|38-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020580|5-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020916|54-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022162|26-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022968|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023214|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023558|48-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065527|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100108046|10-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652805|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653649|51-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016806|34-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016973|34-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017185|9-C/T 0.013743178 0.013864604 8.757947e-03 1.063735e-02 1.477410e-04  
## 100019652|10-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020977|12-T/C 0.007879542 0.007927014 5.988576e-03 7.234701e-03 5.741826e-05  
## 100021791|20-G/A 0.003431819 0.003406437 -7.451110e-03 -8.985513e-03 -3.056297e-05  
## 100064895|33-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064988|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653972|28-A/G 0.004413927 0.004390625 -5.307186e-03 -6.403656e-03 -2.808621e-05  
## 6658602|21-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015510|28-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016175|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016191|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018397|31-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019542|48-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020295|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020374|38-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021678|59-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066638|43-T/G 0.003164317 0.003147931 -5.205256e-03 -6.272665e-03 -1.972536e-05  
## 6653330|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015953|68-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016139|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016326|61-C/T 0.003733038 0.003708593 -6.591593e-03 -7.950030e-03 -2.944456e-05  
## 100016487|19-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016577|32-A/G 0.005071039 0.005053927 -3.385856e-03 -4.086503e-03 -2.063890e-05  
## 100016760|26-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016954|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017145|65-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017289|41-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017927|57-A/G 0.006465471 0.006419459 -7.167617e-03 -8.669541e-03 -5.557398e-05  
## 100019119|41-A/C 0.007056146 0.007086190 4.239733e-03 5.119493e-03 3.630846e-05  
## 100019129|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020392|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021327|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022094|8-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023476|68-C/T 0.003227665 0.003208884 -5.852817e-03 -7.054380e-03 -2.261019e-05  
## 100065094|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082310|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091292|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633859|61-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651602|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653320|67-A/G 0.004787541 0.004766178 -4.482367e-03 -5.409566e-03 -2.575984e-05  
## 100015805|62-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016005|36-T/C 0.008009363 0.007648025 -4.724587e-02 -5.769800e-02 -4.371061e-04  
## 100017432|35-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019685|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020281|34-T/C 0.010600072 0.010727252 1.185580e-02 1.434536e-02 1.542512e-04  
## 100020816|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020920|57-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021124|31-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021513|63-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021836|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022515|43-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023216|57-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023496|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023681|60-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065088|33-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065666|45-T/C 0.013726512 0.013861826 9.761642e-03 1.185386e-02 1.646369e-04  
## 100066471|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652033|13-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661430|6-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661570|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661730|63-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016186|12-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016774|44-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017111|47-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017208|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017523|52-T/C 0.007362110 0.007265666 -1.327395e-02 -1.608959e-02 -1.165913e-04  
## 100017874|53-A/G 0.011617456 0.011630687 1.137639e-03 1.380899e-03 1.606446e-05  
## 100018144|64-A/G 0.003226249 0.003208648 -5.485425e-03 -6.611069e-03 -2.118932e-05  
## 100018225|53-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018942|41-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019677|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022269|27-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066082|15-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066253|43-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066444|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100114672|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651282|60-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651428|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652874|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015264|22-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015814|11-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015850|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016120|45-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017115|64-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017958|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018308|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018683|52-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019218|10-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019222|23-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020050|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020331|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020335|6-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021226|41-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021502|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021862|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021994|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022357|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022781|47-C/T 0.005112516 0.005060840 -1.021092e-02 -1.234127e-02 -6.232964e-05  
## 100023182|23-A/G 0.006527226 0.006475712 -7.955044e-03 -9.624083e-03 -6.222363e-05  
## 100023311|52-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023534|68-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653500|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661123|54-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665401|24-G/T 0.009765793 0.009797567 3.243005e-03 3.927438e-03 3.850429e-05  
## 100015499|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015907|12-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016631|34-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019009|45-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019123|42-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019424|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019445|67-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019654|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020359|57-A/G 0.016282845 0.016602696 1.926502e-02 2.341048e-02 3.901746e-04  
## 100020876|63-C/T 0.003420280 0.003404514 -4.630988e-03 -5.581428e-03 -1.898445e-05  
## 100022261|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022625|36-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023251|49-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100090852|5-C/T 0.009959269 0.009869701 -9.075061e-03 -1.101962e-02 -1.085630e-04  
## 6653799|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661647|17-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015702|42-C/T 0.003049422 0.003033489 -5.252076e-03 -6.328416e-03 -1.917702e-05  
## 100015896|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016097|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016416|52-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016914|9-T/G 0.003163935 0.003147868 -5.104250e-03 -6.150819e-03 -1.934220e-05  
## 100017736|15-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018093|40-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018383|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018805|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018914|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019000|63-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019412|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019519|62-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019671|36-A/G 0.012572281 0.012779141 1.618729e-02 1.960859e-02 2.513922e-04  
## 100019895|42-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020000|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020210|64-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021670|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021761|67-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022043|14-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022106|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022213|48-C/T 0.010271927 0.010392543 1.160607e-02 1.403924e-02 1.462420e-04  
## 100022452|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022997|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065791|46-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066265|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066487|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100101063|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634524|57-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652255|33-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661618|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015912|66-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015914|56-A/G 0.003496984 0.003476349 -5.935659e-03 -7.156282e-03 -2.484820e-05  
## 100016606|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016946|25-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017520|47-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018722|5-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019526|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019891|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020909|55-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020985|50-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021139|33-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021214|56-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021255|31-C/T 0.003565899 0.003549399 -4.648577e-03 -5.603465e-03 -1.987044e-05  
## 100021313|59-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022420|43-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022458|29-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022624|40-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022691|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023114|8-T/A 0.003223826 0.003208244 -4.856681e-03 -5.852551e-03 -1.875818e-05  
## 100023164|37-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023165|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023475|55-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024879|34-A/G 0.003646817 0.003627127 -5.428674e-03 -6.545359e-03 -2.371507e-05  
## 6650963|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650995|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015203|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015415|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015496|59-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015847|60-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015873|28-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015977|34-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016012|21-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016160|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016617|11-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016919|15-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016933|17-A/C 0.003724653 0.003707195 -4.709132e-03 -5.677433e-03 -2.102753e-05  
## 100017138|9-G/C 0.008261465 0.008321355 7.197202e-03 8.696070e-03 7.246725e-05  
## 100017592|13-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017929|18-A/C 0.003500028 0.003476856 -6.664412e-03 -8.036094e-03 -2.790311e-05  
## 100018201|42-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018285|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018596|39-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018944|19-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019340|48-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019515|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019761|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019817|32-A/G 0.003503101 0.003477369 -7.399882e-03 -8.924282e-03 -3.098709e-05  
## 100020455|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020993|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022157|60-A/G 0.006333841 0.006288705 -7.177468e-03 -8.680322e-03 -5.450962e-05  
## 100023102|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045024|30-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065312|53-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066063|67-C/T 0.004213879 0.004174535 -9.424722e-03 -1.137897e-02 -4.741239e-05  
## 100066423|46-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634305|33-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651275|16-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652010|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661116|34-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664719|65-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015734|66-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015877|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016028|28-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016794|51-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016930|62-C/T 0.003105078 0.003089530 -5.032768e-03 -6.064237e-03 -1.871678e-05  
## 100016976|17-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017073|58-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017352|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017471|13-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017594|43-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017596|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018057|54-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018384|20-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018436|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018459|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018601|57-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018886|5-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019401|38-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019538|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019682|13-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019773|68-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019884|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020084|63-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020358|5-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020410|17-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020846|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021982|22-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022352|35-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023106|5-T/A 0.006710579 0.006673985 -5.483063e-03 -6.631399e-03 -4.420933e-05  
## 100023435|47-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023548|13-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064672|55-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091227|51-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121014|17-C/T 0.010362579 0.010407652 4.330726e-03 5.246744e-03 5.465359e-05  
## 6653240|15-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015605|26-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015623|29-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015712|9-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015915|16-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016293|25-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016319|36-T/C 0.009239945 0.008849932 -4.406957e-02 -5.385132e-02 -4.723800e-04  
## 100016723|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017173|15-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017697|22-G/A 0.004109576 0.004072463 -9.113087e-03 -1.100088e-02 -4.471903e-05  
## 100018492|22-T/C 0.004081095 0.004067716 -3.288909e-03 -3.965472e-03 -1.611981e-05  
## 100018548|16-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018796|68-C/T 0.008135875 0.008091447 -5.490664e-03 -6.650145e-03 -5.375021e-05  
## 100018865|11-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018936|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019019|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019086|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019131|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019765|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019951|22-C/T 0.004784091 0.004765602 -3.879596e-03 -4.681527e-03 -2.229299e-05  
## 100020346|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021253|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021441|53-T/C 0.003352354 0.003336503 -4.750673e-03 -5.725423e-03 -1.908474e-05  
## 100021634|50-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021664|5-T/C 0.004306814 0.004279056 -6.487017e-03 -7.828248e-03 -3.345405e-05  
## 100021900|25-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021918|16-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021944|59-G/C 0.003570205 0.003550117 -5.658366e-03 -6.822088e-03 -2.419180e-05  
## 100022064|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022439|9-G/A 0.003224606 0.003208375 -5.059155e-03 -6.096795e-03 -1.954101e-05  
## 100022958|60-G/A 0.003353855 0.003336754 -5.125141e-03 -6.177197e-03 -2.059066e-05  
## 100023335|10-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066167|17-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652225|65-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653132|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653692|35-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661742|53-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663972|39-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664076|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015254|42-A/G 0.014552757 0.014622753 4.786772e-03 5.823379e-03 8.523535e-05  
## 100015421|66-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017443|50-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018227|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018684|33-T/C 0.003226096 0.003208623 -5.445817e-03 -6.563279e-03 -2.103615e-05  
## 100019036|18-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019346|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019642|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020216|59-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020462|12-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020825|41-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021447|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021487|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022350|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022637|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022974|38-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023108|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023245|57-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023390|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023533|34-T/C 0.005388370 0.005378348 -1.863314e-03 -2.248929e-03 -1.209101e-05  
## 100064760|51-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064984|7-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6635254|28-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650882|51-G/T 0.004079955 0.004067526 -3.055482e-03 -3.683850e-03 -1.497500e-05  
## 6651794|65-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652456|5-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652956|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653074|11-G/T 0.003570786 0.003550214 -5.794728e-03 -6.986689e-03 -2.477549e-05  
## 6653246|55-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653257|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653558|37-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653841|24-C/G 0.003166749 0.003148337 -5.848421e-03 -7.048645e-03 -2.216555e-05  
## 6661717|50-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015306|34-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017026|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017183|63-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017740|39-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018186|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018502|54-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019407|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019597|22-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019799|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020064|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020467|61-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021342|19-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021726|23-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021853|38-A/G 0.004525751 0.004508046 -3.927428e-03 -4.738062e-03 -2.134262e-05  
## 100022073|47-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022174|61-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022237|64-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022450|28-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023247|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024830|48-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065475|5-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065743|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651542|50-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652006|5-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652136|34-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652490|28-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653164|33-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661138|57-G/A 0.019945180 0.019842054 -5.197351e-03 -6.370370e-03 -1.262698e-04  
## 6661286|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015294|55-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015312|26-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015717|58-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016035|58-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017166|55-C/G 0.003106465 0.003089761 -5.406361e-03 -6.514894e-03 -2.010770e-05  
## 100017336|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017436|6-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018333|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018623|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018949|25-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019179|31-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019378|46-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019715|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020007|20-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020186|42-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020325|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020984|22-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021063|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021116|47-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021276|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021323|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023352|36-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023524|20-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064607|25-T/A 0.014068356 0.013918800 -1.074490e-02 -1.310603e-02 -1.820282e-04  
## 100064666|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066449|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100104023|51-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651556|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651732|66-T/C 0.006768649 0.006469989 -4.616094e-02 -5.629031e-02 -3.608353e-04  
## 6652161|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653042|9-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661220|17-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015287|46-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015379|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015449|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016230|18-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016245|55-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016437|62-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017249|15-G/A 0.003723267 0.003706964 -4.397863e-03 -5.301821e-03 -1.963637e-05  
## 100018724|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018729|20-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018771|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019308|38-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019625|33-C/T 0.003049422 0.003033489 -5.252076e-03 -6.328416e-03 -1.917702e-05  
## 100019716|25-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020654|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021098|19-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021170|5-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021240|55-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021330|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021985|6-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022470|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022786|9-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022992|63-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023087|65-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023089|12-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065113|20-C/T 0.007874564 0.007926184 6.512607e-03 7.866911e-03 6.243580e-05  
## 100065660|34-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082081|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650676|61-A/G 0.003356407 0.003337179 -5.761709e-03 -6.945339e-03 -2.315113e-05  
## 6650683|35-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650847|62-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651376|46-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651698|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652341|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652418|6-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652657|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653549|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653926|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661137|45-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661795|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664067|38-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015300|34-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015553|64-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015662|64-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015747|67-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016172|45-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016321|25-T/C 0.004546715 0.004511540 -7.796848e-03 -9.413632e-03 -4.240375e-05  
## 100016379|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016524|6-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016678|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017389|39-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017447|10-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018638|48-T/C 0.005417780 0.005383250 -6.414302e-03 -7.749032e-03 -4.166146e-05  
## 100019669|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021395|62-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021505|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021653|13-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021672|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022109|34-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022563|58-C/T 0.003850325 0.003798287 -1.370062e-02 -1.654964e-02 -6.268803e-05  
## 100022828|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023017|29-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066440|62-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066652|41-G/A 0.003105415 0.003089586 -5.123420e-03 -6.173582e-03 -1.905426e-05  
## 100096906|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630114|53-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650736|10-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651252|16-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653034|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653152|22-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653197|10-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653543|62-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653729|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658435|49-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661280|18-T/C 0.006428226 0.006413251 -2.334929e-03 -2.821361e-03 -1.808564e-05  
## 6661782|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015470|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016237|28-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016452|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016620|23-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016680|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016867|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016970|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018066|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018458|45-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018598|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019260|10-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019313|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020459|17-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022183|15-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022219|59-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022324|20-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022476|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022820|44-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065830|50-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073534|35-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100108129|53-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631518|25-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650419|25-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650596|64-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650922|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650997|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651758|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652094|60-T/C 0.011437901 0.011447012 7.960057e-04 9.661051e-04 1.106078e-05  
## 6652276|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652446|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652850|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652911|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653387|31-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653442|7-A/G 0.003576968 0.003551244 -7.243555e-03 -8.736126e-03 -3.097917e-05  
## 6653457|43-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653666|33-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653913|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661714|10-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661819|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665305|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015271|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015651|23-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016940|6-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017024|68-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018261|61-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018474|24-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018954|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019606|34-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019837|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020506|37-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020651|11-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021368|14-C/T 0.007987290 0.007944972 -5.326404e-03 -6.450019e-03 -5.119063e-05  
## 100021399|20-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021433|22-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021823|21-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022483|30-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022774|66-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023022|43-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023206|43-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023292|16-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023396|25-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024289|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045482|25-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065022|34-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065562|43-G/A 0.004078842 0.004067341 -2.827588e-03 -3.408931e-03 -1.385744e-05  
## 100065795|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066292|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073974|41-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082647|16-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650814|43-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650908|37-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651113|11-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651346|28-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651709|24-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652049|29-T/C 0.004029335 0.003978434 -1.279419e-02 -1.545469e-02 -6.132814e-05  
## 6652500|45-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652777|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653333|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653390|14-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653414|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653728|20-G/T 0.003163644 0.003147819 -5.027309e-03 -6.058008e-03 -1.905034e-05  
## 6654032|23-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654037|57-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657904|10-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661607|55-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661700|18-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662767|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664074|40-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664074|44-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664735|26-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665238|34-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100124938|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015346|10-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016456|52-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016501|31-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017004|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017283|39-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017322|41-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017407|26-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017421|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018243|9-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018879|32-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019658|67-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020347|21-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021567|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021727|64-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023434|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066346|64-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066369|51-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066626|37-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631525|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650677|49-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650829|66-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650865|22-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651274|64-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651327|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651363|38-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651684|66-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652046|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652267|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652284|17-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652529|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652900|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653610|43-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653665|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653751|12-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653876|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654005|53-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654018|46-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661150|29-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661536|5-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664750|33-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100103994|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100103994|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100104021|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015729|18-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015952|21-T/A 0.003227045 0.003208781 -5.691783e-03 -6.860061e-03 -2.198738e-05  
## 100016302|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016507|10-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016962|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017543|65-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018176|18-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018259|44-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019881|23-C/A 0.003353575 0.003336707 -5.055285e-03 -6.092915e-03 -2.030972e-05  
## 100019923|11-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020081|6-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020349|28-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022424|20-G/A 0.003996909 0.003973030 -6.010331e-03 -7.250055e-03 -2.877006e-05  
## 100023400|43-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044682|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044750|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065250|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065326|31-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065589|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066526|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091166|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091166|42-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650613|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650687|41-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650796|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650803|47-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651101|36-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651528|20-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651771|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651853|15-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652025|35-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652815|7-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652936|53-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653177|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653241|40-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653293|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653307|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653389|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653538|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653579|57-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653832|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661683|57-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661685|63-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661816|48-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661824|42-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661850|36-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661890|47-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665337|42-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015757|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016204|33-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017468|57-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017967|62-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018112|46-A/C 0.003811935 0.003791888 -5.286880e-03 -6.375274e-03 -2.414877e-05  
## 100018165|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018718|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019849|5-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019859|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022136|24-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022312|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045521|11-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065432|12-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065536|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066606|52-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082316|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082368|14-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100097022|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100108129|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631225|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631997|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650612|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650648|12-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651035|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651242|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651289|37-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651290|54-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651373|58-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651393|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651401|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651427|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651437|43-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651445|36-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651476|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651646|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651749|48-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651841|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652088|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652192|52-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652260|63-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652326|50-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652369|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652422|33-T/C 0.003226096 0.003208623 -5.445817e-03 -6.563279e-03 -2.103615e-05  
## 6652547|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652893|32-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652909|24-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652955|18-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653017|55-G/A 0.003494054 0.003475861 -5.234200e-03 -6.309668e-03 -2.190857e-05  
## 6653103|52-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653677|36-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653708|16-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653903|37-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653934|25-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654040|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654091|9-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657832|39-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661183|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661274|44-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661675|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663998|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664011|37-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016463|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016812|38-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017567|49-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017961|50-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018143|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019099|54-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019383|33-G/T 0.003981937 0.003970534 -2.871771e-03 -3.461891e-03 -1.373766e-05  
## 100019940|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020427|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020660|8-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020677|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021361|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021511|43-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021828|33-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022057|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022783|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064616|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065171|45-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065966|15-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082527|51-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082585|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106949|10-G/A 0.046963181 0.049879666 5.847042e-02 7.277104e-02 3.672242e-03  
## 100117044|51-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650418|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650423|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650818|67-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651153|49-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651180|65-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651287|48-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651447|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651655|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651717|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651971|61-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651981|50-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652195|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652270|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652411|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652419|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652451|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652920|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653067|56-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653377|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653583|28-T/C 0.003576743 0.003551207 -7.190835e-03 -8.672449e-03 -3.075336e-05  
## 6653636|14-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653697|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653731|66-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653767|20-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653770|20-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653784|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653810|62-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653854|42-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653892|54-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653910|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654022|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661470|52-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066269|13-T/C 0.058521878 0.061907841 5.469361e-02 6.895771e-02 4.315720e-03  
## 6662979|27-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664013|56-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664771|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665036|59-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015387|20-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016289|59-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017196|51-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017527|6-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017670|46-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018265|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018491|67-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019232|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019318|16-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019703|50-G/A 0.003105078 0.003089530 -5.032768e-03 -6.064237e-03 -1.871678e-05  
## 100019708|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019897|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020477|33-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022633|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023423|28-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064644|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065127|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082124|16-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6632526|27-G/T 0.006641953 0.006662548 3.091174e-03 3.731904e-03 2.487936e-05  
## 6650445|31-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650584|38-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650848|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651173|50-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651298|24-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651530|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651782|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651907|9-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652024|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652131|34-G/A 0.004653200 0.004633558 -4.238998e-03 -5.114914e-03 -2.368016e-05  
## 6652159|67-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652177|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652210|27-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652401|28-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652416|68-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652713|26-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652866|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652983|43-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653039|43-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653044|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653092|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653202|68-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653253|13-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653255|39-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653445|25-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653487|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653527|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653922|36-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653930|13-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654013|57-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657669|38-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658619|38-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661144|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661228|61-G/A 0.012584549 0.012781185 1.538486e-02 1.863977e-02 2.389714e-04  
## 6661239|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661757|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661837|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663958|42-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664017|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665345|60-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665563|37-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665563|41-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665563|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666102|24-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015848|14-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016751|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017832|10-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017856|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018301|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019450|10-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019818|16-G/A 0.004833758 0.004773880 -1.254273e-02 -1.516242e-02 -7.220200e-05  
## 100019983|13-A/G 0.011158609 0.011170900 1.100292e-03 1.334956e-03 1.491594e-05  
## 100020502|50-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020602|47-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065169|68-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066267|15-G/A 0.004182792 0.004169354 -3.223061e-03 -3.886424e-03 -1.619343e-05  
## 100066657|20-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6632946|54-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650395|54-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650450|36-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650539|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650675|13-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650760|49-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650770|63-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650778|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650888|42-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650948|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651067|68-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651104|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651269|64-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651380|66-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651460|39-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651469|31-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651565|25-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651594|47-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651714|59-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651809|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651814|64-A/G 0.010256262 0.010389933 1.286541e-02 1.555844e-02 1.620671e-04  
## 6652119|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652183|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652218|58-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652272|46-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652443|56-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652587|38-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652614|24-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652643|8-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652647|54-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652695|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652702|52-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652729|55-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652886|48-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653028|14-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653065|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653124|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653205|17-C/T 0.005264859 0.005217754 -9.027762e-03 -1.091035e-02 -5.682475e-05  
## 6653210|45-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653524|37-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653532|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653787|34-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653818|55-C/T 0.008740888 0.008766756 2.950758e-03 3.570027e-03 3.131602e-05  
## 6653820|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653825|25-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653908|59-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653938|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656975|12-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658434|32-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661131|30-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661170|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661460|63-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082330|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661516|30-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661542|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661650|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661787|54-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661807|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663931|44-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663966|33-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664887|16-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665234|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666170|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016216|6-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016431|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016980|14-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017035|18-A/G 0.004667543 0.004635949 -6.815180e-03 -8.227782e-03 -3.809158e-05  
## 100018089|20-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018299|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019103|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020260|22-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020593|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021233|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022402|38-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022743|53-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064690|24-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065349|19-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065841|23-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100074065|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650412|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650459|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650487|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650510|49-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650571|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650575|33-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650657|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650727|33-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650764|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650786|30-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650877|51-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650982|52-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650992|26-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651041|46-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651162|25-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651244|31-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651284|8-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651398|18-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651485|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651517|35-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651527|40-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651546|39-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651644|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651663|43-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651671|42-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651691|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651700|17-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651734|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651746|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651800|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651813|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651896|64-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651912|26-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651917|68-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652038|34-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652059|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652081|56-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652085|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652121|43-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652134|47-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652186|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652189|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652281|62-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652285|54-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652290|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652304|61-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652432|55-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652503|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652505|16-A/C 0.011862917 0.012078163 1.782105e-02 2.156514e-02 2.613956e-04  
## 6652521|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652525|37-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652601|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652602|25-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652606|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652624|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652668|15-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652670|16-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652721|10-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652733|37-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652745|53-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652752|31-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652791|49-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652818|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652862|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652881|22-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652972|10-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652998|52-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652999|57-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653082|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653098|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653162|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653274|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653325|64-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653332|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653357|42-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653362|53-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653412|42-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653426|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653440|10-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653465|26-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653468|58-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653470|47-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653503|52-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653589|18-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653681|55-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653716|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653721|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653756|39-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653768|57-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653772|52-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653912|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653970|10-G/T 0.004179079 0.004168735 -2.481179e-03 -2.991394e-03 -1.246414e-05  
## 6654035|9-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654089|34-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657074|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657427|36-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658142|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658487|31-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658567|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661106|67-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661340|59-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661404|52-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661465|25-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661493|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661592|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661602|55-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661729|38-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661755|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661849|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662667|9-T/C 0.003354876 0.003336924 -5.379977e-03 -6.484681e-03 -2.161560e-05  
## 6663069|39-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663912|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663945|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665239|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665353|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665974|11-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666103|68-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016182|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017836|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017869|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018411|68-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020222|50-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021008|5-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021734|34-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021842|6-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045232|8-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065195|59-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100074076|12-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100114674|53-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650380|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650404|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650422|10-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650471|64-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650500|18-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650515|50-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650537|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650542|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650554|41-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650556|9-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650615|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650633|41-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650636|55-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650715|51-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650784|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650806|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650812|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650885|45-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650890|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650891|27-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650939|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651045|37-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651063|37-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651127|50-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651189|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651213|10-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651259|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651305|62-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651312|67-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651314|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651471|5-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651479|37-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651523|45-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651524|18-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651611|23-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651617|38-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651627|10-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651680|16-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651686|18-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651990|27-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652031|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652068|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652123|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652141|65-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652156|37-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652188|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652217|66-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652220|47-G/A 0.003426295 0.003405516 -6.101434e-03 -7.355870e-03 -2.501997e-05  
## 6652222|50-C/T 0.004200338 0.004172279 -6.725143e-03 -8.115127e-03 -3.381303e-05  
## 6652329|66-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652364|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652450|9-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652454|59-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652470|43-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652506|53-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652539|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652561|39-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652572|11-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652637|54-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652648|60-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652659|15-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652665|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652728|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652751|58-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652774|48-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652817|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652845|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652939|61-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652947|66-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653004|32-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653011|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653170|45-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653174|64-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653291|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653324|46-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653415|50-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653489|12-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653514|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653535|20-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653594|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653646|49-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653674|54-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653683|31-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653750|55-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653771|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653779|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653822|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653827|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653858|29-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653928|36-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653969|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654051|34-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654056|9-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654078|12-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657388|11-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657512|7-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657941|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658094|46-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658571|22-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658640|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661287|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661315|34-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661316|17-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661420|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661453|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661468|17-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661489|62-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661552|5-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661577|44-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661601|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661629|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661651|60-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661703|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661728|35-C/T 0.008320769 0.008331239 1.256792e-03 1.520423e-03 1.267019e-05  
## 6662799|24-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662820|22-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662890|34-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662898|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662977|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664083|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664294|44-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664720|7-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665218|24-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665351|57-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100109477|37-C/T 0.012574695 0.012779543 1.602939e-02 1.941798e-02 2.489484e-04  
## 6665629|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665821|31-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016377|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016728|8-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017376|68-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018451|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019918|66-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022411|61-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064620|27-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064811|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065350|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100109953|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650460|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650519|57-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650579|51-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650580|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650607|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650671|45-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650689|52-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650703|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650815|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650944|60-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650965|12-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651031|38-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651069|41-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651089|58-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651139|39-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651355|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651367|34-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651487|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651578|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651593|32-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651619|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651620|38-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651675|34-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651806|49-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651821|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651825|51-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651968|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651983|9-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652057|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652073|37-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652074|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652115|60-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652197|23-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652244|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652249|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652338|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652392|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652466|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652514|66-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652554|50-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652556|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652589|8-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652749|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652753|11-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652776|45-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652806|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652834|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652885|65-C/G 0.003491475 0.003475431 -4.616463e-03 -5.564302e-03 -1.932049e-05  
## 6652929|66-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652935|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653073|5-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653088|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653093|44-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653104|55-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653436|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653497|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653639|65-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653645|43-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653769|16-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653927|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653953|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653987|61-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653993|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654009|23-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656879|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656932|34-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657077|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657152|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657200|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657228|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657447|9-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657510|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657518|14-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657616|11-A/G 0.004935486 0.004907548 -5.692816e-03 -6.873088e-03 -3.369161e-05  
## 6657889|17-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657989|13-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657992|32-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658007|29-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658058|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658330|11-C/G 0.003289899 0.003271628 -5.584771e-03 -6.731365e-03 -2.199792e-05  
## 6658349|12-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658401|16-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658424|11-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658451|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658473|36-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658548|12-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658667|17-A/G 0.004333982 0.004283584 -1.176544e-02 -1.421343e-02 -6.074117e-05  
## 6661128|54-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661132|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661145|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661169|16-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661418|24-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661447|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661551|43-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661606|48-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661621|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661667|62-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661716|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661770|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662676|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662737|6-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662747|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662778|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662831|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662962|22-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662984|35-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663913|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663996|47-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664080|40-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664712|24-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665849|24-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665849|27-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019306|41-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023120|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045071|11-G/T 0.003426543 0.003405558 -6.162131e-03 -7.429138e-03 -2.526918e-05  
## 100073787|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073808|38-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082396|45-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082676|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650780|18-C/T 0.011218569 0.011129021 -8.046347e-03 -9.780908e-03 -1.086768e-04  
## 6651956|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652018|68-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652299|52-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652898|20-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653146|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657342|25-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657451|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657720|20-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657882|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658021|6-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658104|7-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658212|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658246|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661212|11-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661231|65-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661373|56-C/G 0.008476689 0.008357226 -1.429461e-02 -1.734978e-02 -1.445815e-04  
## 6661472|51-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662632|29-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662644|9-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662718|14-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662788|5-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663015|45-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663056|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663101|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663942|12-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663943|19-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664030|20-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664734|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665050|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665686|46-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064830|15-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073523|7-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073850|23-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100074130|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100085916|27-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100085918|17-C/T 0.006709068 0.006673734 -5.294579e-03 -6.403190e-03 -4.268793e-05  
## 100093520|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100102104|19-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100104847|9-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100107045|42-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100111102|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100118833|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100118214|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661395|67-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661549|61-G/A 0.004930617 0.004906737 -4.866900e-03 -5.874937e-03 -2.879871e-05  
## 6664299|8-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661899|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100117994|5-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100118292|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100120255|8-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100122091|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658340|10-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662816|5-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662936|6-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662936|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662964|8-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662966|17-G/A 0.016231962 0.016594216 2.183014e-02 2.651264e-02 4.418774e-04  
## 6664885|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661031|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066612|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652306|13-T/C 0.020435083 0.020766958 1.598091e-02 1.951478e-02 4.065579e-04  
## 100085941|14-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018734|36-T/A 0.005301946 0.005223935 -1.493329e-02 -1.806943e-02 -9.411162e-05  
## 6661163|12-C/T 0.026650911 0.027021416 1.371151e-02 1.685810e-02 4.567790e-04  
## 100065635|32-C/T 0.034002011 0.036531199 6.923364e-02 8.483009e-02 3.141855e-03  
## 6661774|57-G/A 0.004980275 0.004915013 -1.327801e-02 -1.605600e-02 -7.870586e-05  
## 100082623|35-G/A 0.072131545 0.073168640 1.417404e-02 1.827928e-02 1.341261e-03  
## 100065110|61-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661113|35-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100118834|24-T/A 0.027206478 0.027726653 1.876083e-02 2.305612e-02 6.416677e-04  
## 100065734|46-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663988|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661432|6-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661894|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100025027|41-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065037|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661398|17-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661689|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664901|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661325|52-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024800|55-T/C 0.004007657 0.003974821 -8.261048e-03 -9.969618e-03 -3.956198e-05  
## 6661569|21-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015330|20-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017807|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021430|18-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021922|61-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024081|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044596|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651341|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652981|11-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065893|67-C/T 0.005784340 0.005753329 -5.390202e-03 -6.512896e-03 -3.743044e-05  
## 100015238|36-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015491|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015884|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019050|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022813|55-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653072|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016062|38-A/G 0.024774061 0.025586337 3.174648e-02 3.881708e-02 9.994929e-04  
## 100017135|23-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021766|9-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022076|54-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661377|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015975|43-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016187|49-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024150|52-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018712|5-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021390|26-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045683|24-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661840|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016255|15-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020380|45-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021355|11-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021470|64-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023138|54-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023921|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650819|43-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653757|13-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015309|36-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015511|36-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015825|32-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016469|15-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019560|67-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021988|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022638|31-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022674|60-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023456|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023464|21-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023506|63-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121198|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664022|46-T/C 0.010267296 0.009881151 -3.907896e-02 -4.775446e-02 -4.681810e-04  
## 100017302|21-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017884|42-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020887|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022100|32-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022978|31-G/T 0.018560977 0.019243367 3.546104e-02 4.305268e-02 8.343542e-04  
## 100064951|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100108048|25-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653000|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661699|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015643|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016494|59-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017300|12-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017465|6-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019558|59-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021942|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022249|52-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022694|55-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022788|12-C/T 0.005985355 0.005957877 -4.612086e-03 -5.572969e-03 -3.317243e-05  
## 100101046|61-C/A 0.003572500 0.003550499 -6.196525e-03 -7.471750e-03 -2.649557e-05  
## 6652314|37-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015332|7-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015389|56-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015557|20-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017329|58-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018963|60-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019082|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019182|47-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020256|17-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020398|8-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021013|48-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021289|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023421|10-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653492|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661385|64-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661806|68-G/A 0.009014038 0.008812281 -2.289495e-02 -2.785137e-02 -2.443103e-04  
## 100017094|36-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017357|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018276|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018426|49-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018952|47-A/T 0.003163807 0.003147846 -5.070489e-03 -6.110095e-03 -1.921413e-05  
## 100021643|42-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022068|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022755|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066666|24-G/A 0.004183499 0.004169472 -3.364276e-03 -4.056821e-03 -1.690342e-05  
## 6661519|31-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015745|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018424|55-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021037|43-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021847|31-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022744|13-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023381|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023472|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023477|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024933|20-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651050|34-T/C 0.003902411 0.003880376 -5.678509e-03 -6.848684e-03 -2.654529e-05  
## 6652421|32-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082161|17-G/C 0.006332294 0.006199415 -2.143414e-02 -2.599632e-02 -1.604711e-04  
## 6661817|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665065|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666515|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015276|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016849|33-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018157|49-A/G 0.003227888 0.003208922 -5.910640e-03 -7.124158e-03 -2.283384e-05  
## 100018512|6-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019166|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019599|68-C/T 0.004642066 0.004631702 -2.237561e-03 -2.698803e-03 -1.249446e-05  
## 100020395|68-C/T 0.003227665 0.003208884 -5.852817e-03 -7.054380e-03 -2.261019e-05  
## 100020496|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022054|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022238|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022761|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064714|31-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082512|27-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6635566|26-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651319|63-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100101042|27-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015522|21-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015635|48-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016324|17-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017167|42-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017270|46-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018878|51-C/T 0.003357532 0.003337366 -6.042336e-03 -7.284033e-03 -2.428011e-05  
## 100019810|41-A/G 0.003421253 0.003404676 -4.868958e-03 -5.868522e-03 -1.996096e-05  
## 100020422|49-T/G 0.003360452 0.003337853 -6.770587e-03 -8.163153e-03 -2.721051e-05  
## 100021781|44-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022052|36-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022732|37-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023771|42-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064904|9-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066133|22-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6635226|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661769|64-T/A 0.003166521 0.003148299 -5.787988e-03 -6.975724e-03 -2.193624e-05  
## 100015503|66-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015669|26-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016926|66-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017163|47-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017930|44-G/A 0.003650041 0.003627664 -6.168368e-03 -7.438335e-03 -2.695049e-05  
## 100018643|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019627|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019775|26-T/C 0.006536948 0.006233524 -4.867615e-02 -5.937375e-02 -3.665046e-04  
## 100020011|13-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020180|30-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020794|35-G/A 0.004544437 0.004511160 -7.376609e-03 -8.905480e-03 -4.011478e-05  
## 100022441|55-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065577|55-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066375|31-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100101063|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634311|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650564|10-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651449|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015590|56-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015813|59-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015865|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015966|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016299|67-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017046|59-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017306|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017681|59-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018541|45-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019001|52-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019248|51-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019357|10-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020167|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020584|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020830|34-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021518|64-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023323|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065274|22-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066055|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652294|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661350|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015979|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016232|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016804|11-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016918|64-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017355|38-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018239|64-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018653|43-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019075|38-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020739|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022196|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022506|24-C/G 0.003227057 0.003208783 -5.695078e-03 -6.864037e-03 -2.200012e-05  
## 100022716|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065001|58-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661682|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016459|9-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016800|17-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016857|32-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016901|25-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017304|40-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018018|24-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018056|56-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018188|36-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018521|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019406|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019617|68-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020206|45-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021877|23-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022598|56-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022715|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022769|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023124|68-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045390|32-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064869|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066159|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651348|40-T/G 0.004787521 0.004766174 -4.478908e-03 -5.405387e-03 -2.573994e-05  
## 6651910|25-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661267|31-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661407|12-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661471|46-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015328|40-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015329|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015695|23-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015994|62-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016280|42-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016310|50-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017976|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018090|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018376|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019811|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019879|32-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020836|42-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020897|56-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020918|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022084|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022253|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022347|11-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022822|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022863|16-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064727|32-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064762|17-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065060|19-C/T 0.007063296 0.006964253 -1.422157e-02 -1.723631e-02 -1.196966e-04  
## 100065198|28-C/T 0.011760426 0.011880706 1.012400e-02 1.226854e-02 1.460540e-04  
## 100065497|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066169|37-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066413|57-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066518|25-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650606|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650782|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651161|26-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651343|64-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651987|65-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652583|9-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653986|35-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017405|46-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018360|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020046|11-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020184|33-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020356|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021172|11-C/T 0.009419919 0.009506494 9.106994e-03 1.101226e-02 1.048787e-04  
## 100021739|23-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022407|43-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022586|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023347|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630669|54-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651087|52-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653823|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661427|45-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664050|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015339|30-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015780|53-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016477|49-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016846|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017534|5-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018524|64-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018715|45-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019637|34-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019730|38-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020004|34-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020093|64-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020177|61-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020736|62-T/C 0.007419780 0.007366438 -7.241284e-03 -8.767194e-03 -6.448946e-05  
## 100021876|36-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022251|18-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022479|48-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023192|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065374|28-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065413|68-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065460|57-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065786|62-T/C 0.003231311 0.003209492 -6.798265e-03 -8.195508e-03 -2.626765e-05  
## 100065981|32-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093548|6-T/C 0.008340043 0.008003764 -4.201516e-02 -5.127307e-02 -4.069291e-04  
## 6635925|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651303|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652226|61-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652595|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652880|30-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653288|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661743|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015258|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015334|11-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015520|48-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016206|60-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016803|55-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016999|24-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017691|42-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018254|14-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018691|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018832|49-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018836|30-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018972|63-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018993|58-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019968|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019971|65-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020134|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020237|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020353|50-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021532|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022232|46-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022564|55-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064590|10-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064752|47-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066482|40-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066499|21-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082126|5-A/G 0.007314448 0.007257722 -7.815896e-03 -9.462976e-03 -6.857229e-05  
## 100082673|16-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100118390|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100118390|5-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650749|8-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650993|48-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651187|10-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652437|24-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652887|56-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653102|62-A/C 0.003164204 0.003147912 -5.175416e-03 -6.236669e-03 -1.961217e-05  
## 6653358|49-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661200|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661277|39-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661479|25-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665776|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100116183|6-G/A 0.004570300 0.004515470 -1.214254e-02 -1.467359e-02 -6.609724e-05  
## 100065388|52-T/C 0.017261190 0.017496748 1.346295e-02 1.639516e-02 2.876344e-04  
## 100015585|60-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016513|5-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016711|48-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017104|21-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017773|59-C/T 0.006042206 0.005967352 -1.254396e-02 -1.518234e-02 -9.037109e-05  
## 100017895|25-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018069|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018279|30-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018386|10-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018698|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021026|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021644|9-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022215|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023511|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065011|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065481|45-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065665|18-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082041|35-T/G 0.003642955 0.003626483 -4.542184e-03 -5.475524e-03 -1.983886e-05  
## 100082540|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6635352|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651637|46-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652697|44-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652848|23-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661188|24-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661506|68-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661846|36-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121512|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015223|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015336|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016018|57-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016257|18-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016363|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016533|62-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017334|62-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017905|42-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018782|32-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018840|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018918|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018973|26-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019583|32-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020635|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020952|67-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021607|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021759|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022391|27-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022668|57-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065738|47-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066164|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066550|5-T/C 0.012584847 0.012781235 1.536536e-02 1.861623e-02 2.386696e-04  
## 6633324|49-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634529|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651763|8-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651994|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652616|33-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653336|20-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653857|60-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661332|57-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661613|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015558|12-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016614|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016893|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016974|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017016|14-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018076|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019206|6-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019217|46-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019384|38-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019646|24-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019874|10-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019964|12-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020293|37-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020842|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021693|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022050|68-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022979|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023492|66-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045668|41-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065160|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066259|47-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630074|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651026|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651431|37-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651540|51-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651708|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652397|25-T/C 0.004546715 0.004511540 -7.796848e-03 -9.413632e-03 -4.240375e-05  
## 6653258|20-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661295|56-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016658|9-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016823|19-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017190|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017629|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018573|66-T/A 0.004179089 0.004168737 -2.483250e-03 -2.993893e-03 -1.247455e-05  
## 100019552|33-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021046|26-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022548|38-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065206|29-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065846|12-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651279|28-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652199|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652400|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652445|11-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653155|9-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653256|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661317|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663970|38-G/C 0.004109216 0.004072403 -9.039628e-03 -1.091204e-02 -4.435789e-05  
## 6665305|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015212|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015773|62-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016229|66-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017966|44-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018540|41-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019145|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020607|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021569|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023034|23-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023386|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065690|24-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650623|27-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650909|20-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651336|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651419|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652696|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652736|50-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653280|14-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653295|57-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653940|33-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661206|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661327|42-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664003|47-C/T 0.006990151 0.006952062 -5.478827e-03 -6.628136e-03 -4.602873e-05  
## 100015464|37-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015704|41-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016862|45-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019871|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020987|40-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021296|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065560|20-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066263|36-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066672|61-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082462|27-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6632122|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650958|39-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651020|25-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651285|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651625|35-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651661|21-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651716|31-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651796|30-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651885|10-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652069|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652117|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652234|42-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653188|36-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653368|52-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661580|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661803|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661812|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661866|32-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015736|43-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016141|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017142|64-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019476|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022055|56-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022078|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022886|24-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631211|9-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651047|34-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651407|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651481|28-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652585|52-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653252|68-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653882|52-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653901|21-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654029|48-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015720|28-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016789|20-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016796|38-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017412|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017613|42-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017642|45-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017690|28-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018660|67-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020040|40-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021191|5-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023009|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065757|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066245|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100074042|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082359|43-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6635615|63-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650495|22-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650509|12-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651034|16-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651369|18-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651472|63-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651525|65-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651657|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651750|54-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652293|6-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652474|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653662|55-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661543|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017915|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020329|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021269|67-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021647|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065434|44-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091128|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630649|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631485|63-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634232|23-C/T 0.009435649 0.009414466 -2.250045e-03 -2.727000e-03 -2.566170e-05  
## 6650379|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650507|19-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650854|20-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651417|34-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651649|55-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651797|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652137|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652171|14-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652353|59-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652439|17-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652481|49-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652592|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652631|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652759|5-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653033|21-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653086|60-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653403|58-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653441|17-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653651|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653652|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653717|62-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653911|22-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657418|43-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658319|40-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661213|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661527|23-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664003|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017332|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018422|17-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019803|28-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020227|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021230|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045732|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065400|55-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065695|10-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650641|39-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650730|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651079|5-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651096|56-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651302|27-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651575|42-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651609|46-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651712|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651755|6-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651927|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652423|26-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653022|23-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653024|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653143|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653233|66-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653287|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653308|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653555|27-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653600|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653915|45-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653995|60-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657836|14-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661227|16-C/A 0.009157170 0.009242244 9.204911e-03 1.112749e-02 1.030323e-04  
## 6661262|58-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661434|38-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661641|45-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661702|15-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662581|37-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100114018|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016369|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017864|12-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018488|65-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018874|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022833|43-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045516|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065233|14-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065518|13-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065693|58-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066101|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633196|52-G/C 0.003290544 0.003271736 -5.748888e-03 -6.929408e-03 -2.264512e-05  
## 6633443|50-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650488|44-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650661|48-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650800|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650825|39-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650845|36-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650876|20-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651093|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651267|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651306|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651379|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651554|67-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651736|43-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651932|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651941|51-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652116|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652661|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652756|60-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652829|67-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653016|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653035|59-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653400|19-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653480|48-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653764|58-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654093|42-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661397|22-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663931|67-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663957|68-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663967|43-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665630|56-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017995|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020113|15-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022566|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044990|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065049|7-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066339|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082461|32-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6632579|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650828|56-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650907|12-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650924|57-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651078|6-G/A 0.004570300 0.004515470 -1.214254e-02 -1.467359e-02 -6.609724e-05  
## 6651186|45-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651357|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651533|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651835|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651845|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652615|62-G/A 0.004080522 0.004067621 -3.171569e-03 -3.823902e-03 -1.554432e-05  
## 6652654|38-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652959|31-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652967|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653003|36-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653135|53-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653227|62-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653345|29-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653424|16-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653449|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653581|57-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653676|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653712|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653723|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653956|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654001|23-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658504|15-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658614|43-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661202|35-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661234|44-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661397|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661731|51-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661793|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663947|19-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664041|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664042|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664043|13-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017392|44-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020618|50-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022663|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630289|20-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650619|36-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650638|22-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650699|38-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650728|58-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650755|23-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650783|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650849|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650880|67-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651095|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651245|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651292|26-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651352|20-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651467|62-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651557|42-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651631|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651664|24-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651688|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651718|35-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651795|51-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651923|42-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651965|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652219|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652378|63-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652434|66-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652655|53-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652722|31-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652830|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652882|43-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653040|42-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653271|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653385|63-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653386|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653418|27-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653450|16-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653476|17-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653520|26-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653763|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653916|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654026|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654061|33-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657577|47-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657800|39-C/A 0.007326937 0.007259804 -9.247344e-03 -1.119943e-02 -8.115530e-05  
## 6658145|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658508|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661100|58-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661185|17-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661209|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661230|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661236|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661314|22-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661446|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661535|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661559|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661597|46-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661642|45-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661657|60-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661731|68-A/G 0.009157593 0.009242315 9.166732e-03 1.108143e-02 1.026058e-04  
## 6661796|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662683|15-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664747|36-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665469|54-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665629|23-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023210|29-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065681|26-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100114697|13-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630523|63-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650409|45-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650528|28-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650721|49-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651065|27-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651098|23-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651125|47-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651426|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651605|61-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651634|10-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651759|12-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651815|20-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652098|62-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652125|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652182|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652205|23-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652340|36-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652361|22-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652367|17-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652519|22-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652681|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652787|16-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653095|8-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653128|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653131|30-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653340|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653516|66-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653855|60-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654020|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654087|18-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657400|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658359|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661176|55-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661182|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661371|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661403|66-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065611|31-A/C 0.041262677 0.044434055 7.137268e-02 8.807611e-02 3.969443e-03  
## 6661497|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661654|59-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662907|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663946|23-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665056|53-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665628|28-C/A 0.010310127 0.010398910 8.537706e-03 1.033433e-02 1.076493e-04  
## 100019769|39-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082375|66-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082404|55-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650592|12-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651184|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652576|37-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652672|55-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653304|23-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6656915|10-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657307|34-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657558|38-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658381|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658521|6-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661752|23-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664327|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044751|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100085984|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100115531|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6643578|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106109|11-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100113138|5-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100117994|11-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662821|6-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664383|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665284|5-C/G 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 6665328|8-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665629|20-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100118214|11-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663102|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021042|56-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100090841|7-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100103683|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100103683|6-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106227|13-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106247|9-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100111488|6-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100112338|6-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100114623|5-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6644428|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6647555|5-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6648501|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6648560|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658337|6-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664325|9-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664355|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664406|5-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664885|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665134|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665147|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065344|49-T/C 0.016270191 0.016337113 4.096269e-03 4.992731e-03 8.163364e-05  
## 6661457|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661867|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661122|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064630|57-A/G 0.005618058 0.005565973 -9.357775e-03 -1.131395e-02 -6.285527e-05  
## 100025554|68-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658677|32-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6635413|16-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661764|43-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652801|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024646|8-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066569|63-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652374|43-T/C 0.003508815 0.003478321 -8.766781e-03 -1.057572e-02 -3.672126e-05  
## 6661449|54-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661688|9-G/T 0.015700724 0.015716007 9.724614e-04 1.185337e-03 1.863239e-05  
## 6661583|7-C/T 0.003652138 0.003628013 -6.649588e-03 -8.019420e-03 -2.905587e-05  
## 6661219|45-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016118|67-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065968|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664008|7-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019909|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024919|19-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021772|52-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066372|27-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091350|43-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017975|34-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045781|34-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652884|53-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017252|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017894|53-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022254|26-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6632275|61-T/C 0.004652748 0.004633483 -4.157801e-03 -5.016856e-03 -2.322619e-05  
## 100065115|49-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065825|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654008|51-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653230|18-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020850|15-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024608|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065720|36-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019004|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022949|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024718|58-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065076|9-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650868|53-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017101|27-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017766|10-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019793|62-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021136|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021706|33-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100025017|58-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652036|20-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015261|30-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015698|55-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016039|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021704|31-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021798|6-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022137|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022883|14-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023375|24-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064876|34-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022317|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065186|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653805|57-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021710|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023305|24-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634600|17-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650598|62-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017818|14-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020277|67-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020322|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021252|30-G/A 0.003496923 0.003476339 -5.921228e-03 -7.138862e-03 -2.478771e-05  
## 100022007|39-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022967|55-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023231|52-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024979|12-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651448|5-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661619|36-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100101013|46-C/T 0.008937015 0.008997010 6.668303e-03 8.063368e-03 7.264296e-05  
## 100015916|40-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019381|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021309|54-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022531|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022877|17-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023365|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023869|51-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066103|5-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066389|65-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652703|57-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019288|33-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020549|44-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020551|60-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023117|6-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023343|62-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065070|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100119322|60-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653215|23-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015905|30-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018538|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020139|46-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020548|9-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065378|43-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065666|20-A/T 0.003354460 0.003336854 -5.276028e-03 -6.359254e-03 -2.119751e-05  
## 100065687|58-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651010|63-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651023|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651465|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653507|50-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661164|56-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015555|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017215|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018040|51-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018557|8-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019185|63-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019688|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023075|63-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630180|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015432|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017493|63-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020399|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020528|67-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021151|33-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021753|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021795|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100062072|14-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066634|26-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661693|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015331|61-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015609|28-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017169|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017928|37-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019505|12-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020075|44-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020413|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021373|46-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021417|26-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022461|56-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022969|9-G/A 0.004179778 0.004168852 -2.620970e-03 -3.160022e-03 -1.316676e-05  
## 100023275|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082212|44-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652622|54-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653084|57-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653710|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653840|32-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021632|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022984|17-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064905|26-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015960|29-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016761|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017811|61-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019007|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020970|16-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065097|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651396|51-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651430|31-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015246|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017606|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018953|27-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019018|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020129|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020404|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020733|17-G/A 0.007762289 0.007753663 -1.112438e-03 -1.345668e-03 -1.043154e-05  
## 100021724|12-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066663|43-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100122660|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630550|32-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652105|37-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015837|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016214|35-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017908|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019267|32-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023141|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023174|41-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064755|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651656|34-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651767|59-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664728|67-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018065|63-T/A 0.006016225 0.005963022 -8.922174e-03 -1.079067e-02 -6.423016e-05  
## 100019510|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019632|22-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019754|7-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020251|60-G/A 0.003353855 0.003336754 -5.125141e-03 -6.177197e-03 -2.059066e-05  
## 100021712|18-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044571|14-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661691|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663917|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018085|21-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019876|24-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020554|42-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022262|60-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023321|57-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065480|65-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652163|42-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661278|34-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661299|21-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016113|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018753|18-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022995|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045005|36-T/A 0.005649424 0.005571200 -1.404080e-02 -1.699240e-02 -9.440225e-05  
## 100065425|18-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065813|42-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066450|34-C/G 0.007209780 0.007240277 4.212153e-03 5.087005e-03 3.686235e-05  
## 6652607|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653544|67-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661463|59-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661534|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020053|13-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020534|56-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020747|66-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022664|19-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023314|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024345|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065655|8-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082306|16-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6632614|14-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650544|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661521|5-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661754|5-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017623|23-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019111|65-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020626|26-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022838|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661655|44-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015424|32-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017638|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019862|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064626|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066576|33-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082421|35-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082421|56-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661595|45-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018565|14-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019547|16-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021316|68-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066021|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066577|66-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6635995|53-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650794|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651294|52-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661643|39-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665642|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017091|53-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018288|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019411|13-C/T 0.003731552 0.003708345 -6.258080e-03 -7.547271e-03 -2.795285e-05  
## 100022970|53-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044935|38-C/G 0.009142581 0.009239813 1.052318e-02 1.271756e-02 1.177552e-04  
## 100065133|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065604|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653270|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082437|5-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017079|68-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018306|21-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065207|61-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651674|58-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661762|25-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016541|14-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019240|64-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022760|39-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661631|14-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015984|25-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020169|39-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020171|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020514|46-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093365|13-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631375|67-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651160|63-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651417|40-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653272|47-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661637|58-G/T 0.015636468 0.015833591 1.244967e-02 1.513922e-02 2.403051e-04  
## 6661875|62-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016327|11-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017411|17-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021938|40-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100104022|29-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653086|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654063|52-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661270|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661413|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661571|64-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662928|6-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665563|11-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015347|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015697|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630379|34-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651111|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651135|63-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652080|40-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653891|42-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661255|43-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661262|56-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661441|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019678|23-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065386|6-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082362|41-C/G 0.006273472 0.006286669 2.099137e-03 2.533803e-03 1.593587e-05  
## 100119892|9-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650706|34-C/G 0.003644944 0.003626814 -4.998887e-03 -6.026635e-03 -2.183563e-05  
## 6651084|9-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652828|42-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653640|66-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661213|29-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661501|61-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020312|34-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066078|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651216|56-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651663|16-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652291|30-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661623|16-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664064|11-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019069|65-C/T 0.004546814 0.004511556 -7.815104e-03 -9.435709e-03 -4.250319e-05  
## 6629913|31-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650658|32-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651643|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651651|36-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652652|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652781|24-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652781|64-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652958|54-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661185|61-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661218|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661232|58-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662683|28-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662714|21-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663024|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016570|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017965|14-G/A 0.004649209 0.004632893 -3.521761e-03 -4.248846e-03 -1.967058e-05  
## 100018649|23-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021210|28-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044629|5-T/A 0.007604437 0.007580537 -3.152708e-03 -3.814645e-03 -2.889882e-05  
## 100065997|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066075|25-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100119599|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633592|39-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650534|49-T/C 0.008114469 0.008127479 1.600810e-03 1.936067e-03 1.574038e-05  
## 6650535|67-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651337|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653918|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657564|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661126|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661428|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661666|46-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661783|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661798|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661798|28-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661836|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661836|20-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661863|56-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662849|35-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665679|46-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093359|29-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6629858|37-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6643954|6-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652019|59-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652746|56-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652810|45-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653160|44-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653239|27-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653352|54-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653632|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662822|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664724|62-G/C 0.006152420 0.006169436 2.758111e-03 3.328386e-03 2.054559e-05  
## 100044710|9-T/G 0.003982626 0.003970649 -3.016291e-03 -3.636216e-03 -1.442943e-05  
## 100093660|28-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633718|59-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6641748|42-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658299|7-T/C 0.005596616 0.005562399 -6.151465e-03 -7.432448e-03 -4.129138e-05  
## 6661450|36-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6643586|10-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6643586|9-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6648203|14-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664350|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106226|9-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100111464|9-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6643578|11-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664414|23-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664432|8-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6643814|11-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6643814|5-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100100648|8-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100103657|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106110|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106239|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100109437|5-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100109437|9-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100110529|5-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100111487|5-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100122090|8-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6649192|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657874|5-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658144|18-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662919|11-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663018|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664273|5-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664306|8-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664893|38-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664910|11-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665153|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082484|50-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100118470|9-C/T 0.068116064 0.072250113 5.721859e-02 7.284753e-02 5.323473e-03  
## 6664010|54-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100046106|24-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666102|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657032|15-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665215|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018359|44-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023139|68-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664085|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661211|58-C/T 0.026544839 0.026820468 1.027682e-02 1.264248e-02 3.397742e-04  
## 100066559|31-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663985|50-C/T 0.004200338 0.004172279 -6.725143e-03 -8.115127e-03 -3.381303e-05  
## 6665628|45-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100097039|23-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665040|44-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093411|9-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093413|26-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634480|31-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065820|27-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065626|5-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017456|5-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065031|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100090339|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654096|11-C/A 0.004927159 0.004906161 -4.280102e-03 -5.165977e-03 -2.532342e-05  
## 100045278|30-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650722|8-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023932|52-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661186|27-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066349|48-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664781|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018124|53-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064999|21-G/A 0.013775972 0.013870069 6.784182e-03 8.243551e-03 1.144938e-04  
## 100074314|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661474|58-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664089|39-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100074315|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100109510|37-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106299|29-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652532|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666146|37-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020687|19-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017102|43-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016103|11-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016936|24-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065009|15-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021792|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065064|48-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651486|23-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022395|5-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6635620|7-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021158|56-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024001|29-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065225|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065766|32-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065871|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657554|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021381|48-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065073|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065186|6-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082387|67-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022890|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023224|41-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066151|44-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065712|39-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016548|22-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018316|52-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018669|51-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020096|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021832|59-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045940|24-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066650|24-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045116|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100112452|57-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653883|52-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021186|32-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021930|67-G/A 0.004549418 0.004511990 -8.295177e-03 -1.001632e-02 -4.511857e-05  
## 100065300|66-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082101|62-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100119315|9-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650840|6-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664036|6-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015791|35-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021993|35-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065071|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106305|20-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020586|49-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022366|24-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022982|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100102365|9-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016200|62-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017620|16-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018736|57-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020340|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066082|8-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663098|31-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018726|57-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019037|42-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021366|54-C/T 0.006483821 0.006422517 -9.545175e-03 -1.155101e-02 -7.404495e-05  
## 100022220|45-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066146|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066266|57-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066574|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016560|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066037|49-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121195|35-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018616|49-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066663|58-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100118142|5-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665806|57-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018844|30-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091301|63-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100096922|11-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651543|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016510|41-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100018353|22-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019853|68-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021078|39-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021925|13-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065479|51-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066412|14-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091301|22-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019195|66-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023208|34-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065057|21-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065426|35-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073631|7-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016006|34-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017176|29-G/A 0.005568708 0.005557748 -1.972148e-03 -2.380769e-03 -1.322650e-05  
## 100018612|5-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020218|34-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065408|22-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065476|64-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065761|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6632042|19-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100015587|20-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016037|24-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021787|68-A/C 0.003109185 0.003090214 -6.138985e-03 -7.398842e-03 -2.283593e-05  
## 100022942|14-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066550|58-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082539|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650594|30-T/G 0.003105078 0.003089530 -5.032768e-03 -6.064237e-03 -1.871678e-05  
## 6653546|21-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664281|14-A/T 0.003105800 0.003089650 -5.227272e-03 -6.298854e-03 -1.944091e-05  
## 100016076|49-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022081|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100022274|36-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100116482|57-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121512|34-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017777|61-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064625|41-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064874|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106306|45-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100106306|65-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021587|57-C/T 0.007700932 0.007596620 -1.373138e-02 -1.665126e-02 -1.261459e-04  
## 100065160|65-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100073403|34-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082633|51-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100097045|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652651|47-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661761|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017728|53-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065286|5-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082197|10-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633952|10-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657904|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065579|38-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661858|20-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019471|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044832|16-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065848|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066117|37-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100112452|34-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630404|40-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100103994|35-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100017343|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064738|40-C/G 0.003163582 0.003147809 -5.010929e-03 -6.038250e-03 -1.898821e-05  
## 100064746|17-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100074010|27-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631936|55-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661620|58-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016884|51-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065351|47-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631698|7-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652538|34-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657259|24-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016745|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065233|43-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630611|19-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652270|62-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652729|29-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020530|29-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630408|13-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630626|34-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631766|58-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633539|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634322|14-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652458|12-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653006|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653115|48-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663957|45-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066473|39-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650554|32-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657465|23-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663949|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100020033|33-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082315|13-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6629848|65-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630880|24-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650849|38-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650881|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651487|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651826|47-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652855|33-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657563|28-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657811|15-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658667|25-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662907|9-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665143|45-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100021831|19-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045184|5-G/C 0.004423417 0.004392207 -7.105877e-03 -8.577129e-03 -3.761899e-05  
## 100065651|20-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066434|64-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066660|33-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633749|29-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6635481|20-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650535|47-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652320|27-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652796|29-G/C 0.003168163 0.003148572 -6.222027e-03 -7.499495e-03 -2.358332e-05  
## 6654065|42-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657294|51-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658085|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661346|29-T/A 0.003422965 0.003404961 -5.287603e-03 -6.373658e-03 -2.167911e-05  
## 6661679|17-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662799|12-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662831|22-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663021|23-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100085932|36-G/C 0.003361914 0.003338097 -7.135033e-03 -8.603198e-03 -2.867733e-05  
## 6630269|58-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630995|13-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633153|34-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6644233|38-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650943|57-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650961|27-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651177|55-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651864|18-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652465|10-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652776|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654017|47-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657683|10-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657925|11-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658404|12-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664915|43-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100045721|8-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082404|10-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093333|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633054|40-T/A 0.004515205 0.004506288 -1.978894e-03 -2.386388e-03 -1.074950e-05  
## 6642765|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6643196|21-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653359|24-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658471|31-G/C 0.003049140 0.003033443 -5.174936e-03 -6.235370e-03 -1.889506e-05  
## 100065416|12-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661414|26-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664306|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665409|5-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6642901|10-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100108705|8-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665151|5-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100122090|6-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662690|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016003|7-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100016649|43-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100019431|29-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100023959|16-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100024997|62-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100044851|16-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064658|7-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064682|49-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064707|51-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064714|52-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064753|29-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100064840|30-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065000|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065025|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065087|14-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065157|40-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065238|55-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065368|11-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065400|61-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065428|33-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065497|38-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065538|49-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065597|12-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065605|63-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065647|9-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065669|36-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065706|45-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065736|5-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065739|9-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065933|35-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066025|19-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066134|25-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066259|18-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066274|66-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066332|57-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066410|32-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100066624|60-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082151|41-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082232|23-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082297|57-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082311|43-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082409|16-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082418|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082564|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082633|21-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100086276|23-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100086585|5-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091075|52-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091130|54-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100093549|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100098502|34-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100101042|48-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121195|12-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121196|29-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121197|43-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121199|47-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100121200|51-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100122496|35-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630263|32-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6630513|10-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631038|8-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6631621|56-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6633643|35-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6634127|43-A/G 0.015117763 0.015145890 1.857054e-03 2.261832e-03 3.427018e-05  
## 6635254|35-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6641856|17-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6642355|17-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650389|35-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650444|8-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650519|63-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650553|61-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650587|17-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650591|24-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650676|68-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650899|7-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650902|63-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6650919|10-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651039|12-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651054|54-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651207|33-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651431|65-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651512|39-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651635|32-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065262|63-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651763|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651874|8-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6651879|12-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652022|6-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065511|46-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652174|20-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652193|50-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652287|47-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652538|35-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652743|25-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100065924|8-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6652898|57-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653034|66-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653037|45-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653161|37-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653161|51-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653240|43-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653383|7-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653394|26-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653420|30-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653514|60-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653521|20-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653525|7-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653571|21-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653574|48-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653793|20-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653861|28-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6653990|38-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654094|56-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6654108|11-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6657811|16-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658021|8-T/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658173|44-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658487|25-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6658616|17-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661180|50-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661214|14-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661229|60-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661236|33-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661487|18-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661524|9-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661550|30-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082471|28-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661631|29-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082491|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661651|25-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100082562|68-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661778|27-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661827|57-C/G 0.007555423 0.007572369 2.237775e-03 2.704563e-03 2.048912e-05  
## 6661838|61-A/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6661845|30-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662631|42-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662646|5-A/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662657|27-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662765|9-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662767|43-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6662797|33-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663018|35-C/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663941|10-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663953|25-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6663990|56-G/T 0.008117704 0.008128018 1.269037e-03 1.534918e-03 1.247900e-05  
## 6664007|22-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664018|43-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100091330|60-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6664739|19-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665051|50-C/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665130|20-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665130|26-T/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665131|16-G/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 100109477|22-G/A 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665563|54-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665566|58-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665567|59-A/G 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665600|6-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665637|6-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665638|50-G/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6665992|26-C/T 0.000000000 0.000000000 NaN NaN 0.000000e+00  
## 6666146|48-T/C 0.000000000 0.000000000 NaN NaN 0.000000e+00  
##   
## $global  
## Hs Ht Gst\_est Gprime\_st D\_het D\_mean   
## 0.0334095095 0.0337786260 0.0109275164 0.0135366773 0.0004582497 NA

pairwise\_Gst\_Hedrick(gi, linearized = FALSE)

## Bullen Range Kambah Pool Lanyon Murramore Nerreman  
## Kambah Pool 0.0170039267   
## Lanyon 0.0215351522 0.0254476655   
## Murramore 0.0097138889 0.0222876343 -0.0061221781   
## Nerreman 0.0043467943 0.0127127101 0.0158470560 0.0057630683   
## Tharwa Sandwash 0.0220704982 0.0263026441 0.0064427734 0.0008349941 0.0189271318



#poppr functions  
library(poppr)   
mlg(gi)

## #############################  
## # Number of Individuals: 243   
## # Number of MLG: 243   
## #############################

## [1] 243

poppr(gi)

## | Bullen Range   
## | Kambah Pool   
## | Lanyon   
## | Murramore   
## | Nerreman   
## | Tharwa Sandwash   
## | Total

## Pop N MLG eMLG SE H G lambda E.5 Hexp Ia rbarD File  
## 1 Bullen Range 42 42 18 NaN 3.74 42 0.976 1 0.0335 4.71 0.00672 gi  
## 2 Kambah Pool 54 54 18 1.49e-06 3.99 54 0.981 1 0.0305 7.66 0.01225 gi  
## 3 Lanyon 21 21 18 NaN 3.04 21 0.952 1 0.0319 5.94 0.00997 gi  
## 4 Murramore 18 18 18 0.00e+00 2.89 18 0.944 1 0.0357 7.57 0.01196 gi  
## 5 Nerreman 55 55 18 NaN 4.01 55 0.982 1 0.0347 6.95 0.00855 gi  
## 6 Tharwa Sandwash 53 53 18 1.76e-06 3.97 53 0.981 1 0.0343 9.78 0.01107 gi  
## 7 Total 243 243 18 NaN 5.49 243 0.996 1 0.0337 6.97 0.00689 gi

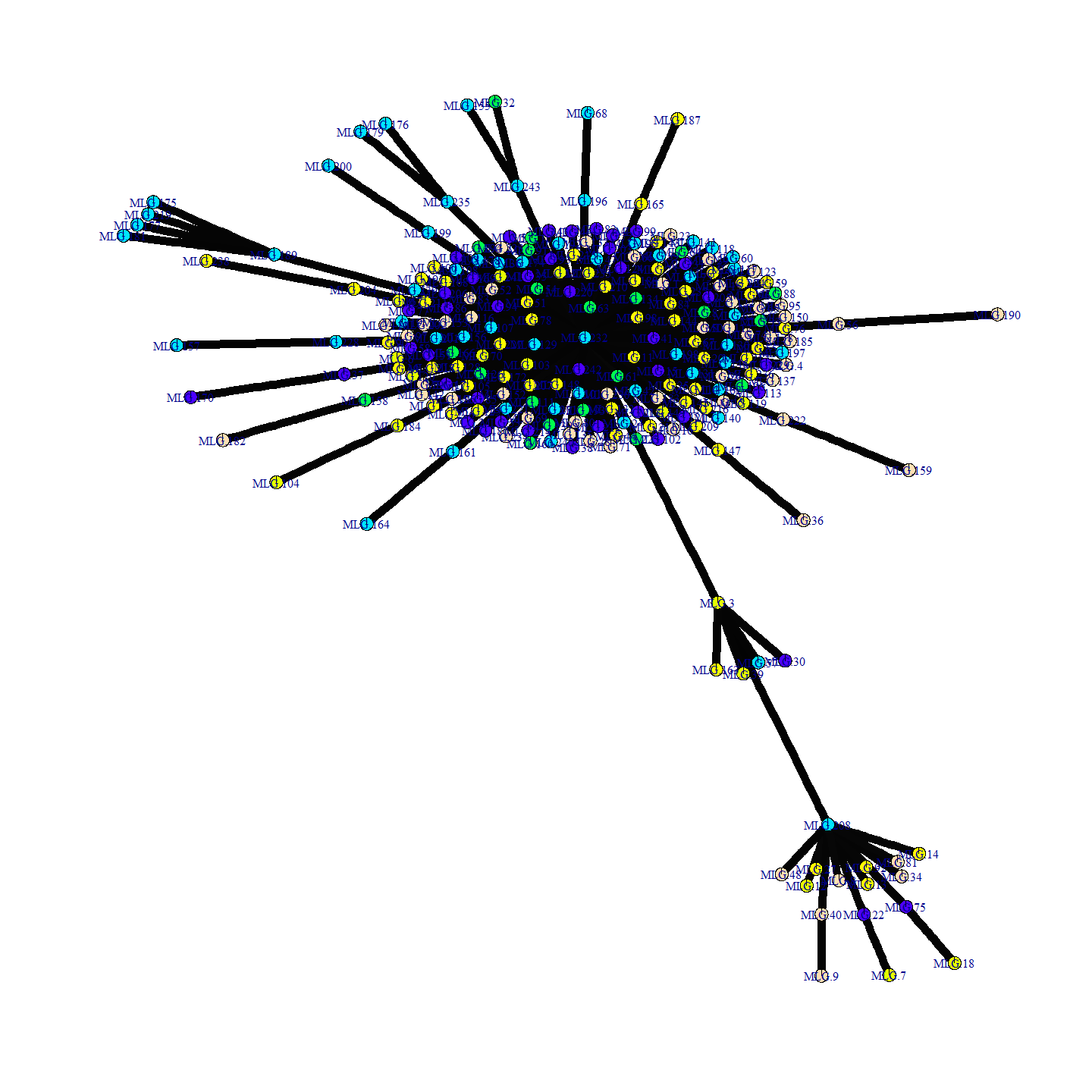
pa<-data.frame(private\_alleles(gi))  
pa<-data.frame(t(pa))  
summary(pa)

## Bullen.Range Kambah.Pool Lanyon Murramore Nerreman Tharwa.Sandwash   
## Min. :0.0000 Min. :0.00000 Min. :0.00000 Min. :0.0000 Min. :0.0000 Min. :0.0000   
## 1st Qu.:0.0000 1st Qu.:0.00000 1st Qu.:0.00000 1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0.0000   
## Median :0.0000 Median :0.00000 Median :0.00000 Median :0.0000 Median :0.0000 Median :0.0000   
## Mean :0.1115 Mean :0.09248 Mean :0.02992 Mean :0.0417 Mean :0.2412 Mean :0.3536   
## 3rd Qu.:0.0000 3rd Qu.:0.00000 3rd Qu.:0.00000 3rd Qu.:0.0000 3rd Qu.:0.0000 3rd Qu.:1.0000   
## Max. :2.0000 Max. :5.00000 Max. :1.00000 Max. :2.0000 Max. :4.0000 Max. :4.0000

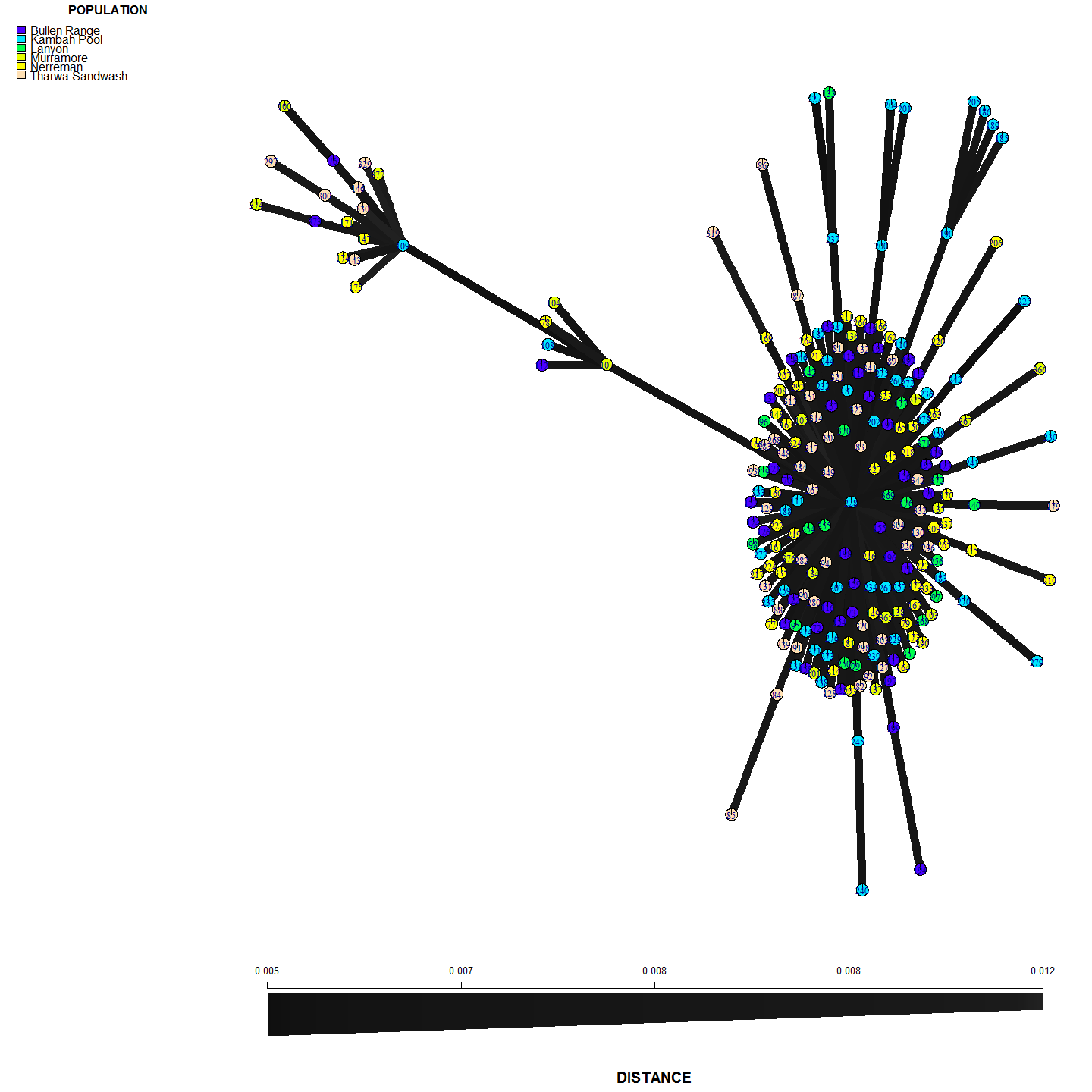
tab <- mlg.table(gi, plot = FALSE)  
diversity\_stats(tab)

## Index  
## Pop H G lambda E.5  
## Bullen Range 3.737670 42 0.9761905 1  
## Kambah Pool 3.988984 54 0.9814815 1  
## Lanyon 3.044522 21 0.9523810 1  
## Murramore 2.890372 18 0.9444444 1  
## Nerreman 4.007333 55 0.9818182 1  
## Tharwa Sandwash 3.970292 53 0.9811321 1

adist <- diss.dist(gi, percent = TRUE)  
amsn <- poppr.msn(gi, adist)



# Default  
library("igraph") # To get all the layouts.  
set.seed(500)  
plot\_poppr\_msn(gi, amsn, gadj = 15)



# Hardy Weinberg and Genotypic Disequilibrium

hwdf<-hw.test(gi, B=0)  
hwdf<-data.frame(hwdf)  
names(hwdf)[names(hwdf)=="Pr.chi.2..."] <- "p"  
  
p.adjust.M <- p.adjust.methods[p.adjust.methods != "fdr"]  
p.adj <- sapply(p.adjust.M, function(meth) p.adjust(hwdf$p, meth))  
corrected<-data.frame(p.adj)  
  
#Before Bonferroni correction  
nrow(subset(corrected, none<0.05))

## [1] 369

#Only   
nrow(subset(corrected, bonferroni<0.05))

## [1] 104

#after bonferroni correction  
#and with BY  
nrow(subset(corrected, BY<0.05))

## [1] 141

corrected<-apply(p.adj, 2, format.pval, digits = 3)  
corrected<-data.frame(corrected)  
corrected<-corrected[order(as.numeric(corrected$none)),]  
corrected[1:40,]

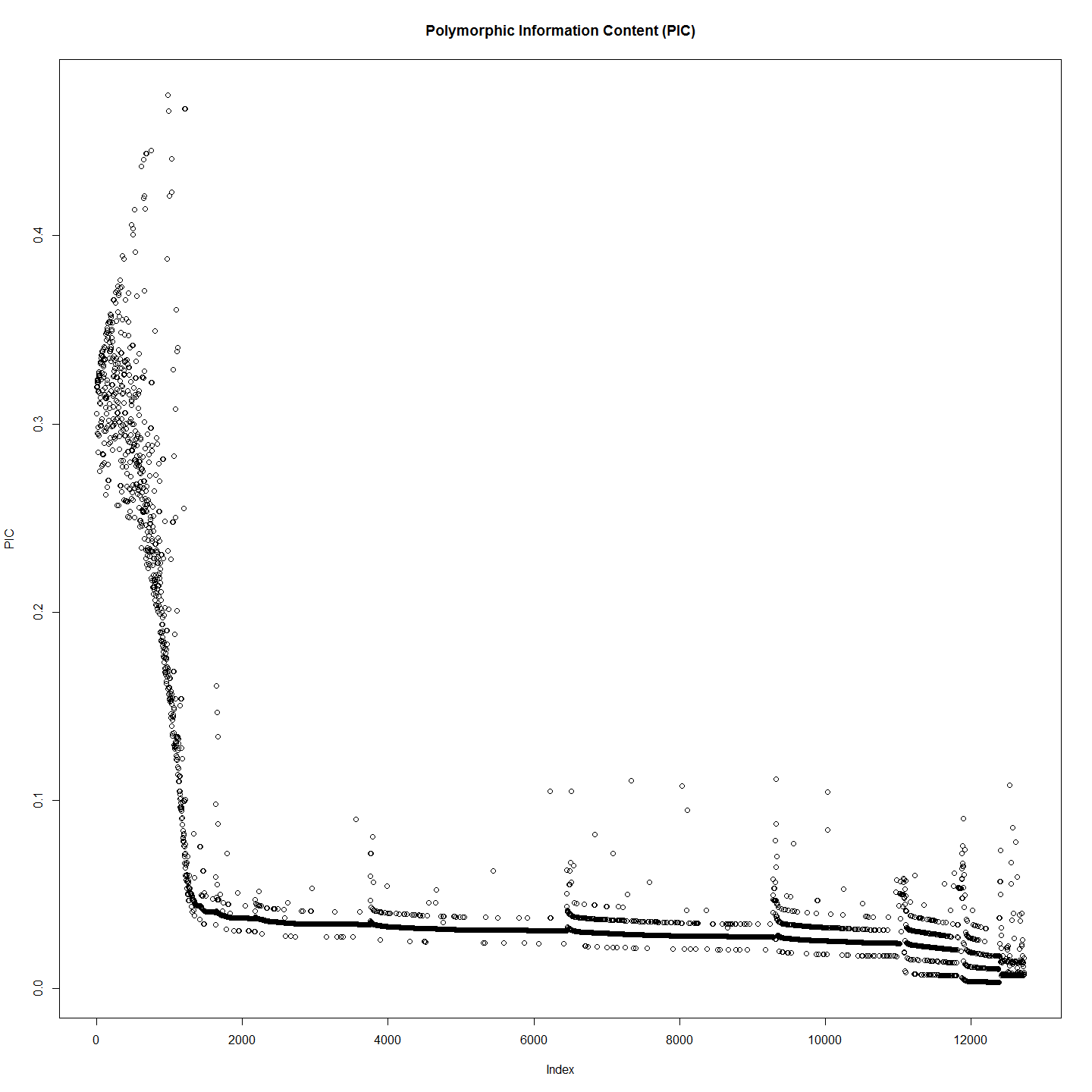
## holm hochberg hommel bonferroni BH BY none  
## 600 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 606 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 731 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 820 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 826 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 834 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 1407 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 2327 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 3234 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 3277 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 3327 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 3343 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 3643 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 4017 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 4051 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 4660 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 4661 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 4663 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 4666 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 4694 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 4731 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 4936 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 5017 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 5227 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 5482 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 5538 7.03e-13 7.03e-13 7.03e-13 7.07e-13 2.08e-14 1.94e-13 < 2e-16  
## 5552 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 5615 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 5934 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 5943 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 5965 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 6266 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 6335 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 6347 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16 < 2e-16  
## 101 0.636925 0.636925 0.629253 0.651043 0.004684 0.043726 0.000102  
## 89 0.687874 0.687874 0.679476 0.703234 0.005023 0.046894 0.000111  
## 22 0.717811 0.717811 0.708930 0.733957 0.005205 0.048596 0.000115  
## 60 0.783510 0.783510 0.773564 0.801263 0.005643 0.052679 0.000126  
## 253 0.796375 0.796375 0.786392 0.814550 0.005696 0.053178 0.000128  
## 328 0.876017 0.876017 0.864752 0.896154 0.006220 0.058069 0.000141

# Population Structure

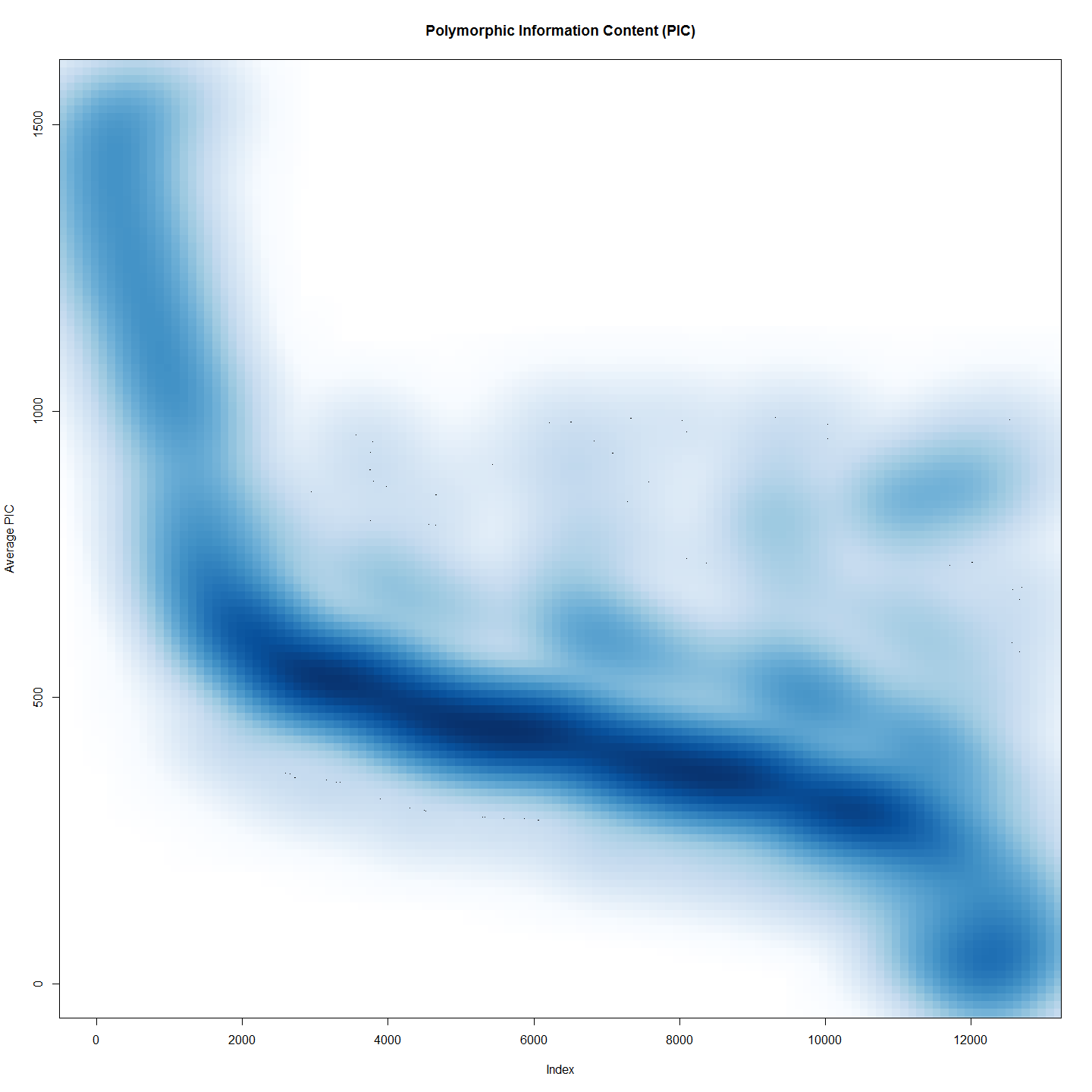
See: runPCAandTSNEYearsandSites.Rmd

# Polymorphic Information Content

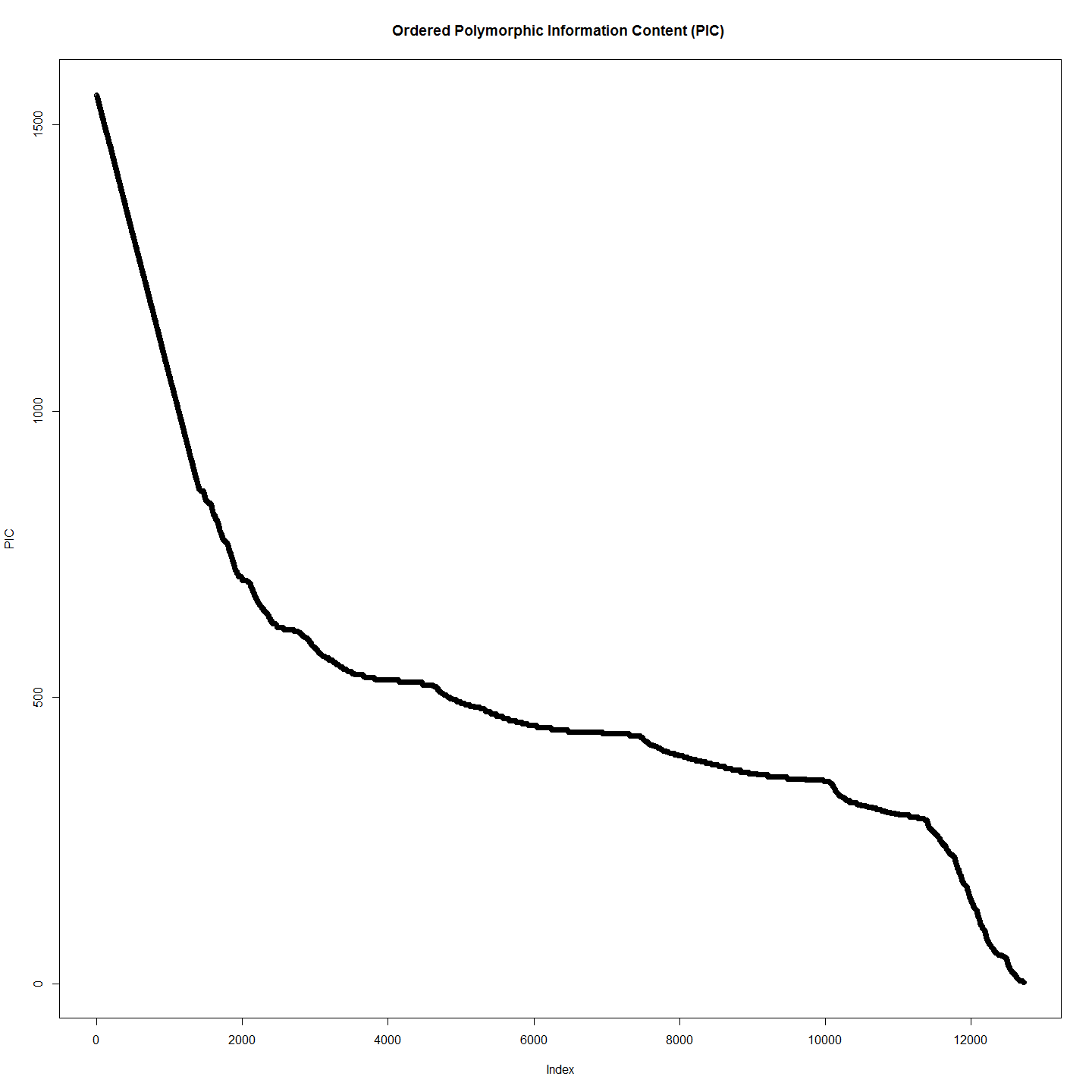
#A script to plot all M. peelii snps average PIC (PIC of reference and PIC of alternate state allele) against index number of the data frame. This shows that using the first X number of snps is using the alleles with the highest PIC.  
  
  
df<-allPeeliSnps; main<-"All Peelii snps"  
df<-df[-c(1:4),]  
  
pic<-df[2:nrow(df),14] #check pic in order  
plot(as.character(pic),main="Polymorphic Information Content (PIC)", ylab="PIC")# to show PIC is in order (ish) ideally cut off would be 1300 or so.



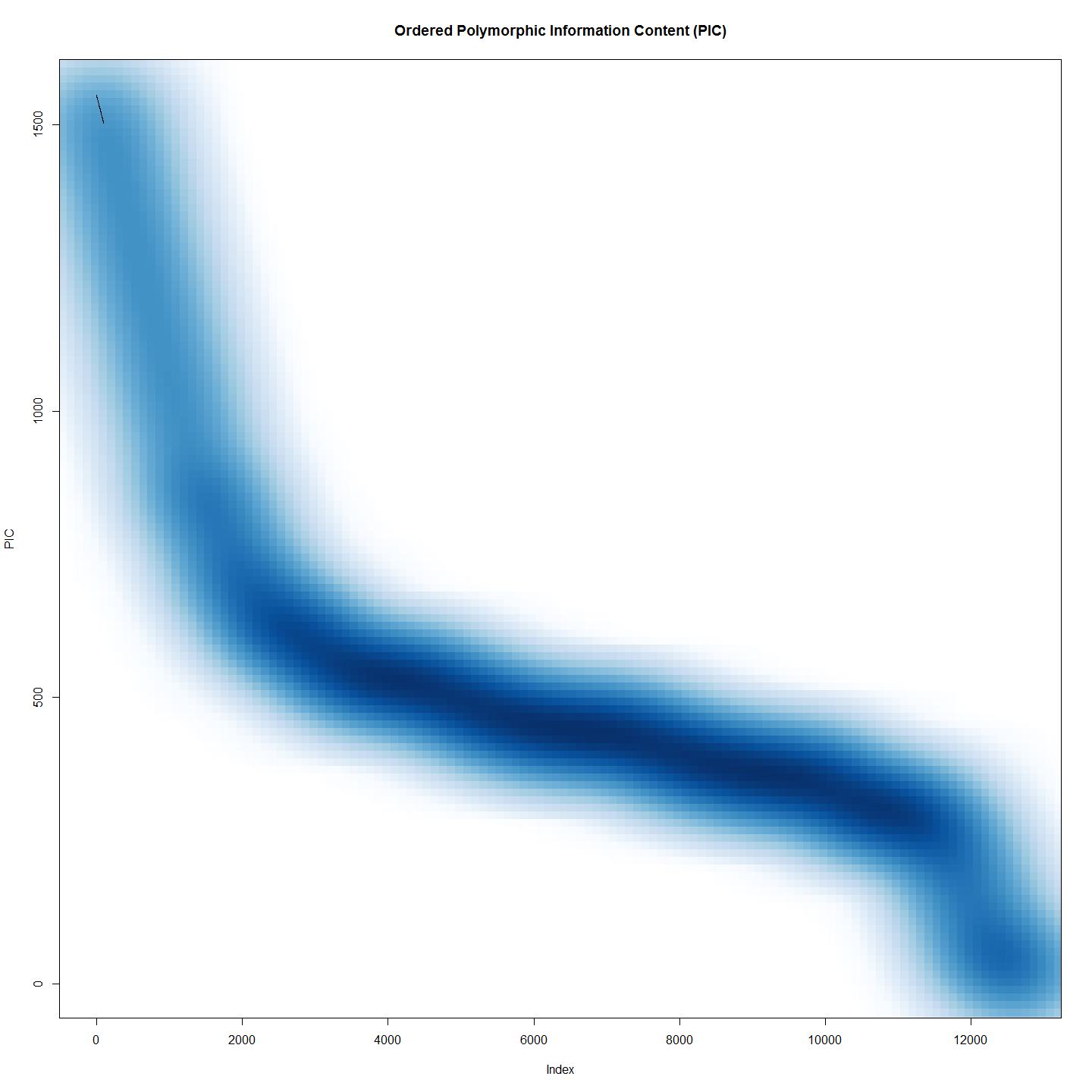
smoothScatter(pic,main="Polymorphic Information Content (PIC)", ylab="Average PIC")



# Place in strict order of PIC and have alook  
pico<-data.frame(pic)  
rownames(pico) <- NULL  
colnames(pico)[1]<-"PIC"  
  
pico <- data.frame(pico[order(as.numeric(pico$PIC),decreasing = TRUE),])  
  
pico[,2]<-pico[,1] #Order columns to facilitate plotting.  
pico[,1]<-row.names(pico) #Replace name with index number  
colnames(pico)[1]<-"Index"  
colnames(pico)[2]<-"PIC"  
  
plot(pico, main="Ordered Polymorphic Information Content (PIC) ")



smoothScatter(pico, main="Ordered Polymorphic Information Content (PIC)")



rm(pic)  
rm(pico)

## Genome Structure in Larvae by Years and Sites

### FST and Sites

library(StAMPP)  
system.time(snpfst <-stamppFst(gl,nboots=1, percent=95, nclusters=8))

## user system elapsed   
## 27.52 0.04 61.60

snpfst

## Kambah Pool Bullen Range Nerreman Tharwa Sandwash Lanyon Murramore  
## Kambah Pool NA NA NA NA NA NA  
## Bullen Range 0.01524984 NA NA NA NA NA  
## Nerreman 0.01241047 0.007348972 NA NA NA NA  
## Tharwa Sandwash 0.02727594 0.026001892 0.02273005 NA NA NA  
## Lanyon 0.02823645 0.029941074 0.02402186 0.012530020 NA NA  
## Murramore 0.02516960 0.020465393 0.01636588 0.008125193 0.004919345 NA

rm(snpfst)

Although not strong some difference in the three upper sites and the three lower sites is evident. The difference between the 3 upper and three lower sites also is greater than the difference among each of the three lower, or the three upper sites.

### Temporal Structure

glt<-gl  
glt@pop<-as.factor(gl@other$covariates)  
system.time(snpfstTemporal <-stamppFst(glt,nboots=1, percent=95, nclusters=8))

## user system elapsed   
## 13.95 0.00 17.46

snpfstTemporal

## 2013 2011 2012  
## 2013 NA NA NA  
## 2011 0.014914747 NA NA  
## 2012 0.005010593 0.01111121 NA

rm(glt); rm(npfstTemporal)

There is little difference between years.

## Genetic Distance between Sites

gi<-df2genind(data.frame(gl),ncode=1, pop=gl$pop)  
gp<-genind2genpop(gi)

##   
## Converting data from a genind to a genpop object...   
##   
## ...done.

dist.genpop(gp)

## Bullen Range Kambah Pool Lanyon Murramore Nerreman  
## Kambah Pool 0.003084083   
## Lanyon 0.004076401 0.004261646   
## Murramore 0.003632366 0.005372541 0.003149246   
## Nerreman 0.001670094 0.002379941 0.003443184 0.003267281   
## Tharwa Sandwash 0.002998878 0.003526237 0.002719802 0.002499254 0.002531829

#or Isolation by Distance (site)  
library(ade4)  
Dgen <- dist.genpop(gp, method = 2)  
Dgeo2<-select(larv, SiteName, Distance.to.Angle.Crossing..m.)  
Dgeo2<-unique(Dgeo2)  
rownames(Dgeo2)<-Dgeo2[,1]  
Dgeo2[,1]<-NULL  
Dgeo2<-dist(Dgeo2)  
ibd <- mantel.randtest(Dgen, Dgeo2)  
ibd

## Monte-Carlo test  
## Call: mantel.randtest(m1 = Dgen, m2 = Dgeo2)  
##   
## Observation: 0.3790073   
##   
## Based on 999 replicates  
## Simulated p-value: 0.086   
## Alternative hypothesis: greater   
##   
## Std.Obs Expectation Variance   
## 1.440281716 -0.005850301 0.071401155

# Heterozygosity

Hs(gi)

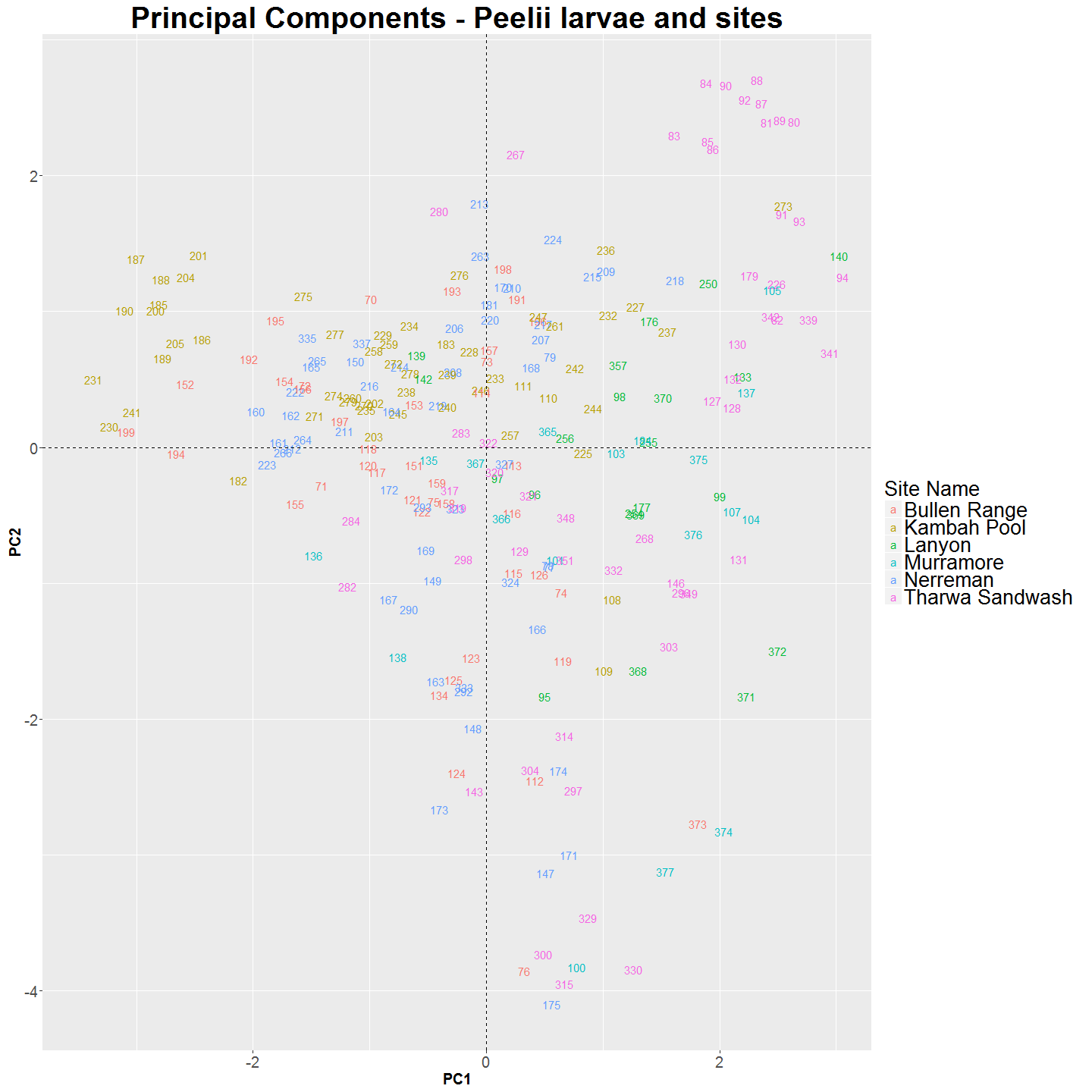
## Bullen Range Kambah Pool Lanyon Murramore Nerreman Tharwa Sandwash   
## 0.04375030 0.04420646 0.04083251 0.04254215 0.04704342 0.04643666

This function computes the expected heterozygosity (Hs) within populations of a genpop object. This function is available for codominant markers (@type="codom") only. Hs is commonly used for measuring within population genetic diversity (and as such, it still has sense when computed from haploid data).

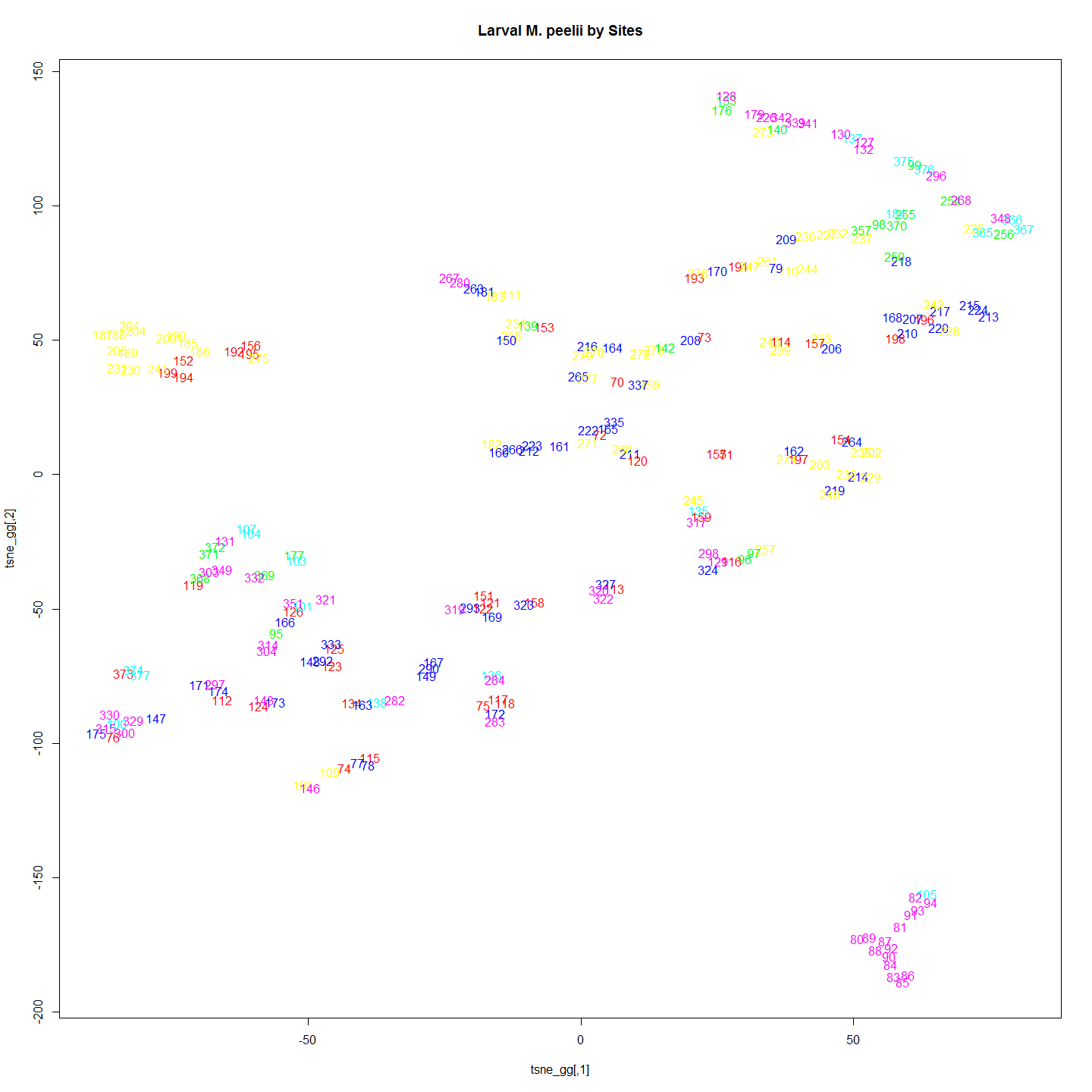
#First we do PCA and tSNE using peelii larvae and site  
#Vanilla PCA  
require(adegenet)  
require(ggplot2)  
  
system.time(pca1 <- glPca(gl[,], parallel=F, nf=3))

## user system elapsed   
## 52.89 0.00 53.01

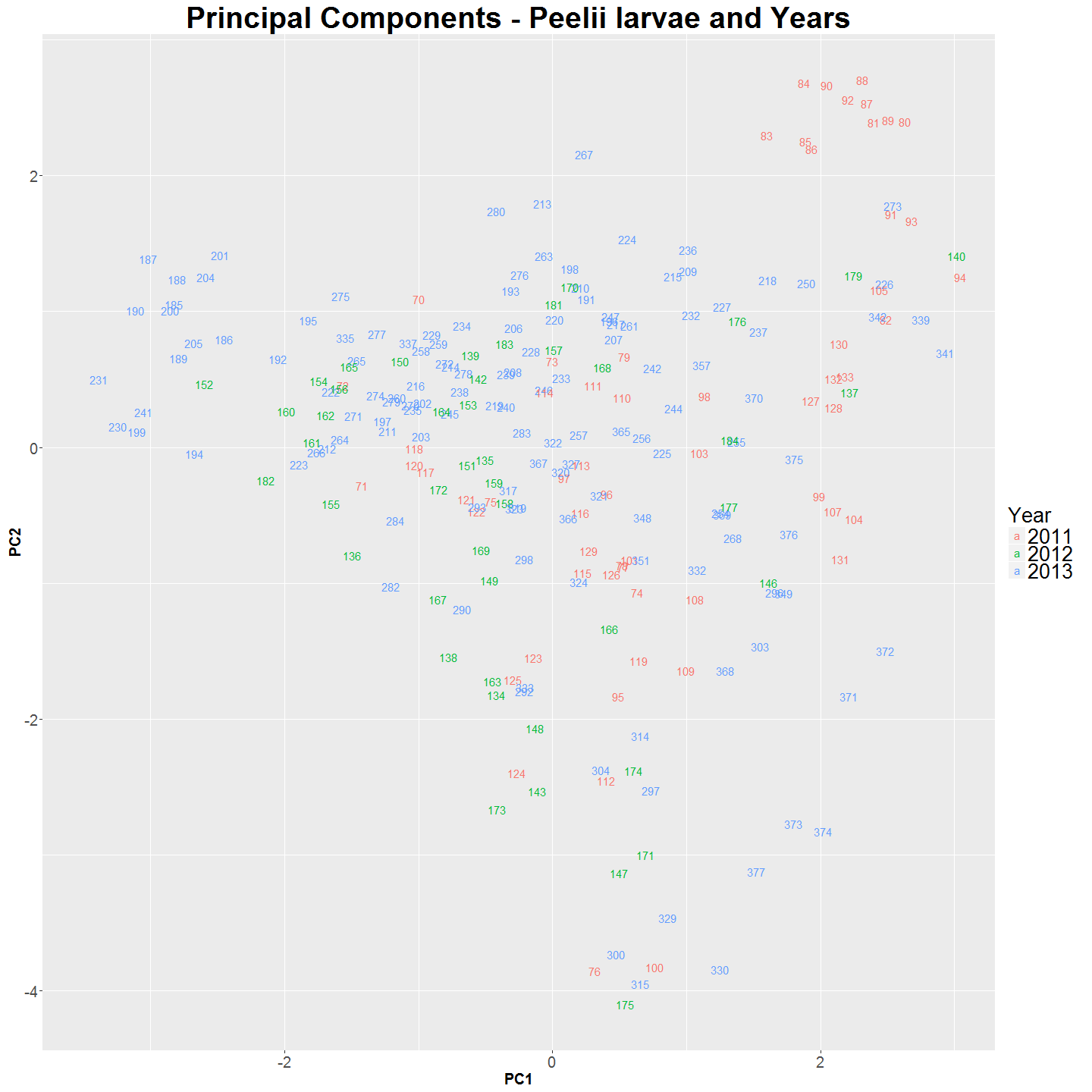
gg <- data.frame(pca1$scores,cluster=pop(gl))  
gg$labels <- rownames(gg)  
  
ggplot(gg, aes(x=PC1, y=PC2))+  
 geom\_text(aes(label=labels, color=factor(cluster)),hjust=-0.2, size=4) +  
 geom\_hline(yintercept=0,linetype=2) +  
 geom\_vline(xintercept=0,linetype=2) +  
 scale\_color\_discrete(name="Site Name") +  
 ggtitle("Principal Components - Peelii larvae and sites")+  
 theme(plot.title = element\_text(lineheight=.8, face="bold", size=29))+  
 theme(axis.text=element\_text(size=15), axis.title=element\_text(size=15,face="bold"),legend.text = element\_text(size = 20),legend.title = element\_text(size = 20))



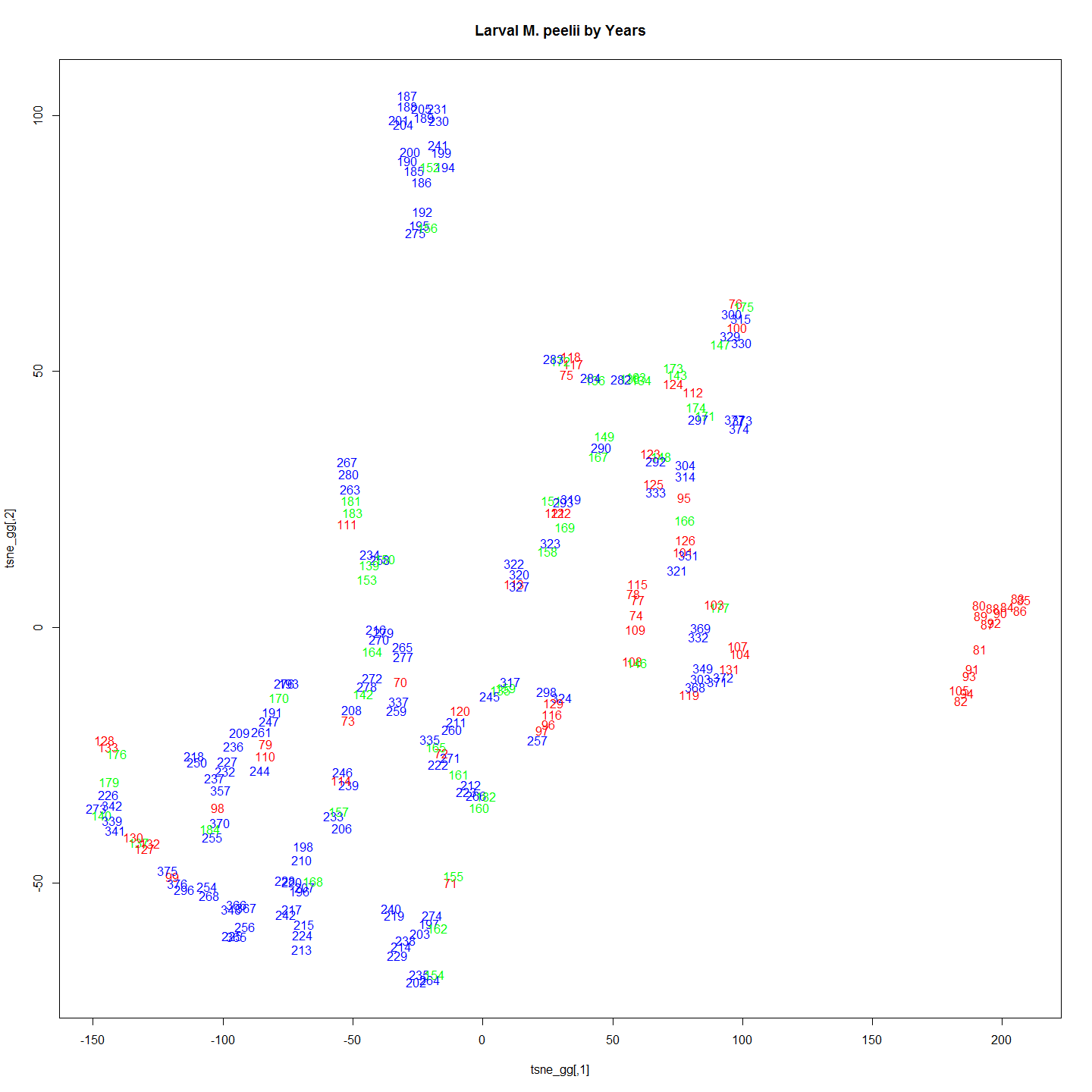
#tsne 2d  
require(tsne)  
colors<- rainbow(length(unique(gg$cluster)))  
names(colors) <- unique(gg$cluster)  
#ecb <-function(x,y){ plot(x,t='n',main="Larval M. peelii by Sites"); text(x,labels= row.names(gg),col=colors[gg$cluster])} #to make series  
#tsne\_gg <- tsne(gg[,1:3], max\_iter=10000,k=2, epoch\_callback = ecb, perplexity=5,epoch=1000)  
tsne\_gg <- tsne(gg[,1:3], max\_iter=10000,k=2, perplexity=5)  
plot(tsne\_gg,t='n',main="Larval M. peelii by Sites"); text(tsne\_gg,labels= row.names(gg),col=colors[gg$cluster])



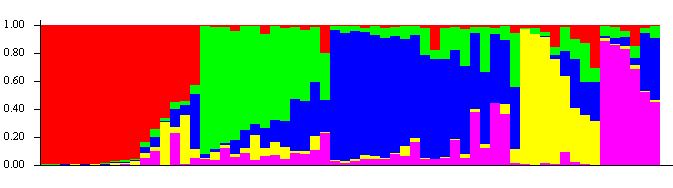
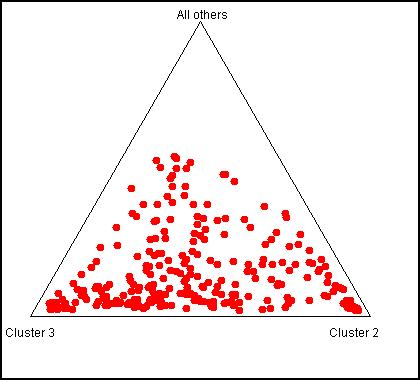
#Second we do PCA and tSNE with the same larvae coloured by year   
gg<- data.frame(pca1$scores,cluster=as.character(gl@other$covariates))  
gg$labels <- rownames(gg)  
ggplot(gg, aes(x=PC1, y=PC2))+  
 geom\_text(aes(label=labels, color=factor(cluster)),hjust=-0.2, size=4) +  
 # geom\_hline(yintercept=0,linetype=2) +  
 # geom\_vline(xintercept=0,linetype=2) +  
 scale\_color\_discrete(name="Year") +  
 ggtitle("Principal Components - Peelii larvae and Years")+  
 theme(plot.title = element\_text(lineheight=.8, face="bold", size=29))+  
 theme(axis.text=element\_text(size=15), axis.title=element\_text(size=15,face="bold"),legend.text = element\_text(size = 20),legend.title = element\_text(size = 20))

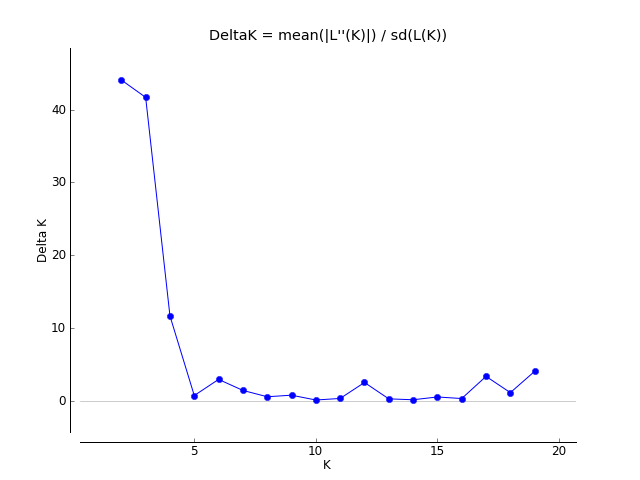


#tsne 2d  
require(tsne)  
colors<- rainbow(length(unique(gg$cluster)))  
names(colors) <- unique(gg$cluster)  
#ecb <-function(x,y){ plot(x,t='n',main="Larval M. peelii by Years"); text(x,labels= row.names(gg),col=colors[gg$cluster])} #to make series   
#tsne\_gg <- tsne(gg[,1:3], max\_iter=10000, epoch\_callback = ecb, perplexity=5,epoch=1000)  
tsne\_gg <- tsne(gg[,1:3], max\_iter=10000, perplexity=5)  
plot(tsne\_gg,t='n',main="Larval M. peelii by Years"); text(tsne\_gg,labels= row.names(gg),col=colors[gg$cluster])

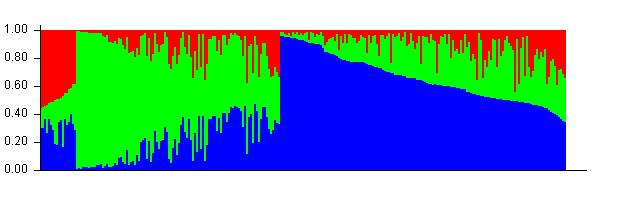
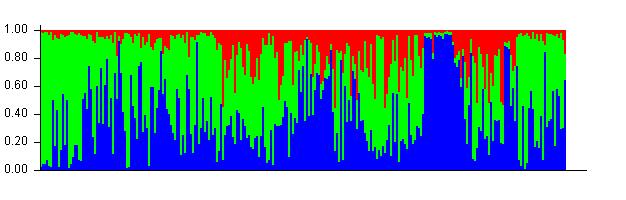


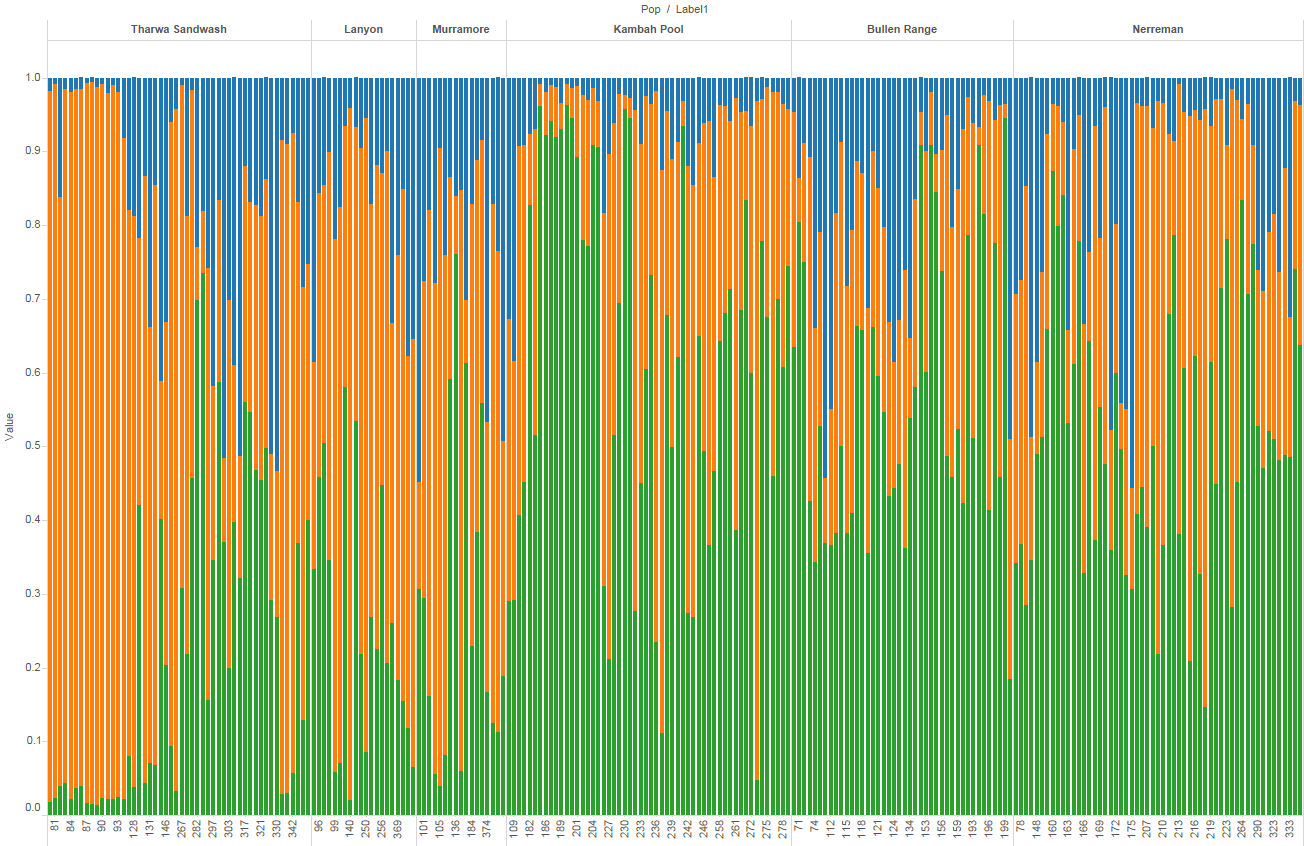
# ####################################Incase we need 3d plots  
# require(scatterplot3d)  
# tsne\_gg <- tsne(gg[,1:3], max\_iter=1000,k=3, perplexity=5)  
# scatterplot3d(tsne\_gg[,1],tsne\_gg[,2],tsne\_gg[,3], pch=16, highlight.3d=TRUE, main="3D Scatterplot")  
#   
# require(rgl)  
# #plot3d(tsne\_gg[,1],tsne\_gg[,2],tsne\_gg[,3], col="red", size=3)  
# plot3d(tsne\_gg[,1],tsne\_gg[,2],tsne\_gg[,3], col=colors[gg$cluster], size=3)

A little structure is evident if we look at structure based on collection site.  or as a triangle plot 

Following the evanno method we settled on 3 groups. 

so with three groups.

The structure is a associated with collection site. 

When the structure is examined based on the nest site rather than the collection site which better accounts for putative barriers and unidirectional dispersal. then:

after nests chapter is done

#Looking for DAPC, fixed differences, and Correspondence Analysis between populations.  
  
require(reshape2)  
require(dart)  
require(pegas)  
all.dart <- read.dart("otherData/larvalPeeliSnps.csv", topskip = 5)

## Added the following covmetrics:  
## CloneID SNP SnpPosition CallRate OneRatioSnp FreqHomRef FreqHomSnp FreqHets AvgCountRef AvgCountSnp RepAvg .  
## Number of rows per Clone. Should be only 2s:  
## 2  
## Recognised: 243 individuals and 6364 SNPs in otherData/larvalPeeliSnps.csv

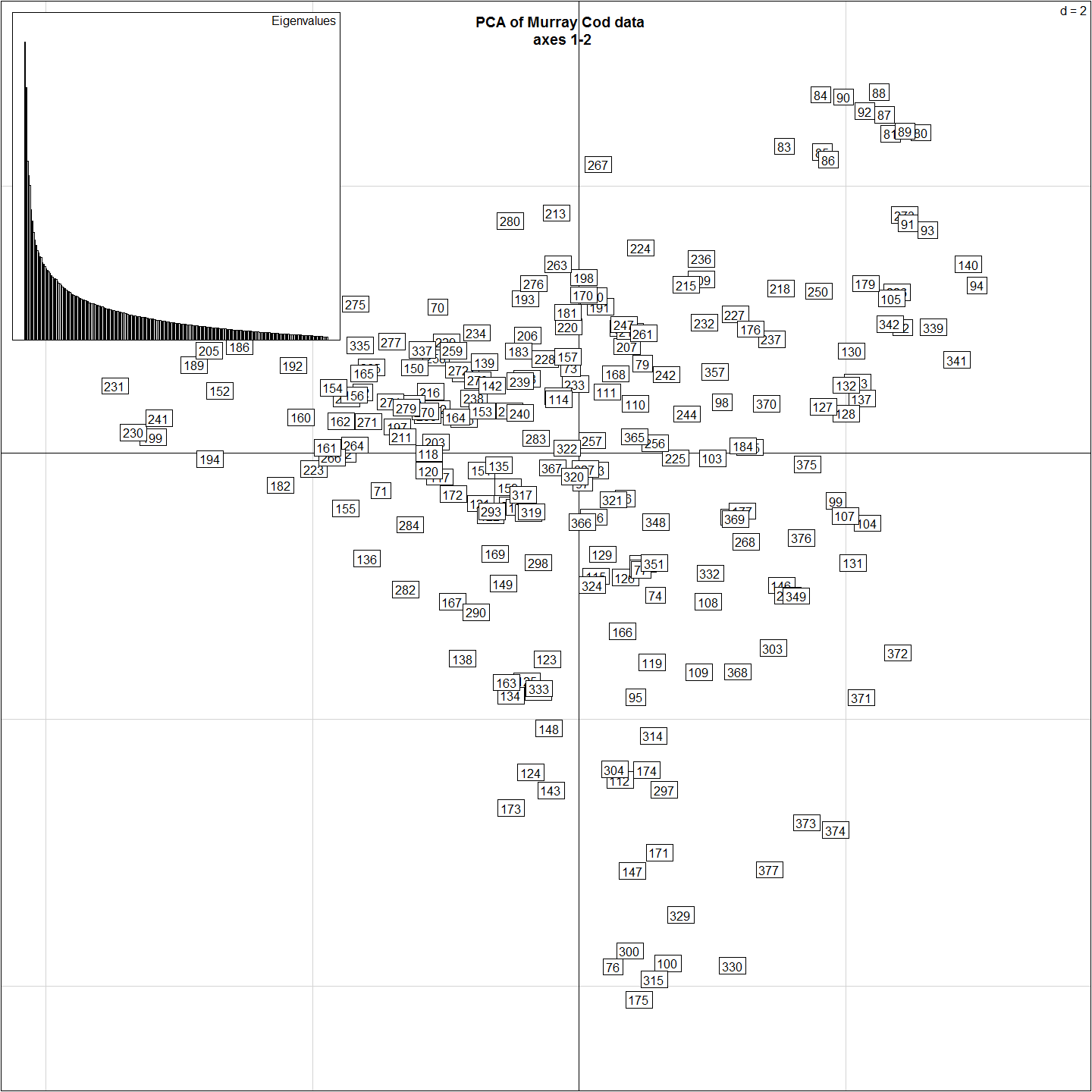
gl.dart <- dart2genlight(all.dart, covfilename = "otherData/qslLarvalPeeliiMetaForPCA.csv") # this glObject is then suitable for sharing via GitHub or such for open data as required by PeerJ etc. Need better file but.

## Start conversion....  
## Please note conversion of bigger data sets will take some time!  
## Once finished, we recommend to save the object using save(object, file="object.rdata")  
##   
 |   
   
## Try to add covariate file: otherData/qslLarvalPeeliiMetaForPCA.csv .  
## Ids of covariate file does not match the number of ids in the genetic file. Maybe this is fine if a subset matches.  
## Ids of covariate file (at least a subset of) are matching!  
## Found 243 matching ids out of 251 ids provided in the covariate file.  
## Added pop factor.  
## Added latlon data.  
## Added YearOnly to the other$covariates slot.  
## Added estimatedAge to the other$covariates slot.  
## Added Day.of.Year to the other$covariates slot.  
## Added hatchedDoY to the other$covariates slot.  
## Added Delta13C to the other$covariates slot.  
## Added Delta15N to the other$covariates slot.  
## Added CNRatio to the other$covariates slot.  
## Added Distance.to.Angle.Crossing..m. to the other$covariates slot.  
## Added raceCladeName to the other$covariates slot.  
## Added cladeGoTName to the other$covariates slot.  
## Added mumPulldown to the other$covariates slot.  
## Added Fathers to the other$covariates slot.  
## Added inbredCoeff to the other$covariates slot.

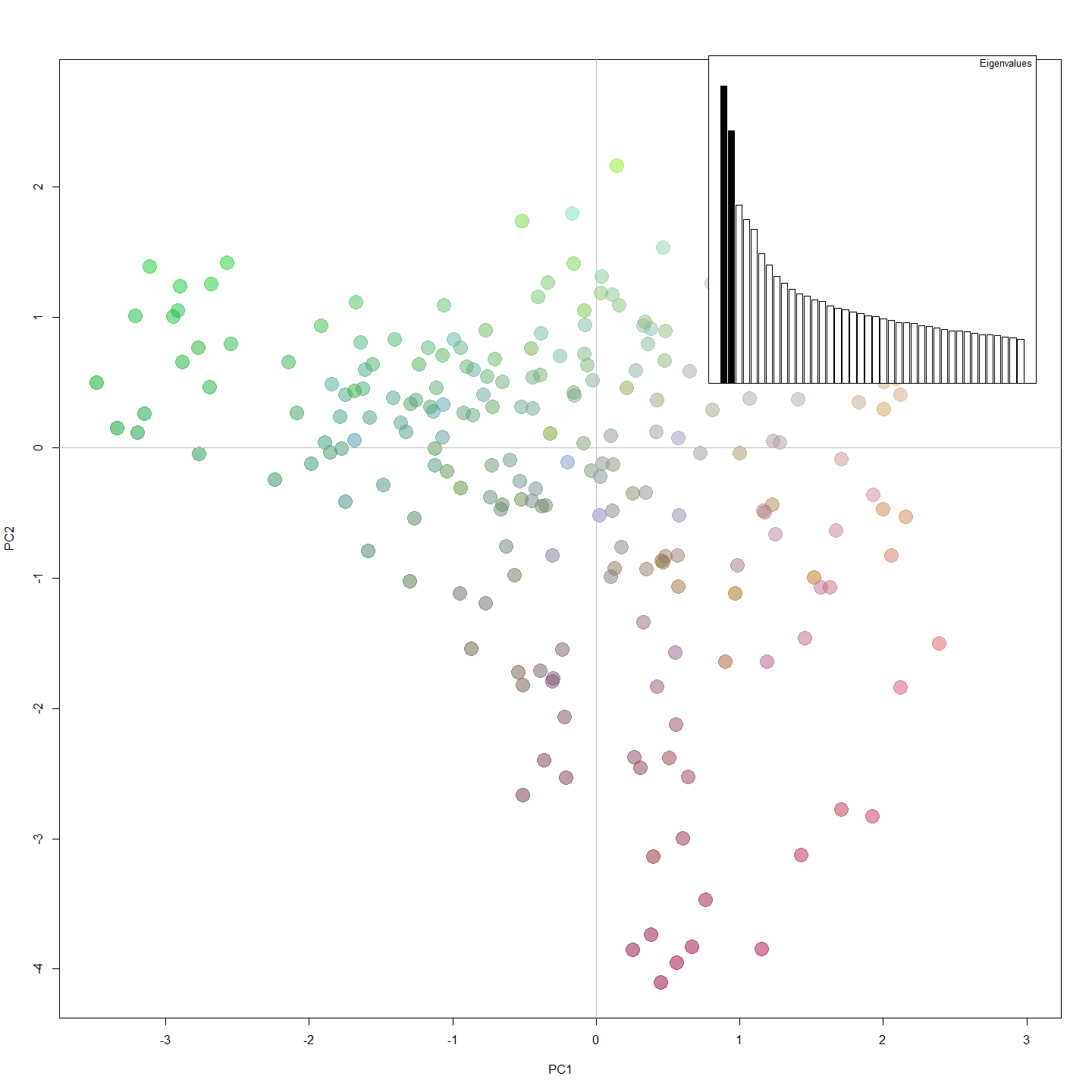
# cant work gl.fixed.diff(gl.dart, t=0)  
  
#PCA  
pca1 <- glPca(gl.dart, nf = 3 ,parallel = FALSE)  
pca1

## === PCA of genlight object ===  
## Class: list of type glPca  
## Call ($call):glPca(x = gl.dart, nf = 3, parallel = FALSE)  
##   
## Eigenvalues ($eig):  
## 2.077 1.762 1.245 1.144 1.078 0.908 ...  
##   
## Principal components ($scores):  
## matrix with 243 rows (individuals) and 3 columns (axes)   
##   
## Principal axes ($loadings):  
## matrix with 6364 rows (SNPs) and 3 columns (axes)

scatter(pca1, posi="topleft")  
title("PCA of Murray Cod data\n axes 1-2")



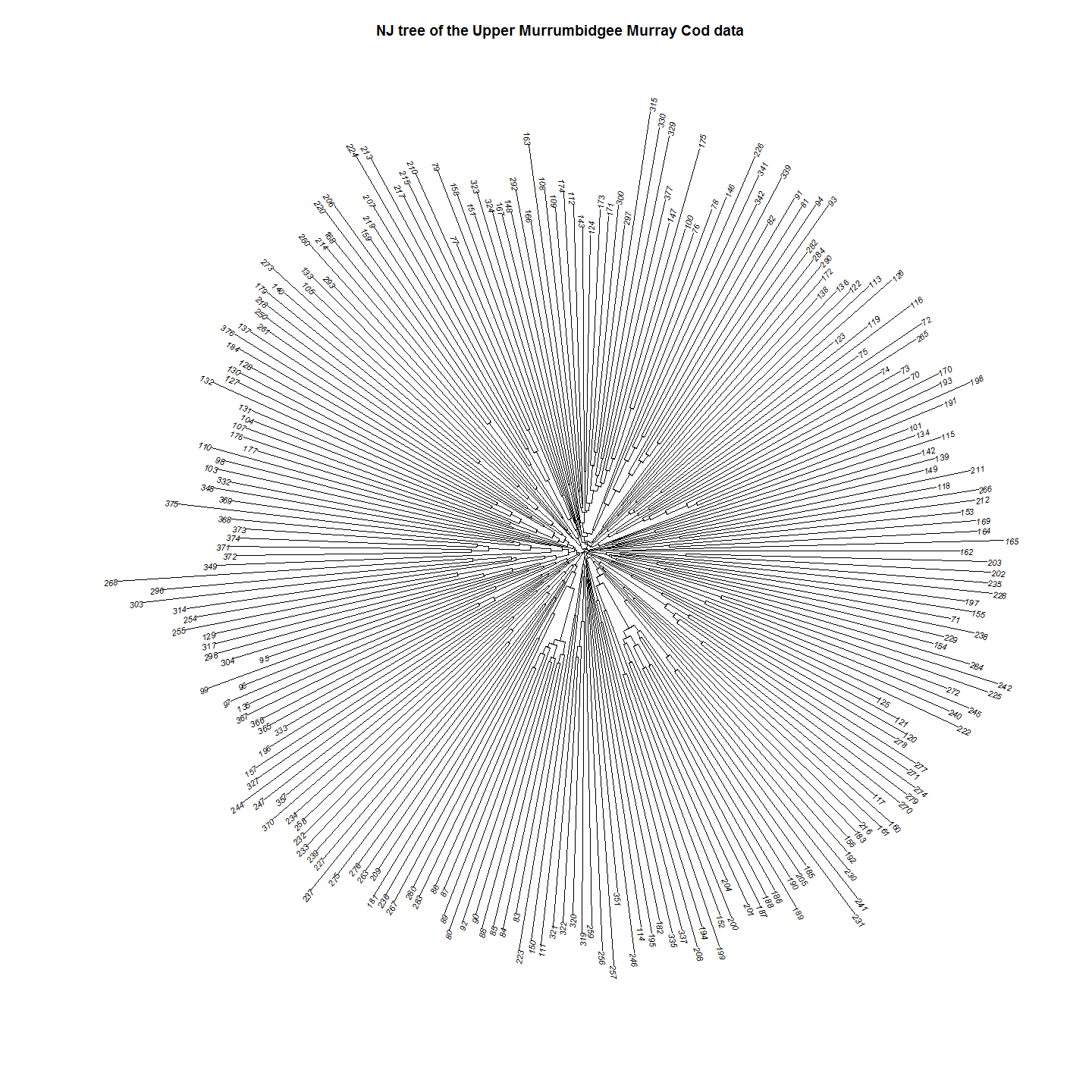
myCol <- colorplot(pca1$scores,pca1$scores, transp=TRUE, cex=4)  
abline(h=0,v=0, col="grey")  
add.scatter.eig(pca1$eig[1:40],2,1,2, posi="topright", inset=.05, ratio=.3)



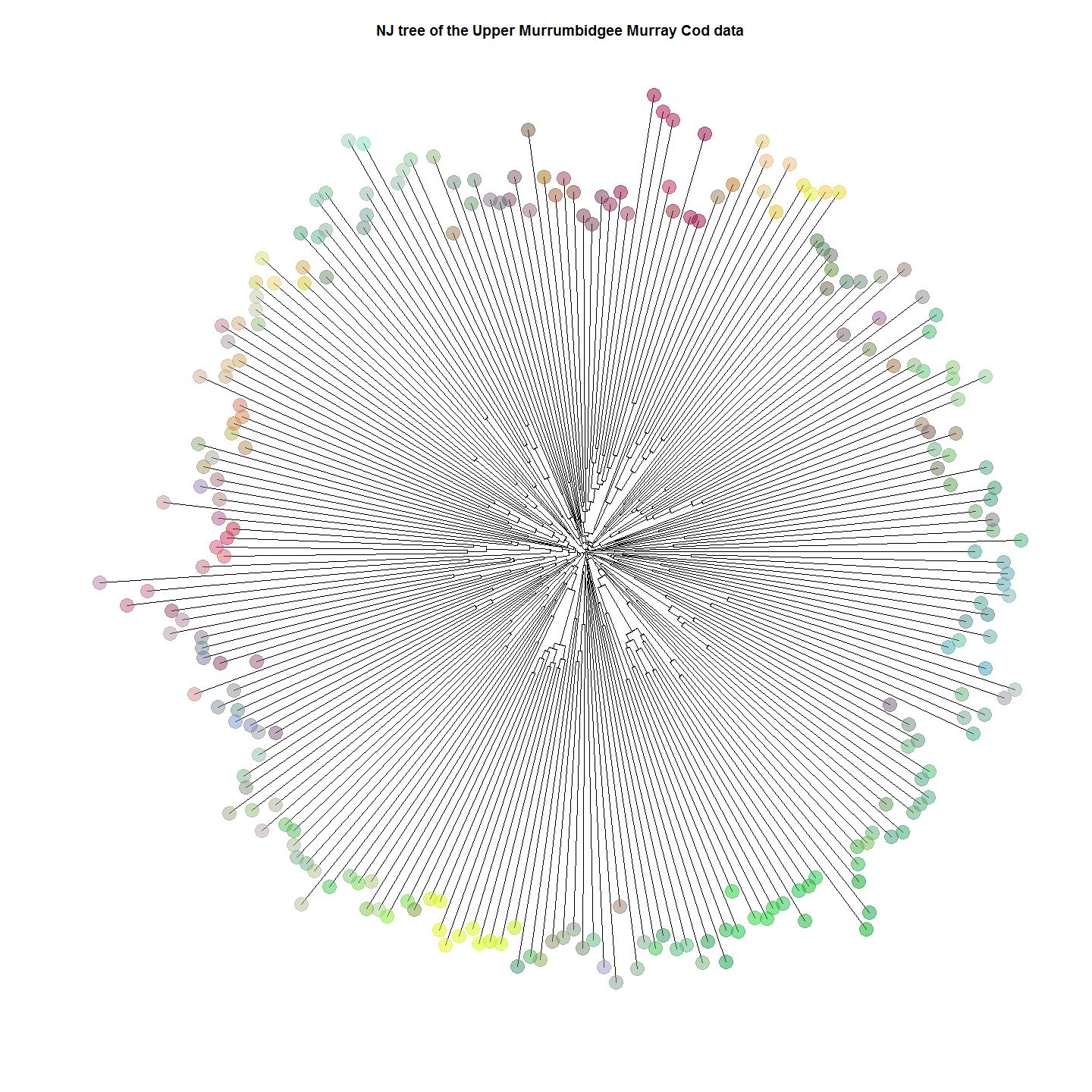
require(ape)  
tre <- nj(dist(as.matrix(gl)))  
tre

##   
## Phylogenetic tree with 243 tips and 241 internal nodes.  
##   
## Tip labels:  
## 185, 186, 187, 188, 189, 190, ...  
##   
## Unrooted; includes branch lengths.

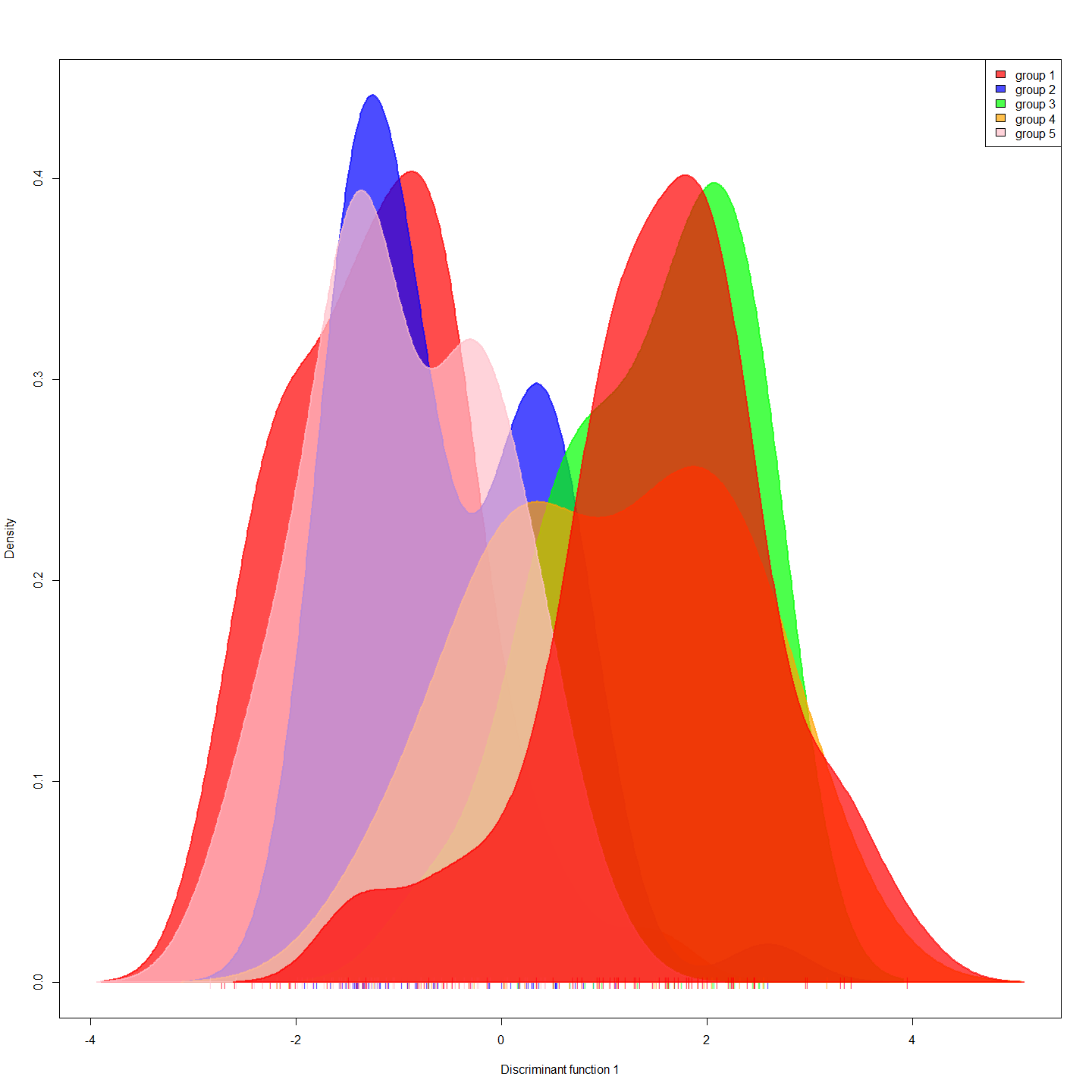
plot(tre, typ="fan", cex=0.7)  
title("NJ tree of the Upper Murrumbidgee Murray Cod data")



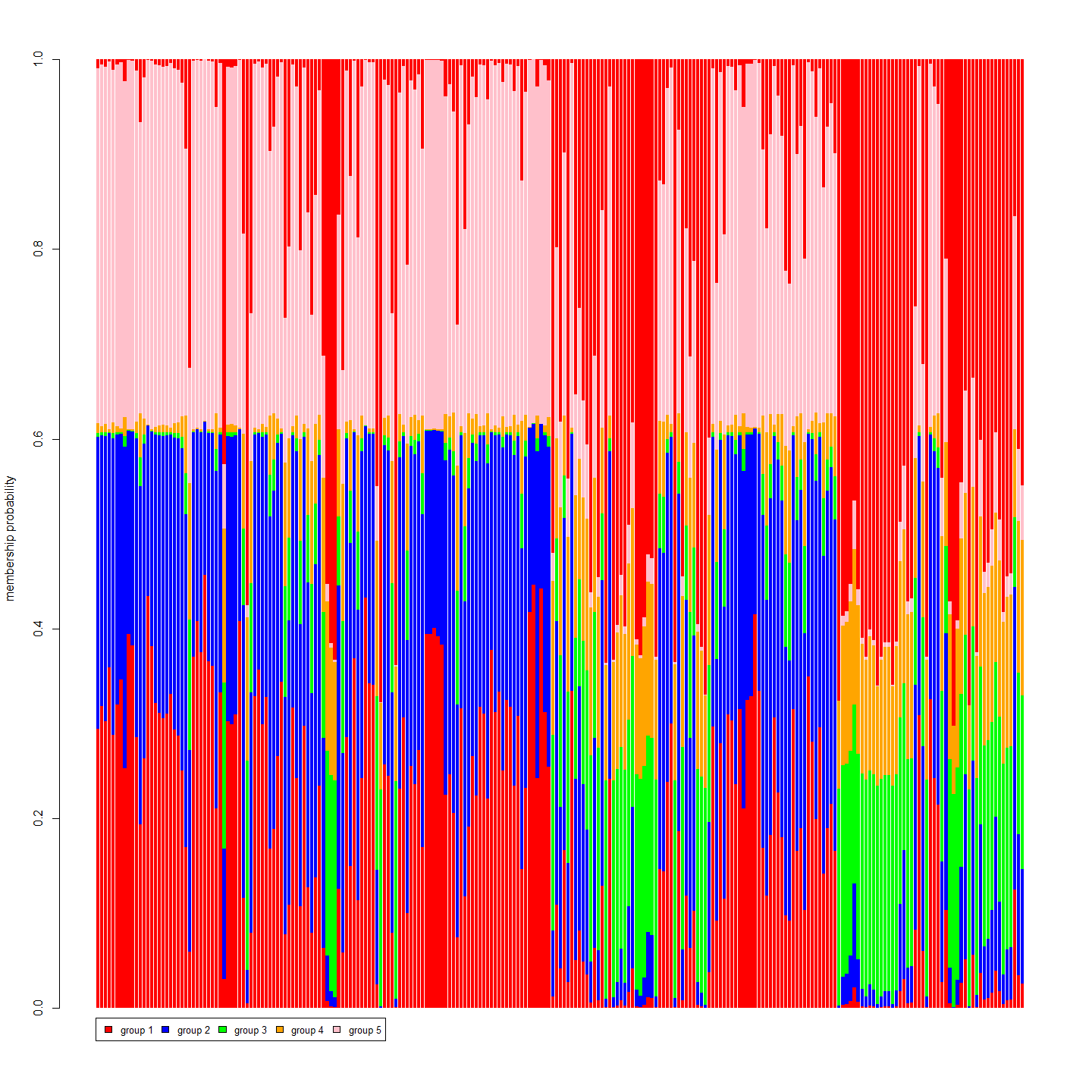
plot(tre, typ="fan", show.tip=FALSE)  
tiplabels(pch=20, col=myCol, cex=4)  
title("NJ tree of the Upper Murrumbidgee Murray Cod data")



#Discriminant Component Analysis   
dapc2 <- dapc(gl.dart, n.pca=10, n.da=1, parallel=FALSE)  
scatter(dapc2,scree.da=FALSE, bg="white", posi.pca="topright", legend=TRUE, txt.leg=paste("group", 1:5), col=c("red","blue","green","orange", "pink"))



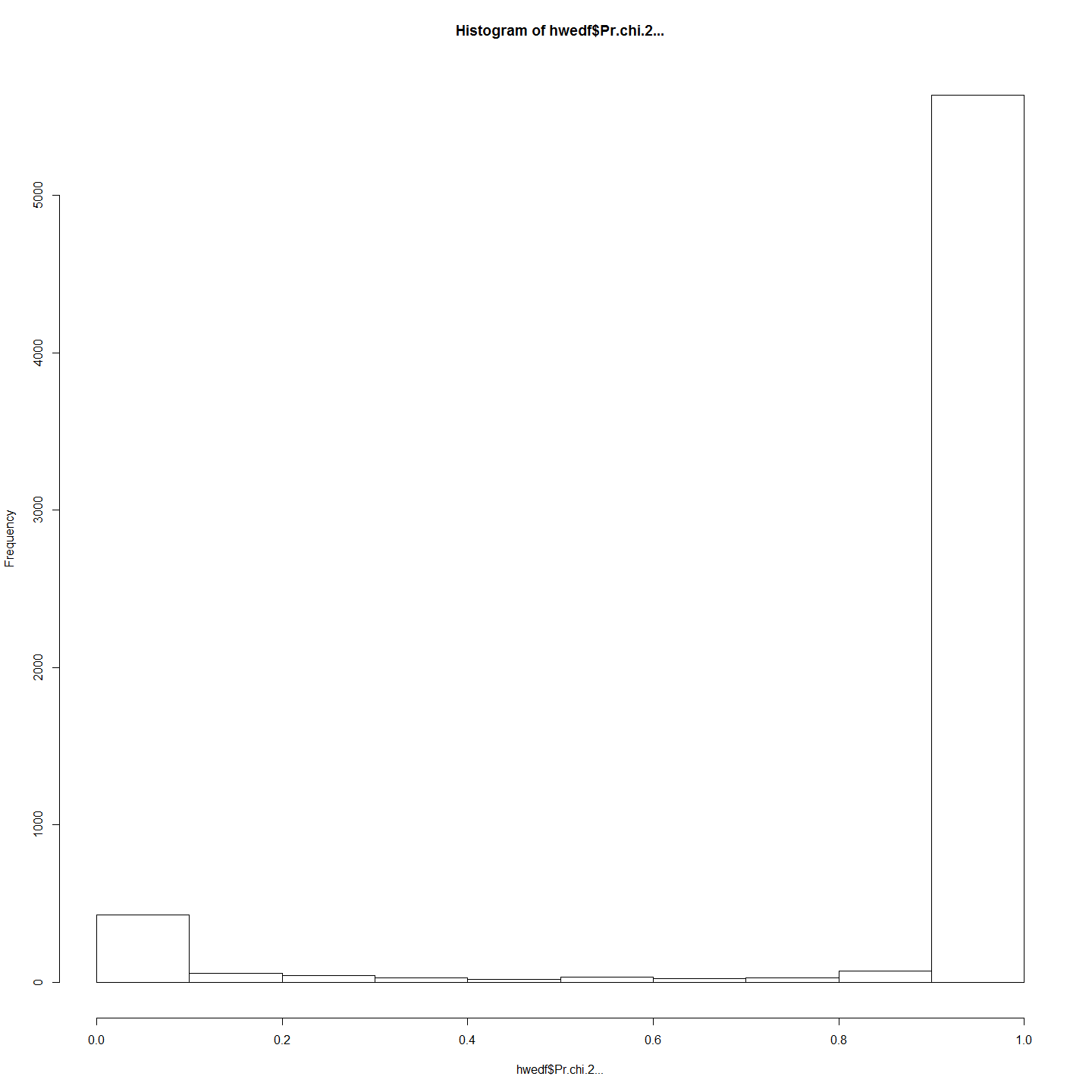
compoplot(dapc2, col=c("red","blue","green","orange", "pink"),lab="", txt.leg=paste("group", 1:5), ncol=5)



#Analysis on genInd object (individuals)  
#Hardy Weinberg  
source("genlight2genInd.R")  
gI<-genlight2genind(gl.dart)

## Start conversion....  
## Please note conversion of bigger data sets will take some time!  
## Once finished, we recommend to save the object using >save(object, file="object.rdata")  
##   
## Matrix converted.. Prepare genind object...  
## Finished! Took 72 seconds.

hwe<-hw.test(gI, B=0)  
hwedf<-data.frame(hwe)  
hist(hwedf$Pr.chi.2...)



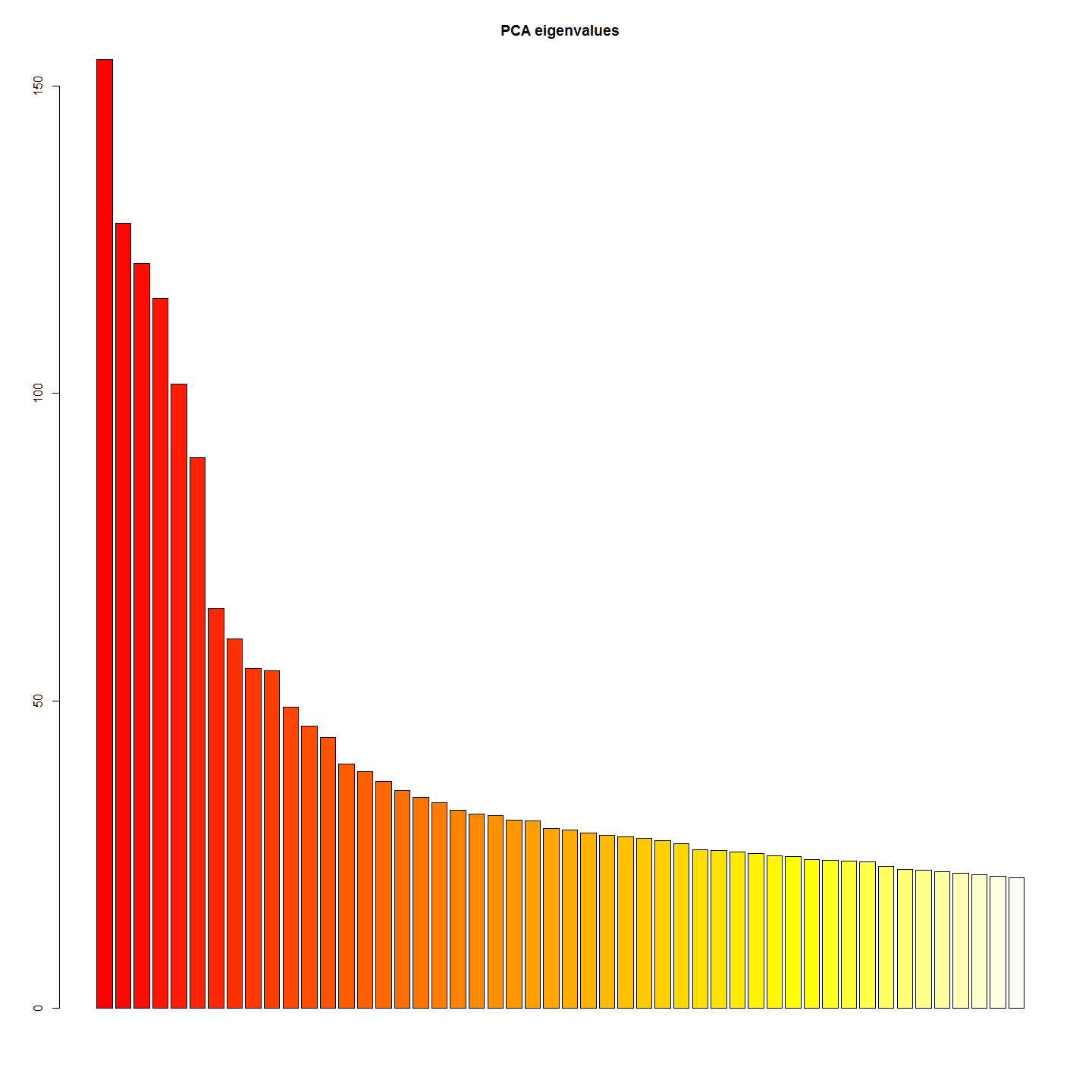
#There are   
sum(is.na(gI$tab)) #missing values in the data

## [1] 30511

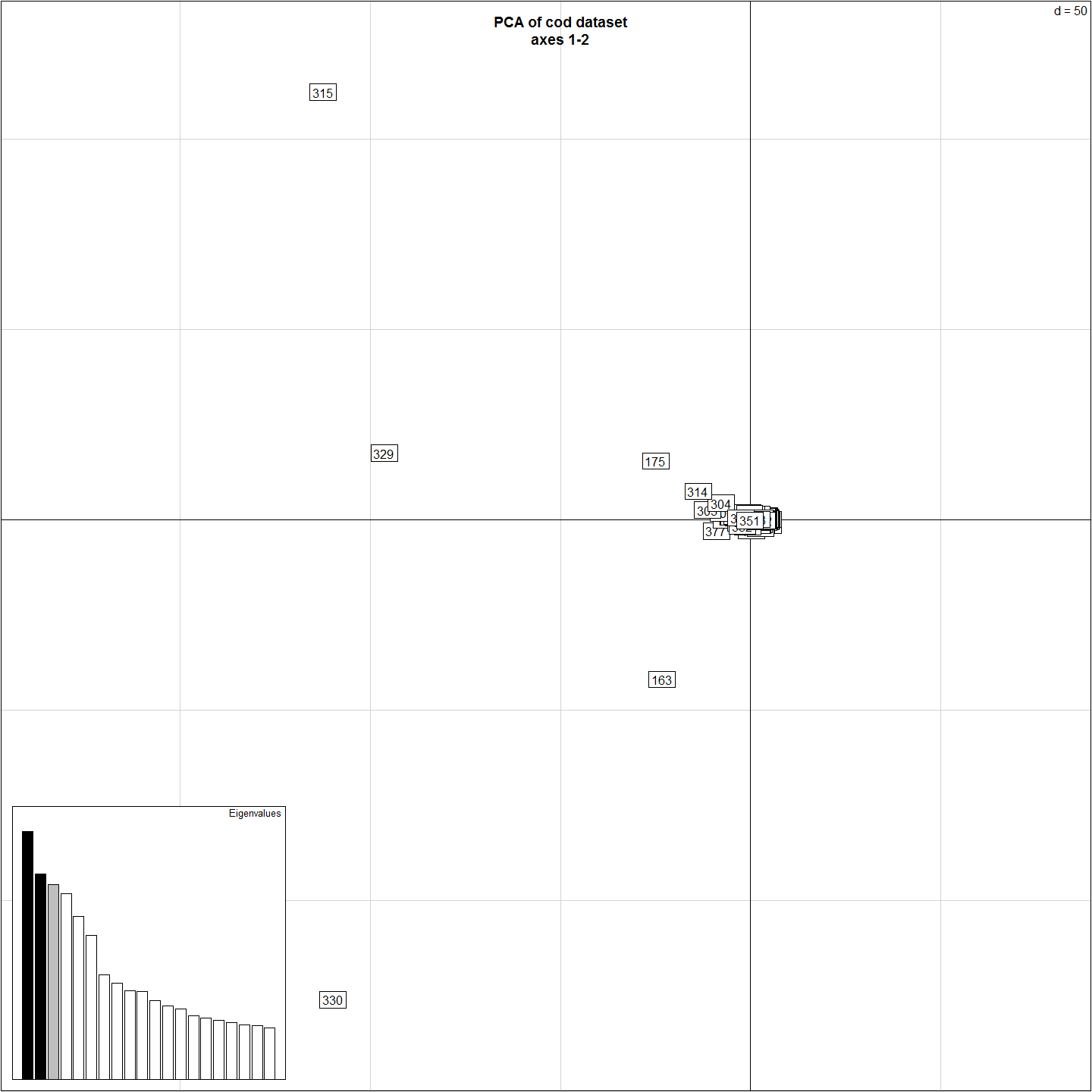
forPCOA<-scaleGen(gI, NA.method="mean") #scale the data  
forPCOA[1:5,1:5]

## 6661549-60-C/T.A 6661549-60-C/T.B 6650588-15-C/T.A 6650588-15-C/T.B 6661794-21-A/G.A  
## 185 2.006758 -2.006758 1.499011 -1.499011 0.1184337  
## 186 2.006758 -2.006758 1.499011 -1.499011 1.7172889  
## 187 0.289708 -0.289708 1.499011 -1.499011 0.1184337  
## 188 0.289708 -0.289708 1.499011 -1.499011 1.7172889  
## 189 0.289708 -0.289708 1.499011 -1.499011 0.1184337

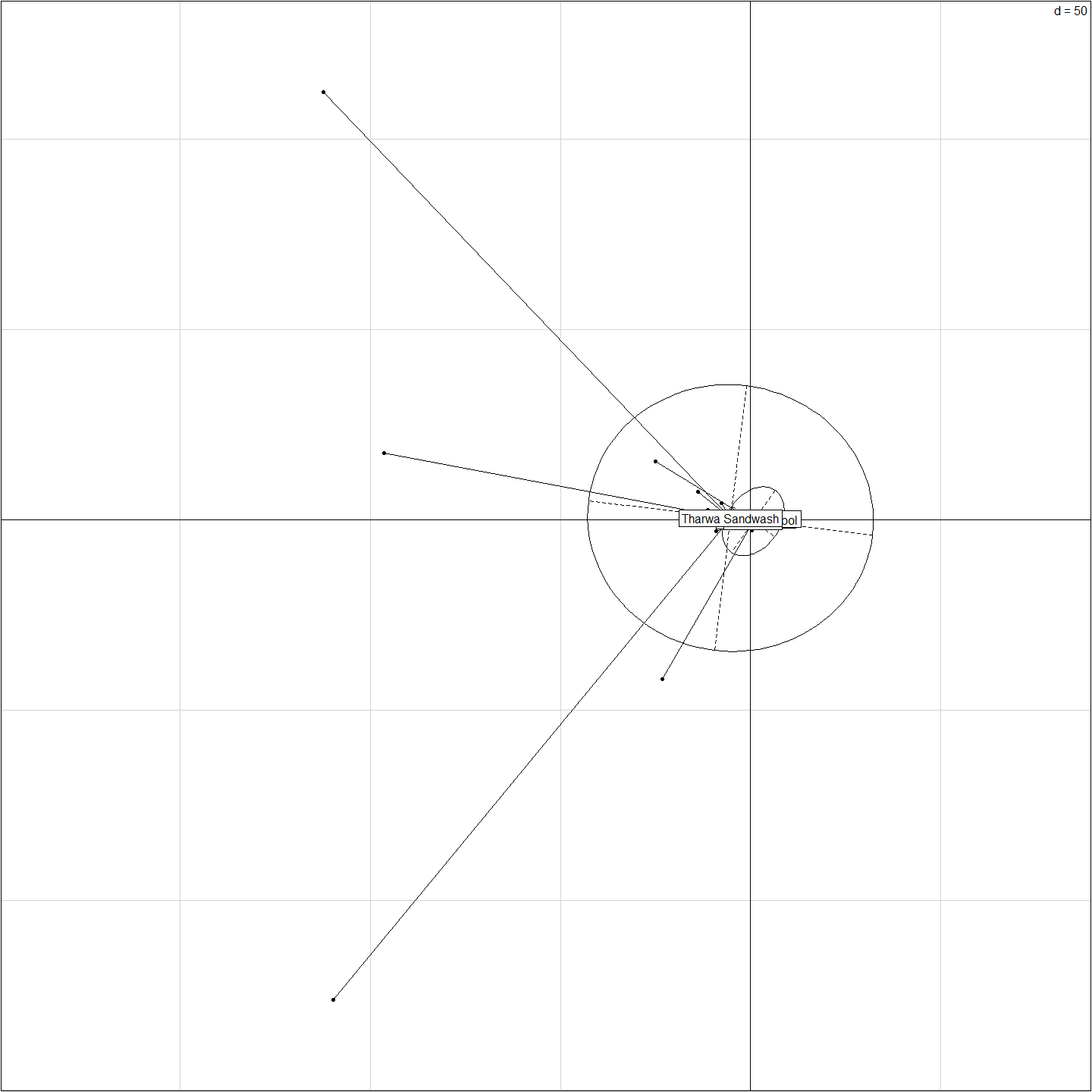
pca1 <- dudi.pca(forPCOA,cent=FALSE,scale=FALSE,scannf=FALSE,nf=3)  
barplot(pca1$eig[1:50],main="PCA eigenvalues", col=heat.colors(50))



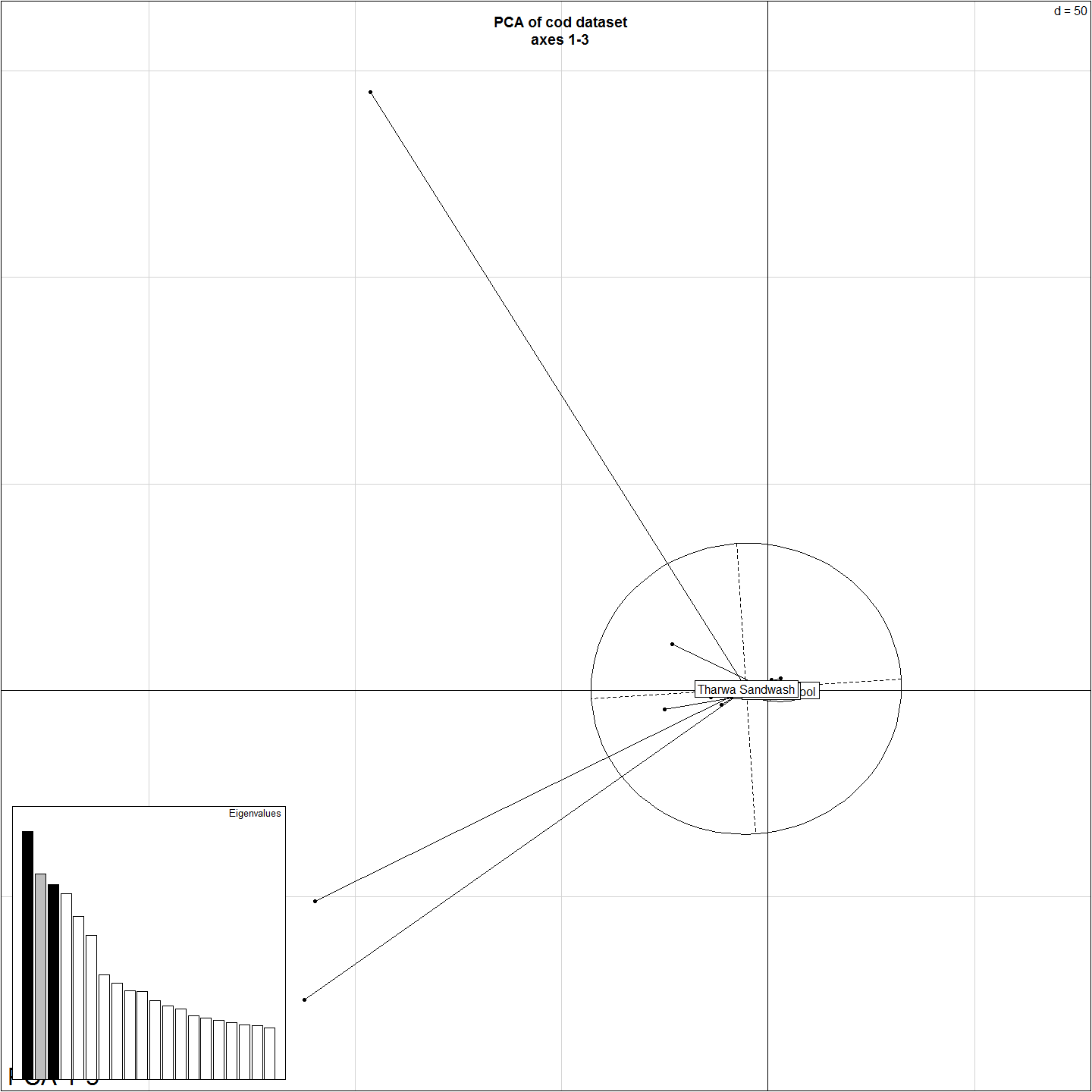
s.label(pca1$li)  
title("PCA of cod dataset\naxes 1-2")  
add.scatter.eig(pca1$eig[1:20], 3,1,2)



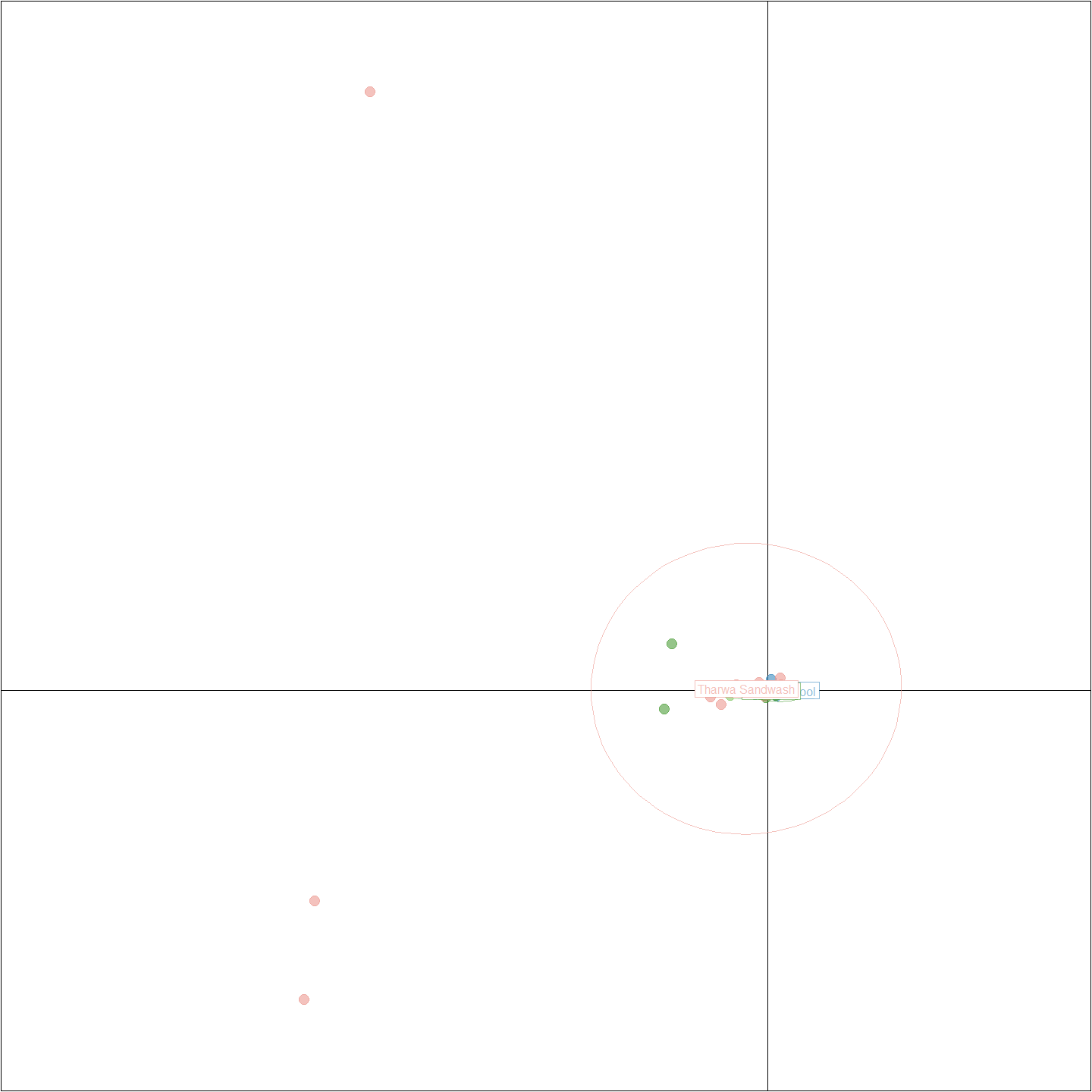
s.class(pca1$li, pop(gI))



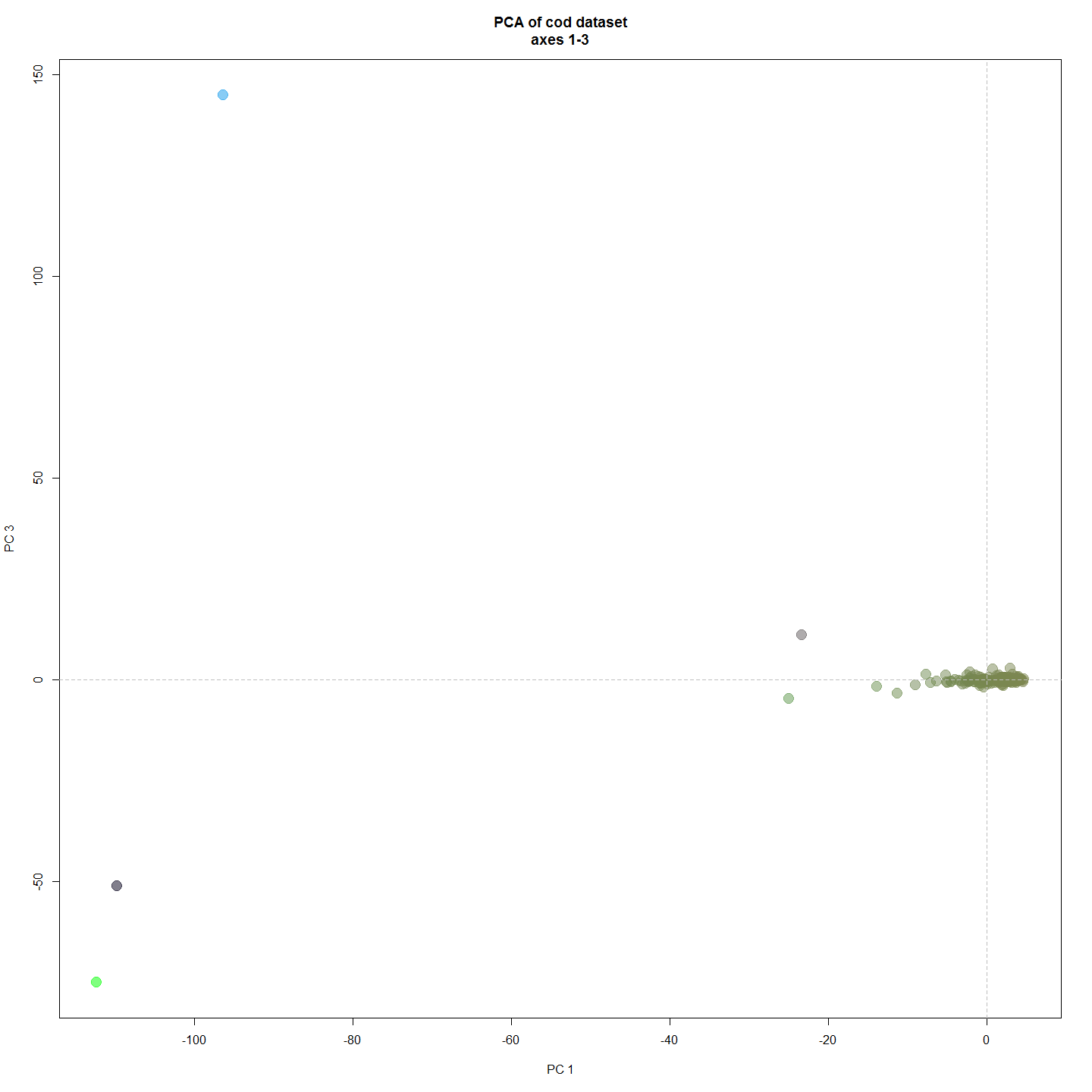
s.class(pca1$li,pop(gI),xax=1,yax=3,sub="PCA 1-3",csub=2)  
title("PCA of cod dataset\naxes 1-3")  
add.scatter.eig(pca1$eig[1:20],nf=3,xax=1,yax=3)



col <- funky(15)  
s.class(pca1$li, pop(gI),xax=1,yax=3, col=transp(col,.6), axesell=FALSE,  
 cstar=0, cpoint=3, grid=FALSE)



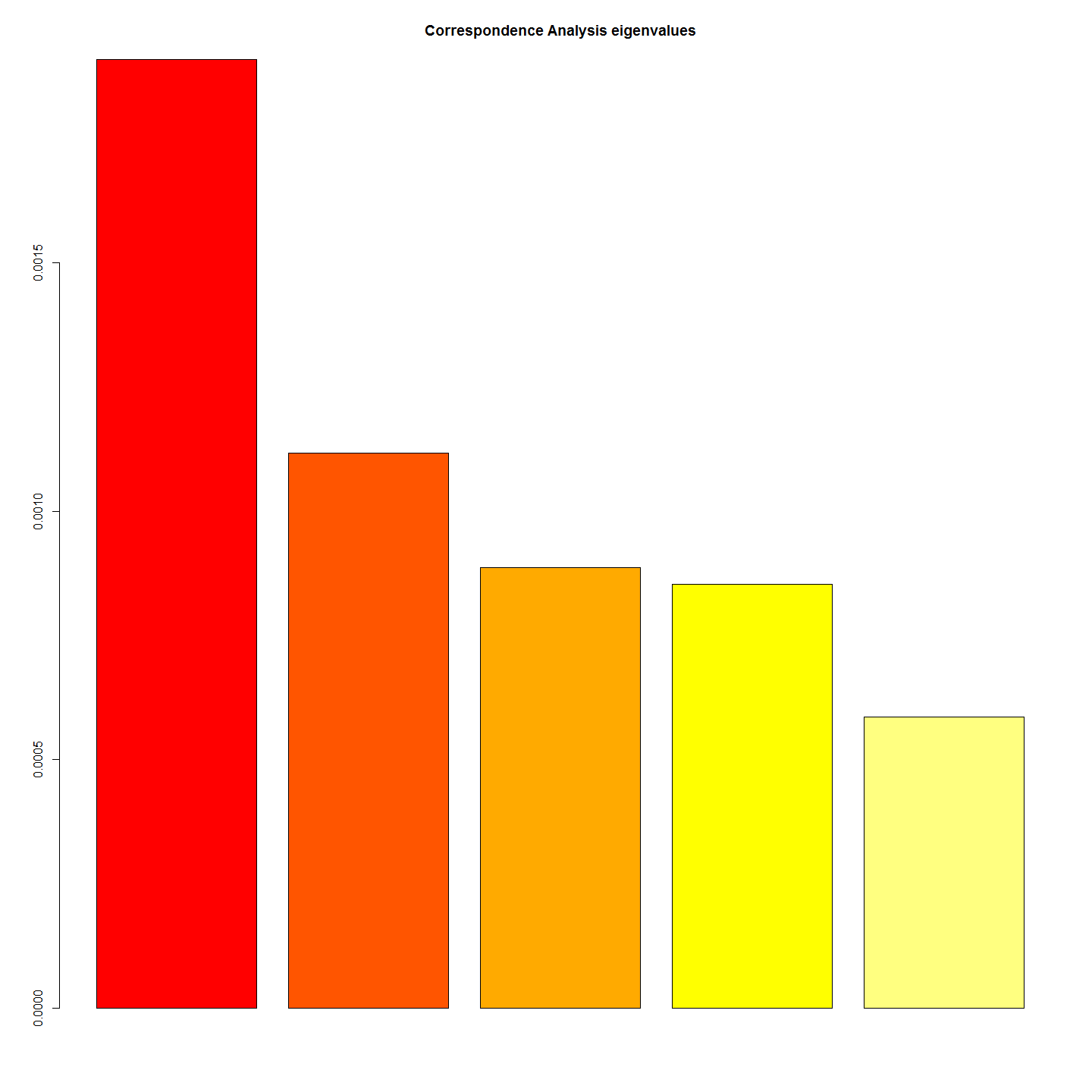
colorplot(pca1$li[c(1,3)], pca1$li, transp=TRUE, cex=3, xlab="PC 1", ylab="PC 3")  
title("PCA of cod dataset\naxes 1-3")  
abline(v=0,h=0,col="grey", lty=2)



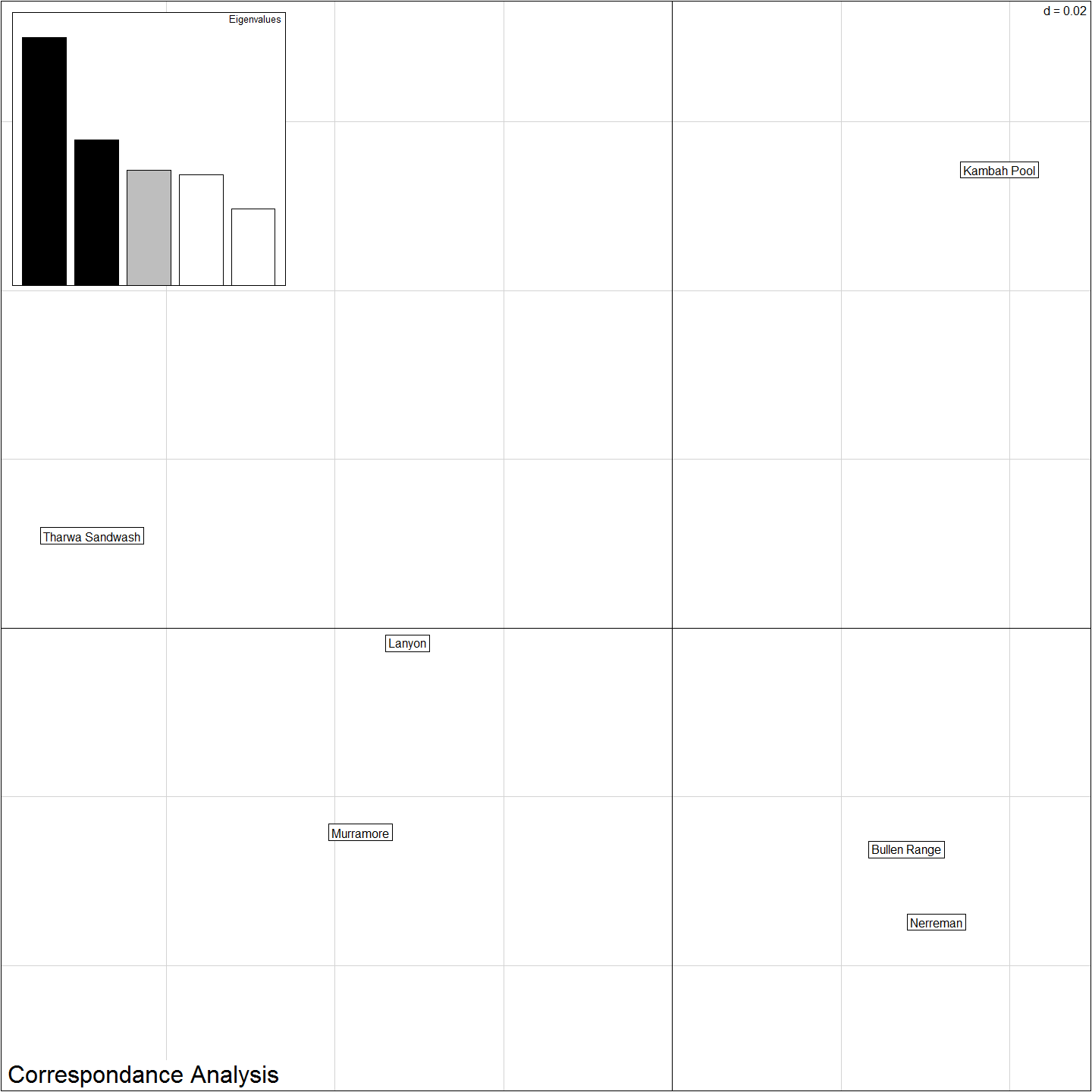
#Correspondance Analysis (genepop object)  
obj <- genind2genpop(gI)

##   
## Converting data from a genind to a genpop object...   
##   
## ...done.

ca1 <- dudi.coa(tab(obj),scannf=FALSE,nf=3)  
barplot(ca1$eig,main="Correspondence Analysis eigenvalues",  
 col=heat.colors(length(ca1$eig)))



s.label(ca1$li, sub="Correspondance Analysis",csub=2)  
add.scatter.eig(ca1$eig,nf=3,xax=1,yax=2,posi="topleft")



#Isolation By Distance  
# Dgen <- dist.genpop(obj,method=2)  
# Dgeo <- dist(gI$other$latlong) #need xys for sites in gI for this to work.  
# ibd <- mantel.randtest(Dgen,Dgeo)  
# ibd

all\_labels()

## [1] "Project\_Template\_and\_Knitr" "Set\_Global\_Options" "unnamed-chunk-1" "unnamed-chunk-2"   
## [5] "unnamed-chunk-3" "unnamed-chunk-4" "unnamed-chunk-5" "poppr functions"   
## [9] "unnamed-chunk-6" "unnamed-chunk-7" "unnamed-chunk-8" "unnamed-chunk-9"   
## [13] "unnamed-chunk-10" "unnamed-chunk-11" "PCAtSNEStructure" "unnamed-chunk-12"   
## [17] "dapcCorrespondence" "Include\_Chunk\_Labels\_and\_Session Information" "averagePIC" "dapcCorroStructure"

proc.time()-ptm

## user system elapsed   
## 3712.95 13.85 3921.54

#Session Information  
sessionInfo()

## R version 3.3.0 (2016-05-03)  
## Platform: x86\_64-w64-mingw32/x64 (64-bit)  
## Running under: Windows 7 x64 (build 7601) Service Pack 1  
##   
## locale:  
## [1] LC\_COLLATE=English\_Australia.1252 LC\_CTYPE=English\_Australia.1252 LC\_MONETARY=English\_Australia.1252 LC\_NUMERIC=C LC\_TIME=English\_Australia.1252   
##   
## attached base packages:  
## [1] stats graphics grDevices utils datasets methods base   
##   
## other attached packages:  
## [1] reshape2\_1.4.1 StAMPP\_1.4 igraph\_1.0.1 poppr\_2.2.1 mmod\_1.3.1 hierfstat\_0.04-22 pegas\_0.9 ape\_3.5 tsne\_0.1-3   
## [10] dart\_0.3 adegenet\_2.0.1 ade4\_1.7-4 ggplot2\_2.1.0 plyr\_1.8.4 dplyr\_0.5.0 ProjectTemplate\_0.7 knitr\_1.13   
##   
## loaded via a namespace (and not attached):  
## [1] Rcpp\_0.12.6 lattice\_0.20-33 deldir\_0.1-12 gtools\_3.5.0 assertthat\_0.1 digest\_0.6.10 foreach\_1.4.3 mime\_0.5 R6\_2.1.2 nnls\_1.4   
## [11] evaluate\_0.9 coda\_0.18-1 lazyeval\_0.2.0 spdep\_0.6-6 gdata\_2.17.0 vegan\_2.4-0 phangorn\_2.0.4 gmodels\_2.16.2 Matrix\_1.2-6 rmarkdown\_1.0   
## [21] labeling\_0.3 splines\_3.3.0 stringr\_1.0.0 munsell\_0.4.3 shiny\_0.13.2 httpuv\_1.3.3 mgcv\_1.8-13 htmltools\_0.3.5 tibble\_1.1 quadprog\_1.5-5   
## [31] codetools\_0.2-14 permute\_0.9-0 MASS\_7.3-45 grid\_3.3.0 nlme\_3.1-128 xtable\_1.8-2 gtable\_0.2.0 DBI\_0.5 magrittr\_1.5 formatR\_1.4   
## [41] scales\_0.4.0 KernSmooth\_2.23-15 stringi\_1.1.1 LearnBayes\_2.15 doParallel\_1.0.10 sp\_1.2-3 seqinr\_3.3-0 boot\_1.3-18 fastmatch\_1.0-4 iterators\_1.0.8   
## [51] tools\_3.3.0 parallel\_3.3.0 yaml\_2.1.13 colorspace\_1.2-6 cluster\_2.0.4