

features

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January 25, 2018

finding discriminative features

The features are going to be selected based on different models. To find the significant features permutation test is applied.

```
pathTodata = "C:/Users/nz1413/Desktop/"
PathToReport = "C:/Users/nz1413/Desktop/AnalysisTag/DiseaseSubTypeDiscovery/Final/report/"

data <- t(read.table(paste(pathTodata, "/dataTAC/sputum_508genes.txt", sep = ""), header = TRUE))
dataScaled = scale(data)

TAClabels <- t(read.table(paste(pathTodata, "dataTAC/correspondanceTAC.txt", sep = ""), header = FALSE))
inds = match(TAClabels[2,], rownames(data))
tacLabels <- as.numeric(TAClabels[1,])
dataScaled = dataScaled[inds,]

library(mclust)

## Package 'mclust' version 5.4
## Type 'citation("mclust")' for citing this R package in publications.

mbc<-Mclust(dataScaled)
summary(mbc)

## -----
## Gaussian finite mixture model fitted by EM algorithm
## -----
##
## Mclust VII (spherical, varying volume) model with 4 components:
##
##   log.likelihood    n    df        BIC        ICL
##      -63604.42 104 2039  -136678.7 -136678.8
##
## Clustering table:
##   1  2  3  4
## 23 28 24 29

temp = factor(mbc$classification)
levels(temp)=c("TAC1", "TAC3a", "TAC2", "TAC3b")
mbc$classification = temp

#clusters
library(CMA)

## Loading required package: Biobase
## Loading required package: BiocGenerics
## Loading required package: parallel
```

```

##
## Attaching package: 'BiocGenerics'

## The following objects are masked from 'package:parallel':
##
##   clusterApply, clusterApplyLB, clusterCall, clusterEvalQ,
##   clusterExport, clusterMap, parApply, parCapply, parLapply,
##   parLapplyLB, parRapply, parSapply, parSapplyLB

## The following objects are masked from 'package:stats':
##
##   IQR, mad, sd, var, xtabs

## The following objects are masked from 'package:base':
##
##   anyDuplicated, append, as.data.frame, cbind, colMeans,
##   colnames, colSums, do.call, duplicated, eval, evalq, Filter,
##   Find, get, grep, grepl, intersect, is.unsorted, lapply,
##   lengths, Map, mapply, match, mget, order, paste, pmax,
##   pmax.int, pmin, pmin.int, Position, rank, rbind, Reduce,
##   rowMeans, rownames, rowSums, sapply, setdiff, sort, table,
##   tapply, union, unique, unsplit, which, which.max, which.min

## Welcome to Bioconductor
##
##   Vignettes contain introductory material; view with
##   'browseVignettes()'. To cite Bioconductor, see
##   'citation("Biobase")', and for packages 'citation("pkgname")'.

set.seed(321)
options(warn=-1)
varsel_ftest <- GeneSelection(X = dataScaled, y=mbc$classification,
                             method = "f.test")

## GeneSelection: iteration 1
varsel_kruskaltest <- GeneSelection(X = dataScaled, y=mbc$classification,
                                   method = "kruskal.test")

## GeneSelection: iteration 1
varsel_rf <- GeneSelection(X = dataScaled, y=mbc$classification,
                          method = "rf")

## GeneSelection: iteration 1
## randomForest 4.6-12
## Type rfNews() to see new features/changes/bug fixes.
##
## Attaching package: 'randomForest'

## The following object is masked from 'package:Biobase':
##
##   combine

## The following object is masked from 'package:BiocGenerics':
##
##   combine

```


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```
set.seed(113)
options(warn=-1)
varsel_ftest <- GeneSelection(X = dataScaled, y=mbc$classification,
                             method = "f.test")
```

```
varsel_kruskaltest <- GeneSelection(X = dataScaled, y=mbc$classification,
                                   method = "kruskal.test")
```

```
varsel_rf <- GeneSelection(X = dataScaled, y=mbc$classification,
                           mtry= ceiling(10*sqrt(nvars)), nodesize = 8 , method = "rf")
```

[illegible]

```

## GeneSelection: iteration 1

options(warn=0)
pValuefctest = matrix(0,1,nvars)
pValuekruskaltest = matrix(0,1,nvars)
pValuerf = matrix(0,1,nvars)
pValueboosting = matrix(0,1,nvars)
for(i in 1:nvars)
{
  temp = which(varsel_fctest@rankings[[1]]==i)
  pValuefctest[1,i] = length(which(varImportancefctest[,i]>
                                   varsel_fctest@importance[[1]][temp]))

  temp = which(varsel_kruskaltest@rankings[[1]]==i)
  pValuekruskaltest[1,i] = length(which(varImportancekruskaltest[,i]>
                                         varsel_kruskaltest@importance[[1]][temp]))

  temp = which(varsel_rf@rankings[[1]]==i)
  pValuerf[1,i] = length(which(varImportancerf[,i]>
                               varsel_rf@importance[[1]][temp]))

  temp = which(varsel_boosting@rankings[[1]]==i)
  pValueboosting[1,i] = length(which(varImportanceboosting[,i]>
                                     varsel_boosting@importance[[1]][temp]))
}

fctestPvalue = t(pValuefctest)/1000
kruskalPvalue = t(pValuekruskaltest)/1000
boostingPvalue = t(pValueboosting)/1000
rfPvalue = t(pValuerf)/1000

# adjustment
indeces = order(fctestPvalue)
fctestPvalue[indeces] = p.adjust(fctestPvalue[indeces],
                                method = "BH")

indeces = order(kruskalPvalue)
kruskalPvalue[indeces] = p.adjust(kruskalPvalue[indeces],
                                method = "BH")

indeces = order(boostingPvalue)
boostingPvalue[indeces] = p.adjust(boostingPvalue[indeces],
                                method = "BH")

indeces = order(rfPvalue)
rfPvalue[indeces] = p.adjust(rfPvalue[indeces],
                             method = "BH")

result = cbind(varsel_fctest@importance[[1]][varsel_fctest@rankings[[1]][1:nvars]],
               fctestPvalue,
               varsel_kruskaltest@importance[[1]][varsel_kruskaltest@rankings[[1]][1:nvars]],
               kruskalPvalue,
               varsel_rf@importance[[1]][varsel_rf@rankings[[1]][1:nvars]],
               rfPvalue,
               varsel_boosting@importance[[1]][varsel_boosting@rankings[[1]][1:nvars]],
               boostingPvalue)

nvars = dim(dataScaled)[2]
library(gtools)
foldChange = 1:nvars

```

```

for (i in 1:nvars)
{
  foldChange[i] = foldchange(mean(dataScaled[which(mbc$classification==1 | mbc$classification==2),i]), 1)
}

FinalSelection = matrix(0,nvars,4 )
colnames(FinalSelection) = c("f.test", "kruskal.test", "component boosting","random Forst")
rownames(FinalSelection) = colnames(dataScaled)
for(i in seq(1,8,2))
{
  quantTemp = quantile(result[,i], 0.9)
  FinalSelection[, (floor(i/2)+1)] = as.numeric(c(result[,i]>= quantTemp & result[, (i+1)]<= 0.05))
}

FinalSelection = cbind(FinalSelection, foldChange)
rownames(FinalSelection) = colnames(dataScaled)

result = cbind(result, foldChange)
rownames(result) = colnames(dataScaled)

write.table(result, file = paste(PathToReport,"featureSelection/featuresFor4Classes.txt",sep="") )
print(result)

```

```

##
## CLC          4.1540582 0.000000000 49.6581423 0.000000000 -5.000000e-05
## IL1RL1       7.9029633 0.000000000 46.9364562 0.000000000 4.589744e-04
## CPA3         60.1865270 0.000000000 9.6352010 0.000000000 1.081081e-04
## GNA15        17.6864420 0.000000000 11.3677047 0.000000000 6.289426e-04
## PRSS33       20.4411397 0.000000000 20.4813799 0.000000000 -5.714286e-05
## CRLF2        26.6181021 0.000000000 38.9187862 0.000000000 1.954887e-04
## CCL22        20.6889973 0.000000000 35.7699553 0.000000000 0.000000e+00
## GATA2        41.3900700 0.000000000 13.9051186 0.000000000 9.413149e-04
## ALOX15       17.5737199 0.000000000 16.6881560 0.000000000 9.794910e-03
## VEGFA        30.0133084 0.000000000 35.7565570 0.000000000 2.000000e-04
## CCL17        21.3399991 0.000000000 11.4184345 0.000000000 1.111111e-04
## SATB1        4.2847340 0.000000000 41.6348866 0.000000000 1.555556e-04
## SOCS2        21.6806424 0.000000000 52.6592644 0.000000000 1.818182e-04
## SMOX         22.8060443 0.000000000 52.2990691 0.000000000 8.276087e-02
## BIRC3        19.9742831 0.000000000 48.2521346 0.000000000 4.622426e-04
## LOC101927770 4.9946484 0.000000000 17.6428410 0.000000000 2.702703e-04
## TARP         21.5105822 0.000000000 40.7341488 0.000000000 2.659101e-03
## CISH         3.4982322 0.000000000 15.9387331 0.000000000 4.681287e-04
## BST1        11.1469562 0.000000000 16.1274208 0.000000000 0.000000e+00
## HELZ        15.6321473 0.000000000 6.2168795 0.000000000 1.564723e-04
## GPR183       6.6182140 0.000000000 13.3302397 0.000000000 -1.538462e-04
## FECH         6.0227428 0.000000000 33.9142411 0.000000000 3.240093e-04
## RFTN1        5.8968177 0.000000000 16.1482450 0.000000000 2.450639e-04
## FCER1A       22.1648833 0.009707006 70.0150246 0.000000000 1.397552e-02
## CCR7         33.9578795 0.000000000 47.1505814 0.000000000 2.417582e-04
## FAM118A      5.4659659 0.039638604 14.3243098 0.088483607 -5.000000e-05
## GLCCI1       33.6286994 0.000000000 43.2037640 0.009707006 1.439979e-03
## LGALS12      7.6959338 0.000000000 49.2548483 0.000000000 0.000000e+00
## RUNX3        15.7570921 0.000000000 23.2145602 0.000000000 0.000000e+00

```

##	NDFIP1	3.9082333	0.000000000	47.0834910	0.000000000	-4.273504e-06
##	RNF146	11.2098417	0.000000000	23.6105059	0.000000000	5.241631e-04
##	CTSS	28.8807339	0.000000000	4.0795205	0.000000000	1.566198e-03
##	MMP19	6.1374292	0.000000000	24.5245514	0.001099567	2.941176e-04
##	LQC101060424	5.0736025	0.000000000	3.7235703	0.000000000	1.658692e-04
##	TLR7	18.7202365	0.000000000	13.3790681	0.000000000	2.913097e-04
##	NLRC4	27.0893048	0.000000000	39.2477745	0.000000000	5.446011e-04
##	TRGC2	26.7566548	0.000000000	47.0647496	0.000000000	-5.000000e-05
##	COA7	17.1532809	0.000000000	54.2143127	0.000000000	0.000000e+00
##	ZFYVE21	5.3358120	0.000000000	35.4789974	0.000000000	5.714286e-05
##	CYLD	6.0293386	0.000000000	25.6593589	0.000000000	2.096096e-04
##	KIF21B	29.8718239	0.000000000	50.1750034	0.000000000	4.545058e-04
##	UTRN	9.9932540	0.000000000	39.7094824	0.000000000	3.930403e-04
##	TRGV9	9.7184263	0.000000000	56.4545848	0.000000000	0.000000e+00
##	GTF2H2B	9.6999446	0.000000000	18.8654076	0.000000000	1.641711e-04
##	C21orf91-OT1	20.9578206	0.373470356	43.1439214	0.188336673	1.050124e-03
##	TRAPPC12	20.3577391	0.000000000	22.1837140	0.000000000	1.176471e-04
##	ARHGAP1	17.4342763	0.000000000	42.4167993	0.000000000	2.256702e-04
##	XRCC5	8.2744882	0.000000000	16.0899210	0.000000000	-1.500000e-04
##	CD207	54.0637840	0.000000000	4.1761295	0.000000000	6.188530e-04
##	TIPRL	6.2568089	0.000000000	10.8905363	0.000000000	2.795367e-04
##	DUSP4	24.9775233	0.000000000	22.2882239	0.000000000	-4.761905e-05
##	ATP2A3	9.0902180	0.000000000	36.8365481	0.000000000	2.505495e-04
##	HAUS1	5.9248314	0.000000000	41.2875855	0.000000000	9.264619e-04
##	MEIS3P1	36.9796935	0.000000000	17.7018319	0.000000000	1.238390e-04
##	SCOC	1.2313672	0.000000000	33.4894680	0.000000000	-4.633838e-05
##	ADORA3	42.3292200	0.000000000	35.5935550	0.000000000	-1.068376e-04
##	ICOSLG	19.3828016	0.000000000	15.6167036	0.000000000	1.501926e-04
##	RASAL3	17.6922401	0.000000000	45.5665561	0.000000000	9.756098e-05
##	UBA3	12.5541492	0.000000000	44.5469766	0.000000000	4.935732e-04
##	IL18R1	5.6463534	0.000000000	60.1793591	0.000000000	3.911747e-04
##	DAD1	27.3516338	0.000000000	10.6833128	0.000000000	1.057925e-01
##	REL	35.8260184	0.000000000	17.5124949	0.000000000	-1.052632e-04
##	TBC1D2B	15.9735354	0.000000000	25.8911929	0.000000000	0.000000e+00
##	SMG1P5	6.1139160	0.000000000	25.5329261	0.000000000	1.869434e-03
##	DNAJB1	60.5190457	0.000000000	44.9348929	0.000000000	1.633713e-04
##	COL4A3BP	17.9789425	0.000000000	45.8203018	0.000000000	0.000000e+00
##	CD1E	10.7526864	0.000000000	23.8026420	0.000000000	0.000000e+00
##	TRAF1	21.1116606	0.000000000	16.6310915	0.000000000	2.696811e-04
##	VSTM1	31.6329953	0.000000000	25.6663531	0.000000000	5.263158e-05
##	PLBD1	22.8736313	0.000000000	41.2045422	0.000000000	3.305019e-04
##	PQLC3	11.2048676	0.000000000	54.5173156	0.000000000	3.869383e-04
##	SIGLEC7	8.3370553	0.000000000	39.3553860	0.000000000	6.226900e-03
##	TES	24.3926488	0.000000000	23.6810312	0.000000000	3.513889e-04
##	TTYH2	21.7868313	0.000000000	30.0374136	0.000000000	2.960317e-04
##	STX7	30.2036303	0.000000000	60.2011886	0.000000000	3.583960e-04
##	SOCS1	1.2487663	0.000000000	30.3450367	0.000000000	2.740297e-04
##	CCNYL1	46.5537353	0.000000000	61.1981136	0.000000000	2.801896e-03
##	CAMP	21.4273955	0.000000000	36.0789182	0.000000000	0.000000e+00
##	PTPRCAP	3.8204378	0.000000000	48.3294857	0.000000000	5.379302e-05
##	GNB4	6.6218160	0.000000000	2.8164222	0.000000000	2.544982e-03
##	STAC3	35.4112897	0.000000000	43.1531677	0.000000000	2.505013e-04
##	ASXL1	12.7037624	0.000000000	25.4382709	0.000000000	2.686604e-03
##	ARPC3	48.1331762	0.000000000	45.6439753	0.000000000	-5.405405e-05

## ADAM19	17.0394649	0.000000000	46.9725971	0.000000000	1.052632e-03
## CD1C	21.8087331	0.000000000	28.4175415	0.000000000	6.720446e-04
## PTBP3	24.1765906	0.000000000	56.5416098	0.000000000	0.000000e+00
## ETS1	26.6673020	0.018066946	35.3473059	0.008683761	6.240194e-04
## GPR171	24.3563758	0.010739958	45.7584129	0.010694737	1.578947e-04
## GGT5	2.5220428	0.000000000	41.7411866	0.000000000	1.500000e-04
## HRH4	2.1388495	0.000000000	50.7683364	0.000000000	1.374313e-03
## BANK1	9.7762845	0.000000000	38.3566295	0.000000000	1.730128e-03
## THBS1	20.7722276	0.001106754	43.1430415	0.001099567	5.692603e-04
## IL2RA	13.4370145	0.000000000	38.8225467	0.000000000	4.078996e-04
## RNPEP	1.2880306	0.000000000	49.8448965	0.000000000	0.000000e+00
## TRAM1	47.3922158	0.000000000	16.7361520	0.000000000	2.741329e-03
## ANKRD10	17.2413889	0.000000000	40.3249610	0.000000000	1.250000e-04
## LINC01094	16.9927935	0.000000000	26.2413785	0.000000000	1.353227e-04
## BTBD19	13.5056081	0.000000000	45.0962498	0.000000000	-4.651163e-05
## ADAM1A	22.6370185	0.099547475	10.2974669	0.151275654	5.833988e-04
## COPG1	28.4109585	0.000000000	15.2099436	0.000000000	6.494159e-04
## PAQR8	21.0493945	0.000000000	11.5727983	0.000000000	1.176471e-04
## C8orf60	3.5753813	0.000000000	9.3180509	0.000000000	5.405405e-05
## HN1	1.4224372	0.000000000	35.3518317	0.000000000	2.352941e-04
## SCARB2	11.2804836	0.000000000	4.4364220	0.000000000	1.170913e-02
## TPSB2	11.0138357	0.000000000	18.8417397	0.000000000	0.000000e+00
## ETS2	48.7678180	0.000000000	34.1243714	0.000000000	0.000000e+00
## FCF1	30.0378446	0.000000000	60.4716072	0.000000000	2.250432e-03
## C11orf49	17.1323243	0.000000000	25.1401929	0.000000000	5.128205e-05
## ANKRD44-IT1	1.5408502	0.000000000	40.3881146	0.000000000	3.479853e-04
## XPNPEP3	7.6373284	0.000000000	36.6880582	0.000000000	5.000000e-05
## TP53	11.1375817	0.000000000	38.6526276	0.000000000	1.000000e-04
## OTOA	20.8496391	0.176473896	35.8256229	0.226677291	-4.545455e-05
## MAGOHB	18.5691303	0.000000000	11.1830201	0.000000000	0.000000e+00
## BROX	6.6094407	0.000000000	39.3896285	0.000000000	0.000000e+00
## PPP3R1	11.3283420	0.000000000	32.0120794	0.000000000	0.000000e+00
## COQ2	29.0962278	0.000000000	52.9637898	0.000000000	1.441982e-03
## CSTA	24.7727799	0.000000000	28.8620903	0.000000000	1.658692e-04
## ZNF610	15.5950898	0.000000000	20.0860457	0.000000000	1.328608e-03
## CUL2	12.2743656	0.000000000	56.5271864	0.000000000	5.568190e-04
## IRF4	22.8144806	0.000000000	45.4513045	0.000000000	0.000000e+00
## TMEM120A	3.3348551	0.000000000	4.7648200	0.000000000	5.925207e-03
## ITM2A	12.3618523	0.000000000	47.3597978	0.000000000	4.878049e-05
## UMPS	13.0257452	0.000000000	5.4646946	0.000000000	3.768223e-04
## C5orf22	24.7889180	0.000000000	44.0670665	0.000000000	5.405405e-05
## SUMO1	20.2854398	0.000000000	27.1452184	0.000000000	6.399109e-04
## PRDX3	0.1461907	0.000000000	30.5705680	0.000000000	1.129090e-05
## LOC284454	42.0569067	0.000000000	28.6744742	0.000000000	9.756098e-05
## C2CD5	13.2069744	0.000000000	56.0739739	0.000000000	0.000000e+00
## FLJ37453	20.5975480	0.027345756	45.1293005	0.015908142	-4.878049e-05
## EXTL2	34.0660543	0.047885246	26.4468328	0.092458078	2.066752e-04
## ATG2A	19.1868345	0.000000000	35.5071162	0.000000000	0.000000e+00
## DCN	5.5966161	0.000000000	29.5569711	0.000000000	5.273566e-06
## FAM101B	7.7810323	0.000000000	42.0982660	0.000000000	0.000000e+00
## BTG1	40.8144482	0.000000000	28.4759491	0.000000000	1.707265e-04
## ERN1	17.0591939	0.000000000	73.9291286	0.000000000	-9.523810e-05
## TGOLN2	1.4526126	0.000000000	5.2816441	0.000000000	-1.081081e-04
## LOC100130264	19.2151090	0.000000000	22.3457263	0.000000000	0.000000e+00

## SLC7A11	14.7437829	0.000000000	24.5309247	0.000000000	4.224454e-05
## PRKCZ	15.6732728	0.000000000	50.0493474	0.000000000	0.000000e+00
## SH2D2A	5.2457722	0.001106754	43.1427307	0.000000000	-1.066856e-04
## PDE2A	22.6591442	0.000000000	22.9067468	0.000000000	0.000000e+00
## GINM1	23.9704126	0.000000000	36.0180348	0.000000000	0.000000e+00
## SLC16A10	52.7800466	0.230171657	37.0408513	0.344714286	9.196617e-05
## MAP3K1	41.5478588	0.000000000	16.8849399	0.000000000	7.719085e-04
## FRMD4B	13.0436440	0.000000000	35.3855886	0.000000000	1.240017e-03
## MARS2	21.1235787	0.230171657	29.6648443	0.150556452	0.000000e+00
## DNAJC19	10.0952684	0.000000000	47.2020218	0.000000000	1.666667e-04
## FAM57A	24.6898330	0.000000000	33.5628557	0.000000000	2.881638e-03
## HIF1A	28.3784312	0.000000000	17.4758692	0.000000000	1.265872e-03
## Mar-01	22.1149955	0.000000000	52.6244025	0.000000000	4.972484e-04
## LSM6	13.8134289	0.000000000	50.2252589	0.000000000	0.000000e+00
## ZYG11B	8.0588810	0.000000000	47.2995459	0.000000000	1.538462e-04
## ZCRB1	21.4720204	0.000000000	50.3312806	0.000000000	1.255464e-03
## ACAA1	34.2686807	0.000000000	20.7723179	0.000000000	2.702703e-04
## P2RY10	24.8318308	0.000000000	22.3680775	0.000000000	6.946729e-04
## SLC35F5	22.2602180	0.000000000	19.8615466	0.000000000	1.944444e-04
## RNF135	47.7620970	0.000000000	37.7612828	0.000000000	4.739214e-04
## CCR3	6.8999331	0.000000000	12.0669031	0.000000000	3.578947e-04
## ADAT2	22.1996668	0.143387097	35.0670868	0.155052209	8.710137e-04
## PDIA6	33.3524359	0.000000000	66.5103373	0.000000000	5.405405e-05
## LOC286052	17.5025843	0.964000000	5.4887689	0.912000000	5.000000e-05
## CCDC115	19.1504148	0.000000000	21.3470619	0.000000000	0.000000e+00
## SFMBT2	29.9553908	0.000000000	56.8146059	0.000000000	-7.974482e-06
## WNT5A	30.0748567	0.000000000	37.5534531	0.001099567	0.000000e+00
## FBX03	37.5773704	0.000000000	17.3469439	0.000000000	6.911606e-04
## ZFYVE26	39.3532341	0.000000000	35.7284002	0.000000000	2.123257e-04
## ADAM10	18.8416205	0.000000000	38.9880172	0.000000000	6.734143e-04
## DNM2	32.4210134	0.000000000	31.7899675	0.000000000	0.000000e+00
## NFKBIE	4.3041056	0.000000000	45.2934907	0.000000000	-5.263158e-05
## CD300LB	16.8156187	0.000000000	12.6557189	0.000000000	0.000000e+00
## SRFBP1	30.3043092	0.000000000	54.6638842	0.000000000	3.121622e-04
## ANPEP	8.3557462	0.000000000	30.9206187	0.000000000	0.000000e+00
## ZKSCAN8	2.0546963	0.000000000	29.7702995	0.000000000	2.389610e-04
## GCSH	3.3577291	0.000000000	37.6377186	0.000000000	2.676471e-04
## LOC541473	6.3750362	0.000000000	33.2998208	0.000000000	1.818182e-04
## SUCLG2	14.1404845	0.000000000	43.6842997	0.000000000	6.615288e-04
## KIT	15.7406548	0.000000000	21.3950851	0.000000000	1.908169e-04
## FCGR3B	50.5841683	0.000000000	55.0618854	0.000000000	-1.665531e-06
## BRCC3	14.5041048	0.000000000	52.1174957	0.000000000	1.469410e-03
## PCCA	2.2646788	0.000000000	47.8227360	0.000000000	-1.176471e-04
## KCNJ13	8.9445494	0.265087302	18.2335080	0.383263366	1.538462e-04
## SPAG5-AS1	11.6034813	0.000000000	47.1329906	0.000000000	1.078719e-03
## ZNF587B	12.8833468	0.001106754	19.1793070	0.001099567	1.576227e-04
## FCER2	39.1078468	0.000000000	41.7511867	0.000000000	0.000000e+00
## LENG8	21.6240500	0.000000000	20.7603040	0.000000000	1.391146e-02
## SAMD9L	8.4906401	0.000000000	11.2418342	0.000000000	2.631579e-04
## LY96	18.4962417	0.000000000	50.3105012	0.000000000	0.000000e+00
## PPP1R14A	8.5139193	0.000000000	42.9538317	0.000000000	-1.525641e-04
## SYMPK	17.7722740	0.000000000	47.6613032	0.001099567	6.033376e-05
## IL3RA	1.5581411	0.000000000	9.5316540	0.000000000	4.569168e-05
## FLVCR1	8.8230582	0.000000000	53.6542885	0.000000000	2.424242e-04

## MMP10	5.4921475	0.000000000	4.9915450	0.000000000	0.000000e+00
## MMP12	7.7349848	0.000000000	55.4931973	0.000000000	3.300227e-03
## SIAH2	35.0514748	0.000000000	18.6959779	0.000000000	3.097821e-04
## FCGR1B	37.2840362	0.000000000	65.1747125	0.000000000	3.168831e-04
## TLR1	28.4725546	0.000000000	56.7091455	0.000000000	0.000000e+00
## IFI16	28.5345067	0.000000000	55.6960413	0.000000000	5.119488e-04
## NR4A1	44.5468418	0.000000000	40.1627187	0.000000000	0.000000e+00
## GPR42	6.5104420	0.000000000	43.2865151	0.000000000	1.052632e-04
## RNA45S5	24.6627110	0.000000000	15.0775844	0.000000000	2.155167e-03
## CD1B	23.5917459	0.000000000	0.8121638	0.000000000	5.128205e-05
## RBM47	14.1546547	0.000000000	13.8942046	0.000000000	2.562422e-03
## KMT2A	4.3633063	0.000000000	37.4294316	0.000000000	0.000000e+00
## CD24	30.3213933	0.000000000	30.9679838	0.000000000	5.269841e-04
## CASP4	13.1391399	0.000000000	55.7640661	0.000000000	3.029219e-04
## TPSAB1	7.9631776	0.000000000	33.7192589	0.000000000	1.081081e-04
## DNASE1L3	28.4538013	0.000000000	47.9207063	0.000000000	6.762957e-04
## EPN2-AS1	13.9060897	0.000000000	54.0840202	0.000000000	3.681917e-03
## GIMAP4	59.2742867	0.000000000	35.5452333	0.000000000	1.227682e-04
## TLR8	38.2796283	0.000000000	22.0584361	0.000000000	-6.552007e-06
## F13A1	14.0980992	0.036584362	55.1111375	0.010694737	5.555556e-05
## PJA2	4.0505141	0.000000000	22.9327092	0.000000000	0.000000e+00
## UGT2B28	8.0613907	0.000000000	32.5474329	0.000000000	4.902165e-04
## FCGR1A	33.9521617	0.000000000	29.4752392	0.000000000	6.738441e-04
## S100A8	30.3187933	0.000000000	45.9428611	0.000000000	2.264706e-04
## RRN3P2	40.3278832	0.000000000	41.2528650	0.000000000	2.173913e-04
## NFKBID	14.8599544	0.000000000	62.9687236	0.000000000	4.761905e-05
## TRIM22	6.4931696	0.000000000	35.3930349	0.000000000	0.000000e+00
## HSD17B11	42.2390897	0.000000000	28.6759689	0.000000000	0.000000e+00
## UBE2D1	28.3704409	0.000000000	58.2024402	0.000000000	4.531328e-04
## CD1A	8.1925633	0.000000000	27.7216660	0.029388430	1.613709e-03
## MNDA	17.2456391	0.000000000	50.3095578	0.000000000	0.000000e+00
## DIDO1	7.8758696	0.001106754	31.4601022	0.001099567	-2.000000e-04
## SLA	36.3435888	0.000000000	24.5649316	0.000000000	1.607397e-04
## CTNS	4.0517619	0.000000000	9.0093059	0.000000000	4.667708e-03
## MAPK14	24.4206092	0.000000000	51.5685712	0.000000000	9.124935e-04
## NR4A3	23.1078255	0.000000000	42.4536733	0.000000000	1.111111e-04
## MORC3	14.3338475	0.000000000	20.5170459	0.000000000	0.000000e+00
## MSL2	46.4228747	0.029327835	24.7122022	0.009707006	2.054565e-03
## IFIT3	27.1892905	0.000000000	31.7789523	0.000000000	-1.063492e-04
## PALLD	18.3663904	0.000000000	49.5912459	0.000000000	0.000000e+00
## SNX18	12.0050145	0.000000000	31.4118406	0.000000000	1.538462e-04
## CYSLTR2	7.9217692	0.000000000	50.4481898	0.000000000	-5.405405e-05
## PSMB9	18.8702641	0.000000000	28.9577800	0.000000000	4.761905e-05
## PARP9	4.9197313	0.000000000	52.6657917	0.000000000	1.578947e-04
## NUB1	13.5664062	0.000000000	39.6124420	0.000000000	0.000000e+00
## SBF2	39.6796181	0.000000000	57.3128661	0.000000000	2.026316e-04
## CLIC4	16.4981417	0.000000000	41.3107883	0.000000000	0.000000e+00
## POLR2J4	7.9552689	0.000000000	28.8436894	0.000000000	4.748000e-04
## S100A9	12.6238529	0.000000000	54.2269843	0.000000000	5.982906e-05
## TLR4	34.5455720	0.000000000	36.5663292	0.000000000	0.000000e+00
## STARD4	26.1309694	0.000000000	18.9355081	0.000000000	5.882353e-05
## FHL3	32.0385000	0.000000000	53.5343597	0.000000000	1.952381e-04
## TANC2	8.9616923	0.000000000	22.5780050	0.000000000	0.000000e+00
## CTBS	21.3332479	0.000000000	48.0005380	0.000000000	4.878049e-05

## DPH1	28.6435309	0.000000000	55.8846048	0.000000000	2.900718e-04
## AREG	20.9276477	0.000000000	46.0478121	0.000000000	0.000000e+00
## IFIT2	10.5854189	0.000000000	48.8408368	0.000000000	0.000000e+00
## ARHGEF3	10.3067796	0.000000000	68.0053947	0.000000000	-1.500000e-04
## OLIG2	30.4488242	0.000000000	61.6617969	0.000000000	-1.480186e-04
## ACSL1	25.2464339	0.000000000	55.5367315	0.000000000	0.000000e+00
## NMI	26.4437917	0.000000000	14.3392359	0.000000000	1.043824e-03
## DACH1	39.9196397	0.000000000	47.5827597	0.000000000	6.829858e-03
## CSF1	3.6919117	0.000000000	36.2796834	0.000000000	1.053361e-04
## WDFY3	29.6347075	0.000000000	33.0431298	0.000000000	4.152047e-05
## TLR6	12.5842957	0.000000000	15.8124440	0.000000000	0.000000e+00
## CASP5	51.9576605	0.000000000	23.3537281	0.000000000	5.437427e-03
## PNPLA6	16.3074938	0.000000000	24.9385704	0.000000000	4.061179e-04
## CPEB4	37.7901820	0.000000000	44.1448225	0.000000000	1.142857e-04
## VAV1	8.5503878	0.000000000	55.7812764	0.000000000	0.000000e+00
## CARD16	7.7145005	0.000000000	30.3236564	0.000000000	-2.093083e-04
## FAM129A	13.3367834	0.000000000	51.0076122	0.000000000	0.000000e+00
## GIMAP2	12.7917865	0.000000000	11.8079117	0.000000000	-4.651163e-05
## HMG20B	41.1653604	0.000000000	43.5697811	0.000000000	1.350780e-02
## NT5DC1	43.9622561	0.000000000	37.1092531	0.000000000	1.217904e-02
## ABHD3	23.5196550	0.000000000	31.5488418	0.000000000	0.000000e+00
## S1PR1	9.2335063	0.000000000	22.8981360	0.000000000	4.927843e-04
## LAP3	28.7470143	0.000000000	36.3927576	0.000000000	2.000000e-04
## LOC100505812	23.9792260	0.011764211	22.6958487	0.003284483	5.263158e-05
## TMLHE	2.9095961	0.000000000	10.3610007	0.000000000	0.000000e+00
## ARL4C	10.2483527	0.010739958	12.6120611	0.000000000	2.208360e-03
## KRCC1	23.5828764	0.000000000	49.0953030	0.000000000	0.000000e+00
## CREB5	35.5625960	0.000000000	46.8912753	0.000000000	1.212121e-04
## YES1	5.4777554	0.000000000	48.4044666	0.000000000	6.062122e-05
## RNF149	15.2107995	0.000000000	60.2911042	0.000000000	5.808112e-05
## ZNF395	18.4480416	0.000000000	53.6000518	0.000000000	3.202293e-04
## SIGLEC5	7.2874288	0.000000000	22.4954993	0.000000000	1.698413e-04
## ACN9	3.0689648	0.000000000	34.8965824	0.000000000	0.000000e+00
## CLEC4D	31.5303354	0.000000000	12.0919444	0.000000000	2.418351e-03
## JARID2-AS1	23.9215657	0.000000000	30.6809683	0.000000000	2.162162e-04
## PKIB	30.4615172	0.246425447	55.7705586	0.232286282	5.263158e-05
## HERC5	12.6389813	0.000000000	42.5046435	0.000000000	0.000000e+00
## SYNE1	39.9698807	0.000000000	56.1629357	0.000000000	-1.621622e-04
## CXCL10	7.8911023	0.000000000	6.5317098	0.000000000	3.674980e-03
## RBM7	16.7154132	0.000000000	50.6990676	0.000000000	0.000000e+00
## AP3M1	8.0915981	0.000000000	45.2041919	0.000000000	0.000000e+00
## IGLC1	21.3940782	0.000000000	46.8306501	0.000000000	2.162162e-04
## TRIM5	29.2190351	0.000000000	36.2224730	0.000000000	3.412698e-04
## FAM160B1	19.9868312	0.000000000	48.4808274	0.000000000	1.081871e-04
## CASP1	22.2582822	0.000000000	44.0206319	0.000000000	3.689268e-04
## STK3	13.9634292	0.000000000	55.6557134	0.000000000	0.000000e+00
## CDC73	34.8673272	0.000000000	59.8078026	0.000000000	2.162162e-04
## CR1	10.8913535	0.000000000	27.1179794	0.000000000	1.317862e-03
## MARCKSL1	14.6497765	0.000000000	31.2082277	0.000000000	7.595513e-04
## GAPT	11.5175698	0.008665245	53.5912964	0.000000000	-7.936508e-06
## CLOCK	2.6879052	0.000000000	17.0760522	0.000000000	5.545956e-03
## TNFSF10	35.1671022	0.000000000	55.7991490	0.000000000	-4.700855e-05
## CST1	34.3054767	0.000000000	53.1553443	0.000000000	1.040541e-04
## CPPED1	24.1369897	0.000000000	25.0325986	0.000000000	5.317885e-04

##	NDFIP2	39.1855300	0.000000000	3.1935406	0.000000000	1.655678e-04
##	PDCD2	10.7293825	0.000000000	40.7130768	0.000000000	0.000000e+00
##	ASAP1-IT1	5.7163936	0.000000000	21.0631849	0.000000000	0.000000e+00
##	SPG11	32.8476254	0.000000000	34.5830925	0.000000000	-5.128205e-05
##	POC1B	17.5443448	0.000000000	24.1657146	0.000000000	1.578947e-04
##	KLHL15	18.1258782	0.000000000	41.1561332	0.000000000	2.313677e-04
##	NAIP	15.0021107	0.000000000	52.1853329	0.000000000	1.729112e-03
##	LOC101927066	39.8541137	0.000000000	36.1249463	0.000000000	9.444444e-05
##	IFIH1	48.5233697	0.000000000	45.9278021	0.000000000	5.227462e-03
##	MIR142	9.9751118	0.000000000	28.8583996	0.000000000	1.111971e-03
##	OAS1	36.7522938	0.000000000	20.1903656	0.000000000	1.036123e-03
##	UTP11L	51.9760726	0.000000000	34.3101608	0.000000000	6.033091e-04
##	APOL3	6.4606392	0.000000000	8.8476054	0.000000000	9.473727e-04
##	ATAD2B	8.8360137	0.073458248	35.7500207	0.208280000	0.000000e+00
##	IL6ST	21.8188850	0.000000000	15.7827821	0.000000000	1.240537e-03
##	RAB11FIP3	32.1091664	0.002199134	60.6954066	0.009707006	5.579863e-04
##	GADD45A	29.4180978	0.019050000	32.7819250	0.022086957	1.142857e-04
##	CXCR2	18.1780071	0.000000000	27.7666158	0.000000000	6.233062e-05
##	SPATA13	33.7442653	0.000000000	43.5937514	0.000000000	0.000000e+00
##	PARP8	15.6614733	0.000000000	46.2822414	0.000000000	0.000000e+00
##	IGLV@	13.4937430	0.000000000	52.5739849	0.000000000	2.370418e-04
##	OAS3	12.0136777	0.000000000	54.6163276	0.000000000	8.185601e-04
##	MSRB1	7.9818204	0.000000000	38.1025190	0.000000000	4.225481e-04
##	SLC7A11-AS1	29.7785091	0.000000000	31.9278102	0.000000000	3.152337e-04
##	MRVI1	25.2390829	0.000000000	25.2326440	0.000000000	5.405405e-05
##	PIGK	16.0708636	0.000000000	51.7616087	0.000000000	0.000000e+00
##	VNN2	29.4241406	0.000000000	54.4413613	0.000000000	1.672474e-05
##	NSUN7	37.5589290	0.001106754	46.3927607	0.001099567	-6.896552e-05
##	PTPN7	4.3366071	0.000000000	35.2359067	0.000000000	7.297776e-04
##	UGCG	25.6334816	0.000000000	51.0671334	0.000000000	6.858054e-05
##	BPIFB1	14.8224152	0.000000000	30.5528766	0.000000000	0.000000e+00
##	BAZ1A	37.1965145	0.000000000	38.4934590	0.000000000	-4.761905e-05
##	FGFR10P2	4.4499940	0.019050000	44.3562823	0.011714885	1.848185e-03
##	GZMB	16.4741511	0.000000000	58.3562780	0.000000000	0.000000e+00
##	KLRC4-KLRK1	30.9247579	0.001106754	48.5153863	0.011714885	-4.651163e-05
##	LOC158402	25.3558990	0.000000000	53.3103569	0.000000000	9.488160e-04
##	OR4F3	3.7308918	0.000000000	54.9689079	0.000000000	0.000000e+00
##	LRRC8D	19.4691003	0.000000000	5.0712576	0.000000000	0.000000e+00
##	CD93	25.8564989	0.000000000	18.3103778	0.000000000	0.000000e+00
##	DENND5B	23.4558103	0.081569106	43.2811355	0.082406571	4.092070e-04
##	AMELX	5.7142188	0.237808765	21.6298893	0.118981670	0.000000e+00
##	R3HCC1	24.5063572	0.015974843	53.7481802	0.010694737	1.025641e-04
##	LOC100506860	19.2045381	0.000000000	52.6926191	0.000000000	1.984127e-04
##	GORASP2	34.7779339	0.000000000	50.5417023	0.000000000	2.005013e-04
##	PRF1	1.9718812	0.000000000	63.2361371	0.000000000	3.333333e-04
##	NFAT5	21.3979583	0.001106754	18.6605408	0.000000000	6.543625e-04
##	UNC5B	11.2183357	0.000000000	51.8646331	0.000000000	6.474349e-04
##	CDR1	12.3225018	0.000000000	32.3320074	0.010694737	-2.018970e-04
##	CLPTM1	15.8637923	0.001106754	5.7202278	0.000000000	1.000000e-04
##	LRP5L	45.1702385	0.012806723	26.9927458	0.000000000	1.025641e-04
##	IL1R2	16.8883711	0.000000000	25.9430405	0.000000000	1.472386e-02
##	NELFCD	26.2330913	0.000000000	10.4653904	0.000000000	8.098752e-03
##	DPY19L1	30.1028015	0.000000000	34.0183651	0.000000000	3.752970e-03
##	TREML2	32.7338361	0.000000000	28.4740719	0.000000000	3.545457e-03

## LINC01366	4.8468273	0.000000000	45.2674801	0.000000000	3.368265e-03
## REPS2	21.1881755	0.000000000	41.1874472	0.000000000	3.249833e-03
## FLOT1	9.8476984	0.000000000	48.0024514	0.000000000	3.158127e-03
## FLJ44896	34.1422045	0.028338843	24.1443619	0.036584362	2.649665e-03
## IL18RAP	16.1887267	0.000000000	43.4658662	0.000000000	2.642160e-03
## CLEC12A	24.5152363	0.003277419	46.8888884	0.005450644	1.363020e-03
## SPINT1	22.1607506	0.000000000	41.8014780	0.000000000	1.313845e-03
## LOC100506235	19.2841470	0.053910204	34.8296518	0.020066528	1.308895e-03
## EPB41L5	5.9527149	0.000000000	40.6509448	0.000000000	9.132648e-04
## RYR1	28.8325574	0.000000000	44.2962111	0.000000000	8.127238e-04
## ING2	23.0338427	0.000000000	13.0648435	0.000000000	7.237731e-04
## LOC731424	4.9464269	0.000000000	18.3139992	0.000000000	7.041116e-04
## RNF125	7.2307422	0.002199134	16.1219245	0.013815900	6.746650e-04
## PHC2	5.4512939	0.000000000	37.5995254	0.000000000	6.575687e-04
## AKAP11	11.4011699	0.000000000	16.4404335	0.000000000	6.451746e-04
## LOC100127886	12.0594309	0.000000000	33.5306993	0.000000000	5.951985e-04
## PSMB8-AS1	6.1686543	0.000000000	37.7357384	0.000000000	5.882043e-04
## MAFF	6.0963976	0.000000000	54.1103713	0.000000000	5.743243e-04
## LOC100129406	45.9921598	0.003277419	43.4248607	0.002194384	5.641026e-04
## MBOAT1	15.1731263	0.000000000	34.4523887	0.000000000	5.441176e-04
## MIR101-1	1.0130421	0.000000000	12.6850130	0.000000000	5.119674e-04
## SERPINB8	7.0937468	0.011764211	16.6894420	0.030375258	5.089744e-04
## GTPBP10	0.4089466	0.000000000	19.9221577	0.000000000	4.859360e-04
## SLC25A37	14.8105813	0.000000000	50.6697305	0.000000000	4.230769e-04
## MGAM	23.2611795	0.000000000	34.6769368	0.000000000	4.166330e-04
## LOC642236	33.5410947	0.191390782	16.4074703	0.223073852	3.578947e-04
## VNN3	19.1229782	0.000000000	52.5524766	0.000000000	3.222186e-04
## LMO4	6.7107089	0.000000000	51.8676850	0.000000000	3.147263e-04
## DYSF	12.4964281	0.000000000	32.1129215	0.000000000	3.117409e-04
## MRPS10	13.1803535	0.000000000	50.1302362	0.000000000	2.986111e-04
## HIST1H2AC	12.8164186	0.000000000	48.9674948	0.000000000	2.758985e-04
## VPS36	24.0604991	0.000000000	42.3981950	0.000000000	2.750058e-04
## PIGP	31.2762471	0.000000000	39.3601544	0.000000000	2.653599e-04
## INAFM1	18.8112933	0.000000000	9.5142778	0.000000000	2.625892e-04
## IDI2-AS1	21.4297268	0.000000000	13.5163789	0.000000000	2.605263e-04
## SYNE2	28.5702350	0.000000000	29.9820402	0.000000000	2.506775e-04
## TSPAN2	1.2449229	0.000000000	59.0692181	0.000000000	2.222222e-04
## CD3E	29.7254656	0.156386318	22.9793453	0.141168357	2.150376e-04
## TMEM14B	20.8143267	0.000000000	25.0062250	0.000000000	1.930736e-04
## PITPNA	4.9414374	0.000000000	41.8677672	0.000000000	1.818182e-04
## RHOH	2.3096245	0.000000000	37.1325274	0.000000000	1.759398e-04
## DOCK5	32.9191471	0.000000000	29.9489156	0.000000000	1.638285e-04
## RELL1	34.5325854	0.003277419	0.8652357	0.001099567	1.597744e-04
## NSMCE1	33.6908960	0.000000000	29.1233987	0.000000000	1.593172e-04
## BCL9	46.0193032	0.000000000	2.3111633	0.000000000	1.578947e-04
## TRANK1	7.8410650	0.000000000	47.8585041	0.000000000	1.142857e-04
## NBN	9.0454472	0.000000000	27.7802352	0.000000000	1.142857e-04
## MYO6	6.0650996	0.000000000	33.0315744	0.000000000	1.128776e-04
## ZNF557	14.8420914	0.022178794	41.2200229	0.118981670	1.126984e-04
## SNX30	25.4506042	0.000000000	58.9923550	0.000000000	1.101056e-04
## TNIP1	21.1314177	0.000000000	51.1616376	0.000000000	1.096096e-04
## TTC7A	14.0534261	0.000000000	9.0195525	0.000000000	1.071063e-04
## NKG7	22.1158783	0.000000000	36.9750243	0.000000000	1.052632e-04
## SAMS1	18.5289505	0.000000000	14.0555849	0.000000000	9.890110e-05

## FBXL13	10.6612148	0.000000000	55.1093040	0.000000000	9.639954e-05
## KIAA0100	34.1971987	0.000000000	22.9587348	0.000000000	6.764706e-05
## WWP1	21.8236151	0.000000000	52.9144557	0.000000000	5.847953e-05
## PTGER2	3.3426888	0.090493927	24.5635900	0.142939271	5.714286e-05
## SLAMF1	32.1389668	0.000000000	28.5416601	0.000000000	5.705706e-05
## TRBC1	14.9255577	0.358114851	17.7467827	0.590324111	5.555556e-05
## TBC1D4	5.1150666	0.000000000	14.0298447	0.000000000	5.405405e-05
## NSL1	37.6577105	0.000000000	59.4201712	0.000000000	5.398111e-05
## MEFV	13.1965728	0.000000000	32.6805138	0.000000000	5.000000e-05
## DCSTAMP	7.1768783	0.000000000	31.3684146	0.000000000	5.000000e-05
## NUP98	3.0985089	0.000000000	51.8873816	0.000000000	4.878049e-05
## NCR3LG1	56.0022485	0.000000000	32.3988207	0.000000000	4.761905e-05
## CD8A	33.2515983	0.009707006	42.9933812	0.020066528	4.594595e-05
## SPA17	1.5138279	0.000000000	46.0507841	0.000000000	2.049458e-05
## DESI2	12.1960014	0.000000000	26.1580324	0.000000000	2.631579e-06
## LOC100506258	13.7366439	0.000000000	4.6358171	0.001099567	2.501563e-06
## PLD3	5.4006956	0.000000000	26.8085626	0.000000000	0.000000e+00
## HMMR	22.5201925	0.048826176	41.9238814	0.150556452	0.000000e+00
## BBS10	9.7840020	0.008665245	23.8253376	0.022086957	0.000000e+00
## RRAS2	10.1686528	0.000000000	59.9268554	0.000000000	0.000000e+00
## GNG2	12.0783811	0.000000000	38.7120033	0.000000000	0.000000e+00
## DDIT4	22.0588185	0.000000000	38.2428047	0.000000000	0.000000e+00
## AMFR	46.4680736	0.000000000	36.6013961	0.000000000	0.000000e+00
## LMAN1	7.0236684	0.000000000	46.4133416	0.000000000	0.000000e+00
## KLHDC8B	35.4899516	0.000000000	51.8123247	0.000000000	0.000000e+00
## SLC25A36	33.6801405	0.000000000	30.8013116	0.000000000	0.000000e+00
## MRPS25	41.3293531	0.000000000	48.8882876	0.000000000	0.000000e+00
## KRT23	44.1514108	0.000000000	40.4742106	0.000000000	0.000000e+00
## LRCH1	14.5108254	0.000000000	52.4730422	0.000000000	0.000000e+00
## ADM	28.7467594	0.000000000	67.8185662	0.000000000	0.000000e+00
## LINC01002	29.6962501	0.000000000	28.1718034	0.000000000	0.000000e+00
## PPFIBP2	32.7522128	0.000000000	13.9030257	0.000000000	0.000000e+00
## NOLC1	8.9790965	0.000000000	57.4374779	0.000000000	-9.868421e-06
## TNFAIP3	22.4934971	0.000000000	57.3655105	0.000000000	-4.651163e-05
## ADORA2A	21.8423166	0.000000000	26.3891862	0.000000000	-5.263158e-05
## ZNF28	29.6981332	0.000000000	54.1096000	0.000000000	-5.405405e-05
## IFITM3	20.3610278	0.000000000	31.6440230	0.000000000	-5.555556e-05
## PLK3	46.1790441	0.000000000	27.7844519	0.000000000	-5.714286e-05
## KLHL42	11.2738522	0.000000000	31.8532762	0.000000000	-6.250000e-05
## SLAMF7	20.3346111	0.000000000	42.9713800	0.000000000	-8.205139e-05
## SLC7A5	14.2191795	0.000000000	47.9570637	0.000000000	-1.000000e-04
## LPCAT1	11.2983810	0.000000000	50.6393781	0.000000000	-1.066856e-04
## PARN	12.3091121	0.000000000	31.4561864	0.000000000	-1.081081e-04
## PREPL	25.9304683	0.000000000	56.2334530	0.000000000	2.000024e-03
## FAM65B	19.9189113	0.000000000	48.8760735	0.000000000	0.000000e+00
## GNLY	31.2698800	0.000000000	28.4489251	0.000000000	2.189937e-02
## MAP3K8	11.3744607	0.000000000	34.3949687	0.000000000	3.378213e-04
## ATP1B1	43.3090934	0.000000000	6.4005012	0.000000000	1.587302e-04
## MIOS	14.1230810	0.002199134	44.2975807	0.000000000	0.000000e+00
## SULT1B1	16.1125183	0.000000000	56.8851015	0.000000000	1.593902e-04
## ZCCHC6	7.1918019	0.000000000	50.8146409	0.000000000	1.111111e-04
## CLEC4E	11.3209689	0.000000000	24.3789579	0.000000000	1.818182e-04
## IFITM1	12.0968071	0.000000000	22.1243045	0.000000000	4.595960e-04
## CLEC2D	24.0947076	0.000000000	18.3004848	0.000000000	2.362395e-03

## POLR2M	8.1850530	0.000000000	42.0380897	0.000000000	2.352950e-03
## MRPS33	44.2018086	0.000000000	26.4380590	0.000000000	1.167600e-04
## BRAF	5.3138039	0.000000000	40.3051884	0.000000000	4.651163e-05
## CDC40	31.9268866	0.000000000	28.0960047	0.000000000	-4.770423e-06
## RNF19B	13.1318653	0.000000000	34.5570237	0.000000000	2.767053e-04
## FAM162A	2.5454212	0.000000000	21.7638177	0.000000000	1.764706e-04
## ZFP69B	10.3772927	0.082434077	42.3100040	0.123902439	1.052632e-04
## SLC25A20	6.7714743	0.000000000	26.2422711	0.000000000	3.107478e-04
## FPR2	12.2397126	0.000000000	37.9203382	0.000000000	1.810458e-04
## LCP2	9.9844902	0.000000000	27.3262374	0.000000000	0.000000e+00
## TMEM88	16.2453917	0.000000000	18.5045960	0.000000000	4.761905e-05
## C11orf31	10.9903474	0.000000000	5.1971815	0.000000000	0.000000e+00
## ETV5	9.7854599	0.769514793	24.9123907	0.836646943	0.000000e+00
## SMCHD1	21.0940651	0.000000000	38.8430858	0.000000000	-1.025641e-04
## NINJ1	13.1211464	0.000000000	28.3844429	0.000000000	0.000000e+00
## SPACA6P	31.7559970	0.000000000	25.2461072	0.000000000	0.000000e+00
## PTP4A3	8.2150452	0.000000000	29.7330057	0.000000000	-1.059233e-04
## LINC01000	11.2826080	0.000000000	50.7731320	0.000000000	7.710000e-04
## HLA-DMB	19.4093941	0.000000000	23.9341715	0.000000000	1.113155e-03
## RNF175	11.1292056	0.000000000	17.8908550	0.000000000	4.450406e-04
## SCGB1A1	2.4477937	0.000000000	29.6703279	0.000000000	4.449294e-04
## N4BP1	11.6869545	0.000000000	25.1756959	0.000000000	4.490421e-04
## LINC01136	8.0138894	0.000000000	6.1178931	0.000000000	4.796748e-04
## ARHGAP26	28.2031590	0.000000000	25.5096182	0.000000000	4.533457e-04
## MYH10	1.9744514	0.000000000	47.1996144	0.000000000	0.000000e+00
## OR2A7	43.3629575	0.000000000	57.0145100	0.000000000	6.135105e-04
## ZNF570	4.3170758	0.008665245	27.5999138	0.008683761	1.569893e-03
## IFITM2	13.1536212	0.000000000	21.1910549	0.000000000	1.538462e-04
## TBPL1	27.7186816	0.004360515	11.7355406	0.004369892	-5.847953e-06
## CD300LF	11.9211822	0.000000000	47.1745524	0.000000000	1.066856e-04
## ETFA	10.7699838	0.000000000	22.4355625	0.000000000	5.873016e-05
## CXCR1	6.8678456	0.000000000	45.0116794	0.000000000	0.000000e+00
## FTSJ2	30.2429965	0.000000000	19.9213015	0.000000000	0.000000e+00
## PHF19	24.3582308	0.025294606	29.8491693	0.001099567	5.899364e-05
## CYB5D1	7.8051822	0.000000000	46.0143721	0.000000000	-3.177700e-04
## RLF	29.4385769	0.000000000	27.5880412	0.000000000	-9.324009e-05
## LIPA	8.5004213	0.000000000	18.0860539	0.000000000	6.261422e-03
## FAM135A	9.7054444	0.000000000	50.1875205	0.000000000	0.000000e+00
## ANTXR2	25.3467258	0.000000000	23.6154916	0.000000000	9.383491e-04
## KCNJ15	25.5004634	0.000000000	55.3477766	0.000000000	6.591768e-04
## MRPL57	11.6949718	0.000000000	48.6324894	0.000000000	3.114689e-04
## LIMK2	7.7500598	0.000000000	33.1075592	0.000000000	2.509804e-04
## SORD	22.5963901	0.000000000	46.1620270	0.000000000	-5.263158e-05
## LOC388210	15.3119360	0.000000000	43.1330245	0.000000000	5.405405e-05
## NLRP2	38.2629312	0.000000000	19.2714206	0.000000000	-1.221583e-04
## CD177	4.0236335	0.000000000	10.9200867	0.000000000	5.263158e-05
## LINC01093	24.2773484	0.000000000	44.6477179	0.000000000	2.001297e-03
##				foldChange	
## CLC	0.059069767	0.000000000	0.14443137		NA
## IL1RL1	0.000000000	0.000000000	0.00000000		NA
## CPA3	0.534678337	0.000000000	0.19878261		NA
## GNA15	0.520965197	0.17451342	0.25273000		NA
## PRSS33	0.000000000	0.000000000	0.11501887		NA
## CRLF2	0.301625000	0.000000000	0.20816541		NA

## CCL22	0.429240310	0.00000000	0.19878261	NA
## GATA2	0.448887273	0.00000000	0.20917647	NA
## ALOX15	0.122903226	0.00000000	0.17669565	NA
## VEGFA	0.000000000	0.00000000	0.13170370	NA
## CCL17	0.536465517	0.00000000	0.24284238	NA
## SATB1	0.376464286	0.00000000	0.11659016	NA
## SOCS2	0.712625251	0.00000000	0.15602857	NA
## SMOX	0.016387097	0.00000000	0.13170370	NA
## BIRC3	0.122903226	0.00000000	0.15200000	NA
## LOC101927770	0.460489209	0.31324865	0.28835477	NA
## TARP	0.370702703	0.00000000	0.19149738	NA
## CISH	0.516141026	0.00000000	0.23222857	NA
## BST1	0.378810345	0.00000000	0.19878261	NA
## HELZ	0.520965197	0.98290797	0.27729754	NA
## GPR183	0.291070270	0.08585851	0.13745882	NA
## FECH	0.441656716	0.00000000	0.23222857	NA
## RFTN1	0.520965197	0.00000000	0.19769458	NA
## FCER1A	0.520965197	0.00000000	0.27226914	NA
## CCR7	0.268941176	0.00000000	0.15200000	NA
## FAM118A	0.520965197	0.00000000	0.39240719	NA
## GLCCI1	0.520965197	0.26973930	0.34392547	NA
## LGALS12	0.255577640	0.00000000	0.15630769	NA
## RUNX3	0.119269565	0.00000000	0.17874074	NA
## NDFIP1	0.058615385	0.00000000	0.02419048	NA
## RNF146	0.059069767	0.00000000	0.17947305	NA
## CTSS	0.000000000	0.00000000	0.11501887	NA
## MMP19	0.534678337	0.00000000	0.23669755	NA
## LOC101060424	0.520965197	0.00000000	0.22339759	NA
## TLR7	0.370702703	0.00000000	0.19878261	NA
## NLRC4	0.100641509	0.00000000	0.19878261	NA
## TRGC2	0.460828571	0.00000000	0.17584615	NA
## COA7	0.532780488	0.00000000	0.22339759	NA
## ZFYVE21	0.541721627	0.00000000	0.22339759	NA
## CYLD	0.122903226	0.00000000	0.21050685	NA
## KIF21B	0.476139373	0.00000000	0.20917647	NA
## UTRN	0.326029851	0.00000000	0.23222857	NA
## TRGV9	0.352055814	0.00000000	0.15657534	NA
## GTF2H2B	0.938000000	0.00000000	0.19878261	NA
## C21orf91-OT1	0.520965197	0.00000000	0.35961866	NA
## TRAPPC12	0.059069767	0.00000000	0.19878261	NA
## ARHGAP1	0.519217666	0.53591974	0.20831655	NA
## XRCC5	0.129015873	0.00000000	0.19878261	NA
## CD207	0.513029703	0.00000000	0.27729754	NA
## TIPRL	0.387966245	0.00000000	0.23446154	NA
## DUSP4	0.634217659	0.00000000	0.23049552	NA
## ATP2A3	0.000000000	0.22655172	0.19878261	NA
## HAUS1	0.291070270	0.15901788	0.25080101	NA
## MEIS3P1	0.158289855	2.11344415	0.19878261	NA
## SCOC	0.000000000	0.85507957	0.13745882	NA
## ADORA3	0.122903226	0.65221265	0.23446154	NA
## ICOSLG	0.520965197	0.59242092	0.23132143	NA
## RASAL3	0.110836364	0.56511609	0.15573723	NA
## UBA3	0.483305556	0.51528337	0.23049552	NA
## IL18R1	0.527191111	0.51262143	0.19878261	NA

## DAD1	0.520965197	0.50431129	0.19149738	NA
## REL	0.145676471	0.36768999	0.20831655	NA
## TBC1D2B	0.136769231	0.36344319	0.21771429	NA
## SMG1P5	0.520965197	0.31327154	0.23247458	NA
## DNAJB1	0.130968750	0.31312071	0.19878261	NA
## COL4A3BP	0.606865424	0.30979696	0.14514286	NA
## CD1E	0.520965197	0.30426264	0.19878261	NA
## TRAF1	0.264646707	0.28982001	0.16821192	NA
## VSTM1	0.119269565	0.25570268	0.19878261	NA
## PLBD1	0.000000000	0.25540891	0.11501887	NA
## PQLC3	0.444265683	0.24444958	0.19878261	NA
## SIGLEC7	0.511409396	0.20463849	0.20667681	NA
## TES	0.516141026	0.20311129	0.23954472	NA
## TTYH2	0.516141026	0.20171859	0.25587224	NA
## STX7	0.000000000	0.20110083	0.13170370	NA
## SOCS1	0.716280000	0.19609781	0.21050685	NA
## CCNYL1	0.000000000	0.18841069	0.21407358	NA
## CAMP	0.520965197	0.16551359	0.25587224	NA
## PTPRCAP	0.370702703	0.15540198	0.27180374	NA
## GNB4	0.291070270	0.15179817	0.20398456	NA
## STAC3	0.520965197	0.14468438	0.24113067	NA
## ASXL1	0.520965197	0.14201732	0.17483117	NA
## ARPC3	0.145676471	0.13780037	0.14913761	NA
## ADAM19	0.527191111	0.13632156	0.23424444	NA
## CD1C	0.442148148	0.13216063	0.17265359	NA
## PTBP3	0.520965197	0.13080869	0.17669565	NA
## ETS1	0.527191111	0.13048995	0.24685422	NA
## GPR171	0.520965197	0.12686113	0.26007656	NA
## GGT5	0.191324675	0.11966084	0.14717757	NA
## HRH4	0.291070270	0.10269477	0.21771429	NA
## BANK1	0.413253968	0.10197928	0.33443333	NA
## THBS1	0.520965197	0.09928924	0.27226914	NA
## IL2RA	0.402253061	0.08336062	0.23222857	NA
## RNPEP	0.290705202	0.08313741	0.23222857	NA
## TRAM1	0.000000000	0.07078427	0.19769458	NA
## ANKRD10	0.332912621	0.06596882	0.19878261	NA
## LINC01094	0.723976048	0.05573361	0.21407358	NA
## BTBD19	0.526599542	0.03338213	0.14514286	NA
## ADAM1A	0.513029703	0.00000000	0.40740594	NA
## CPOG1	0.059069767	0.00000000	0.11501887	NA
## PAQR8	0.520965197	0.00000000	0.35961866	NA
## C8orf60	0.520965197	0.00000000	0.19149738	NA
## HN1	0.075659574	0.00000000	0.19214508	NA
## SCARB2	0.000000000	0.00000000	0.00000000	NA
## TPSB2	0.097692308	0.00000000	0.19149738	NA
## ETS2	0.000000000	0.00000000	0.04417391	NA
## FCF1	0.676300813	0.00000000	0.22339759	NA
## C11orf49	0.516141026	0.00000000	0.18980220	NA
## ANKRD44-IT1	0.520965197	0.00000000	0.33936929	NA
## XPNPEP3	0.520965197	0.00000000	0.30741631	NA
## TP53	0.183815789	0.00000000	0.20831655	NA
## OTOA	0.520965197	0.00000000	0.31427119	NA
## MAGOHB	0.071010753	0.00000000	0.32219873	NA
## BROX	0.520965197	0.00000000	0.18101149	NA

## PPP3R1	0.519217666	0.00000000	0.23222857	NA
## CQ2	0.139603053	0.00000000	0.15896599	NA
## CSTA	0.000000000	0.00000000	0.11501887	NA
## ZNF610	0.536465517	0.00000000	0.39240719	NA
## CUL2	0.520965197	0.00000000	0.24483505	NA
## IRF4	0.417644269	0.00000000	0.25015152	NA
## TMEM120A	0.008610169	0.00000000	0.23424444	NA
## ITM2A	0.520965197	0.00000000	0.35352653	NA
## UMPS	0.291070270	0.00000000	0.17584615	NA
## C5orf22	0.520965197	0.00000000	0.18101149	NA
## SUMO1	0.182880000	0.00000000	0.14514286	NA
## PRDX3	0.059069767	0.00000000	0.12095238	NA
## LOC284454	0.402253061	0.00000000	0.17947305	NA
## C2CD5	0.368183486	0.00000000	0.19769458	NA
## FLJ37453	0.520965197	0.00000000	0.33443333	NA
## EXTL2	0.602854772	0.00000000	0.28008036	NA
## ATG2A	0.292236559	0.00000000	0.14717757	NA
## DCN	0.180697987	0.00000000	0.15657534	NA
## FAM101B	0.000000000	0.00000000	0.15573723	NA
## BTG1	0.000000000	0.00000000	0.00000000	NA
## ERN1	0.559334737	0.00000000	0.14443137	NA
## TGOLN2	0.000000000	0.00000000	0.11501887	NA
## LOC100130264	0.016387097	0.00000000	0.23222857	NA
## SLC7A11	0.649743381	0.00000000	0.20398456	NA
## PRKCZ	0.441903346	0.00000000	0.19149738	NA
## SH2D2A	0.608552577	0.00000000	0.20831655	NA
## PDE2A	0.536465517	0.00000000	0.25273000	NA
## GINM1	0.596900000	0.00000000	0.20398456	NA
## SLC16A10	0.520965197	0.00000000	0.21699338	NA
## MAP3K1	0.520965197	0.00000000	0.19878261	NA
## FRMD4B	0.520965197	0.00000000	0.20667681	NA
## MARS2	0.519217666	0.00000000	0.24284238	NA
## DNAJC19	0.071010753	0.00000000	0.20917647	NA
## FAM57A	0.378810345	0.00000000	0.36300405	NA
## HIF1A	0.008610169	0.00000000	0.11659016	NA
## Mar-01	0.062786517	0.00000000	0.19878261	NA
## LSM6	0.008610169	0.00000000	0.19878261	NA
## ZYG11B	0.100641509	0.00000000	0.18101149	NA
## ZCRB1	0.441656716	0.00000000	0.19878261	NA
## ACAA1	0.122903226	0.00000000	0.20631418	NA
## P2RY10	0.527191111	0.00000000	0.24284238	NA
## SLC35F5	0.326930693	0.00000000	0.23214243	NA
## RNF135	0.096520000	0.00000000	0.21152218	NA
## CCR3	0.159657143	0.00000000	0.13170370	NA
## ADAT2	0.472475524	0.00000000	0.38612097	NA
## PDIA6	0.543744136	0.00000000	0.15200000	NA
## LOC286052	0.520965197	0.00000000	0.35352653	NA
## CCDC115	0.058615385	0.00000000	0.13084848	NA
## SFMBT2	0.000000000	0.00000000	0.27729754	NA
## WNT5A	0.526599542	0.00000000	0.35352653	NA
## FBX03	0.520965197	0.00000000	0.26007656	NA
## ZFYVE26	0.345148325	0.00000000	0.20917647	NA
## ADAM10	0.520965197	0.00000000	0.17044737	NA
## DNM2	0.520965197	0.00000000	0.23247458	NA

## NFKBIE	0.229732484	0.00000000	0.14967857	NA
## CD300LB	0.520965197	0.00000000	0.19639175	NA
## SRFBP1	0.774047431	0.00000000	0.24284238	NA
## ANPEP	0.608552577	0.00000000	0.27006089	NA
## ZKSCAN8	0.291070270	0.00000000	0.27709091	NA
## GCSH	0.313010101	0.00000000	0.18368362	NA
## LOC541473	0.520965197	0.00000000	0.27272811	NA
## SUCLG2	0.008610169	0.00000000	0.14443137	NA
## KIT	0.008610169	0.00000000	0.21723684	NA
## FCGR3B	0.000000000	0.00000000	0.13170370	NA
## BRCC3	0.429240310	0.00000000	0.19878261	NA
## PCCA	0.008610169	0.00000000	0.19878261	NA
## KCNJ13	0.520965197	0.00000000	0.35352653	NA
## SPAG5-AS1	0.520965197	0.00000000	0.35797963	NA
## ZNF587B	0.520965197	0.00000000	0.27729754	NA
## FCER2	0.096520000	0.00000000	0.21771429	NA
## LENG8	0.349849057	0.00000000	0.19878261	NA
## SAMD9L	0.000000000	0.00000000	0.14443137	NA
## LY96	0.058615385	0.00000000	0.02419048	NA
## PPP1R14A	0.304800000	0.00000000	0.22339759	NA
## SYMPK	0.520965197	0.00000000	0.25958924	NA
## IL3RA	0.337038462	0.00000000	0.18288000	NA
## FLVCR1	0.541721627	0.00000000	0.24119894	NA
## MMP10	0.520965197	0.00000000	0.26007656	NA
## MMP12	0.724557769	0.00000000	0.24884264	NA
## SIAH2	0.520965197	0.00000000	0.23222857	NA
## FCGR1B	0.000000000	0.00000000	0.14269663	NA
## TLR1	0.008610169	0.00000000	0.11501887	NA
## IFI16	0.000000000	0.00000000	0.11501887	NA
## NR4A1	0.301037037	0.00000000	0.20816541	NA
## GPR42	0.008610169	0.00000000	0.13745882	NA
## RNA45S5	0.291070270	0.00000000	0.21407358	NA
## CD1B	0.520965197	0.00000000	0.22045283	NA
## RBM47	0.096520000	0.00000000	0.15200000	NA
## KMT2A	0.516141026	0.00000000	0.21771429	NA
## CD24	0.349849057	0.00000000	0.20831655	NA
## CASP4	0.000000000	0.00000000	0.00000000	NA
## TPSAB1	0.527191111	0.00000000	0.19878261	NA
## DNASE1L3	0.368183486	0.00000000	0.09407407	NA
## EPN2-AS1	0.461163121	0.00000000	0.26488571	NA
## GIMAP4	0.433753846	0.00000000	0.15200000	NA
## TLR8	0.468508834	0.00000000	0.11659016	NA
## F13A1	0.520965197	0.00000000	0.26488571	NA
## PJA2	0.144059701	0.00000000	0.14269663	NA
## UGT2B28	0.058615385	0.00000000	0.09407407	NA
## FCGR1A	0.097692308	0.00000000	0.17947305	NA
## S100A8	0.378810345	0.00000000	0.14443137	NA
## RRN3P2	0.520965197	0.00000000	0.27006089	NA
## NFKBID	0.488797251	0.00000000	0.11501887	NA
## TRIM22	0.000000000	0.00000000	0.00000000	NA
## HSD17B11	0.520965197	0.00000000	0.14443137	NA
## UBE2D1	0.000000000	0.00000000	0.14443137	NA
## CD1A	0.378810345	0.00000000	0.25336658	NA
## MNDA	0.168140845	0.00000000	0.15657534	NA

## DIDO1	0.520965197	0.00000000	0.27729754	NA
## SLA	0.268941176	0.00000000	0.00000000	NA
## CTNS	0.264646707	0.00000000	0.19878261	NA
## MAPK14	0.008610169	0.00000000	0.14967857	NA
## NR4A3	0.520965197	0.00000000	0.23424444	NA
## MORC3	0.520965197	0.00000000	0.22339759	NA
## MSL2	0.527191111	0.00000000	0.31128511	NA
## IFIT3	0.534678337	0.00000000	0.11501887	NA
## PALLD	0.520965197	0.00000000	0.19878261	NA
## SNX18	0.142393939	0.00000000	0.18101149	NA
## CYSLTR2	0.441656716	0.00000000	0.22425225	NA
## PSMB9	0.110836364	0.00000000	0.13170370	NA
## PARP9	0.000000000	0.00000000	0.19769458	NA
## NUB1	0.058615385	0.00000000	0.23446154	NA
## SBF2	0.513029703	0.00000000	0.21050685	NA
## CLIC4	0.008610169	0.00000000	0.11501887	NA
## POLR2J4	0.520965197	0.00000000	0.24284238	NA
## S100A9	0.000000000	0.00000000	0.14443137	NA
## TLR4	0.325120000	0.00000000	0.16024161	NA
## STARD4	0.526599542	0.00000000	0.21353220	NA
## FHL3	0.536465517	0.00000000	0.20398456	NA
## TANC2	0.527191111	0.00000000	0.23424444	NA
## CTBS	0.534678337	0.00000000	0.17669565	NA
## DPH1	0.516141026	0.00000000	0.18804420	NA
## AREG	0.520965197	0.00000000	0.19878261	NA
## IFIT2	0.378810345	0.00000000	0.15200000	NA
## ARHGEF3	0.058615385	0.00000000	0.15573723	NA
## OLIG2	0.311020408	0.00000000	0.19878261	NA
## ACSL1	0.000000000	0.00000000	0.02419048	NA
## NMI	0.000000000	0.00000000	0.15200000	NA
## DACH1	0.682817814	0.00000000	0.22339759	NA
## CSF1	0.260271605	0.00000000	0.19878261	NA
## WDFY3	0.264646707	0.00000000	0.11501887	NA
## TLR6	0.263292683	0.00000000	0.20831655	NA
## CASP5	0.008610169	0.00000000	0.16024161	NA
## PNPLA6	0.097692308	0.00000000	0.02419048	NA
## CPEB4	0.110836364	0.00000000	0.15200000	NA
## VAV1	0.059069767	0.00000000	0.18035503	NA
## CARD16	0.000000000	0.00000000	0.13170370	NA
## FAM129A	0.332912621	0.00000000	0.13170370	NA
## GIMAP2	0.450942029	0.00000000	0.22339759	NA
## HMG20B	0.059069767	0.00000000	0.19878261	NA
## NT5DC1	0.071010753	0.00000000	0.22225000	NA
## ABHD3	0.534678337	0.00000000	0.14176744	NA
## S1PR1	0.520965197	0.00000000	0.20831655	NA
## LAP3	0.403951807	0.00000000	0.17947305	NA
## LOC100505812	0.520965197	0.00000000	0.23222857	NA
## TMLHE	0.520965197	0.00000000	0.27603653	NA
## ARL4C	0.520965197	0.00000000	0.24106166	NA
## KRCC1	0.520965197	0.00000000	0.19878261	NA
## CREB5	0.541721627	0.00000000	0.06350000	NA
## YES1	0.332912621	0.00000000	0.21771429	NA
## RNF149	0.000000000	0.00000000	0.00000000	NA
## ZNF395	0.554181818	0.00000000	0.23222857	NA

## SIGLEC5	0.520965197	0.00000000	0.20917647	NA
## ACN9	0.519217666	0.00000000	0.30392225	NA
## CLEC4D	0.000000000	0.00000000	0.02419048	NA
## JARID2-AS1	0.379364807	0.00000000	0.20831655	NA
## PKIB	0.520965197	0.00000000	0.30545690	NA
## HERC5	0.693379032	0.00000000	0.21353220	NA
## SYNE1	0.387966245	0.00000000	0.27729754	NA
## CXCL10	0.527191111	0.00000000	0.19878261	NA
## RBM7	0.520965197	0.00000000	0.24284238	NA
## AP3M1	0.370702703	0.00000000	0.22024051	NA
## IGLC1	0.495821918	0.00000000	0.23424444	NA
## TRIM5	0.516141026	0.00000000	0.22339759	NA
## FAM160B1	0.520965197	0.00000000	0.27443678	NA
## CASP1	0.059069767	0.00000000	0.15200000	NA
## STK3	0.520965197	0.00000000	0.22045283	NA
## CDC73	0.520965197	0.00000000	0.23247458	NA
## CR1	0.168140845	0.00000000	0.15358140	NA
## MARCKSL1	0.096520000	0.00000000	0.19878261	NA
## GAPT	0.520965197	0.00000000	0.23521096	NA
## CLOCK	0.513029703	0.00000000	0.21771429	NA
## TNFSF10	0.130968750	0.00000000	0.15602857	NA
## CST1	0.519217666	0.00000000	0.30589247	NA
## CPPED1	0.520965197	0.00000000	0.15573723	NA
## NDFIP2	0.460828571	0.00000000	0.33585031	NA
## PDCD2	0.497632653	0.00000000	0.20917647	NA
## ASAP1-IT1	0.301037037	0.00000000	0.24949873	NA
## SPG11	0.384256410	0.00000000	0.15358140	NA
## POC1B	0.702205231	0.00000000	0.28884071	NA
## KLHL15	0.422000000	0.00000000	0.19149738	NA
## NAIP	0.708955823	0.00000000	0.19878261	NA
## LOC101927066	0.520965197	0.00000000	0.23595628	NA
## IFIH1	0.378810345	0.00000000	0.14443137	NA
## MIR142	0.520965197	0.00000000	0.19878261	NA
## OAS1	0.000000000	0.00000000	0.15573723	NA
## UTP11L	0.520965197	0.00000000	0.25400000	NA
## APOL3	0.350591549	0.00000000	0.26007656	NA
## ATAD2B	0.520965197	0.00000000	0.26546318	NA
## IL6ST	0.114414414	0.00000000	0.18368362	NA
## RAB11FIP3	0.497632653	0.00000000	0.31278132	NA
## GADD45A	0.520965197	0.00000000	0.30193492	NA
## CXCR2	0.179700680	0.00000000	0.14443137	NA
## SPATA13	0.104448598	0.00000000	0.19878261	NA
## PARP8	0.759485149	0.00000000	0.15573723	NA
## IGLV@	0.520965197	0.00000000	0.24685422	NA
## OAS3	0.062786517	0.00000000	0.19878261	NA
## MSRB1	0.008610169	0.00000000	0.11501887	NA
## SLC7A11-AS1	0.735236581	0.00000000	0.14913761	NA
## MRVI1	0.434038314	0.00000000	0.23424444	NA
## PIGK	0.460996441	0.00000000	0.20917647	NA
## VNN2	0.129015873	0.00000000	0.11501887	NA
## NSUN7	0.352055814	0.00000000	0.25272362	NA
## PTPN7	0.301037037	0.00000000	0.20917647	NA
## UGCG	0.554181818	0.00000000	0.19149738	NA
## BPIFB1	0.520965197	0.00000000	0.24884264	NA

## BAZ1A	0.058615385	0.00000000	0.13170370	NA
## FGFR10P2	0.403532258	0.00000000	0.27729754	NA
## GZMB	0.179700680	0.00000000	0.20831655	NA
## KLRC4-KLRK1	0.520965197	0.00000000	0.30869936	NA
## LOC158402	0.392739496	0.00000000	0.29633333	NA
## OR4F3	0.398842975	0.00000000	0.29475165	NA
## LRRC8D	0.520965197	0.00000000	0.21699338	NA
## CD93	0.631341564	0.00000000	0.19878261	NA
## DENND5B	0.527191111	0.00000000	0.40296620	NA
## AMELX	0.520965197	0.00000000	0.38865060	NA
## R3HCC1	0.319095477	0.00000000	0.30827350	NA
## LOC100506860	0.178675862	0.00000000	0.19878261	NA
## GORASP2	0.403532258	0.00000000	0.20917647	NA
## PRF1	0.520965197	0.00000000	0.22135423	NA
## NFAT5	0.520965197	0.00000000	0.26724171	NA
## UNC5B	0.183815789	0.00000000	0.14443137	NA
## CDR1	0.261791411	0.00000000	0.32259072	NA
## CLPTM1	0.520965197	0.00000000	0.26007656	NA
## LRP5L	0.525638889	0.00000000	0.39466135	NA
## IL1R2	0.454815884	0.00000000	0.11501887	NA
## NELFCD	0.291070270	0.00000000	0.29706957	NA
## DPY19L1	0.513029703	0.00000000	0.29044592	NA
## TREML2	0.058615385	0.00000000	0.13084848	NA
## LINC01366	0.244475000	0.00000000	0.13170370	NA
## REPS2	0.221435897	0.00000000	0.15200000	NA
## FLOT1	0.071010753	0.00000000	0.11501887	NA
## FLJ44896	0.535729258	0.00000000	0.35352653	NA
## IL18RAP	0.122903226	0.00000000	0.19769458	NA
## CLEC12A	0.527191111	0.00000000	0.28737639	NA
## SPINT1	0.291070270	0.00000000	0.21771429	NA
## LOC100506235	0.520965197	0.00000000	0.26837736	NA
## EPB41L5	0.516141026	0.00000000	0.15200000	NA
## RYR1	0.536465517	0.00000000	0.28786667	NA
## ING2	0.446593407	0.00000000	0.24027027	NA
## LOC731424	0.313010101	0.00000000	0.23247458	NA
## RNF125	0.543744136	0.00000000	0.39194389	NA
## PHC2	0.378810345	0.00000000	0.21771429	NA
## AKAP11	0.640702041	0.00000000	0.22314019	NA
## LOC100127886	0.520965197	0.00000000	0.27272811	NA
## PSMB8-AS1	0.291070270	0.00000000	0.17669565	NA
## MAFF	0.536465517	0.00000000	0.14967857	NA
## LOC100129406	0.520965197	0.00000000	0.42768379	NA
## MBOAT1	0.375874439	0.00000000	0.00000000	NA
## MIR101-1	0.688622222	0.00000000	0.26007656	NA
## SERPINB8	0.520965197	0.00000000	0.33443333	NA
## GTPBP10	0.527191111	0.00000000	0.25587224	NA
## SLC25A37	0.520965197	0.00000000	0.00000000	NA
## MGAM	0.008610169	0.00000000	0.11501887	NA
## LOC642236	0.527191111	0.00000000	0.33440671	NA
## VNN3	0.058615385	0.00000000	0.13170370	NA
## LMO4	0.520965197	0.00000000	0.21505333	NA
## DYSF	0.000000000	0.00000000	0.14269663	NA
## MRPS10	0.301625000	0.00000000	0.24881633	NA
## HIST1H2AC	0.520965197	0.00000000	0.22339759	NA

## VPS36	0.368183486	0.00000000	0.19878261	NA
## PIGP	0.441656716	0.00000000	0.18101149	NA
## INAFM1	0.398842975	0.00000000	0.25400000	NA
## IDI2-AS1	0.097692308	0.00000000	0.19878261	NA
## SYNE2	0.446817518	0.00000000	0.21771429	NA
## TSPAN2	0.520965197	0.00000000	0.21771429	NA
## CD3E	0.504567568	0.00000000	0.29679650	NA
## TMEM14B	0.520965197	0.00000000	0.11501887	NA
## PITPNA	0.393221757	0.00000000	0.02419048	NA
## RH0H	0.511409396	0.00000000	0.11501887	NA
## DOCK5	0.000000000	0.00000000	0.02419048	NA
## RELL1	0.520965197	0.00000000	0.33440671	NA
## NSMCE1	0.291070270	0.00000000	0.21771429	NA
## BCL9	0.520965197	0.00000000	0.27226914	NA
## TRANK1	0.468647887	0.00000000	0.22339759	NA
## NBN	0.520965197	0.00000000	0.15602857	NA
## MYO6	0.291070270	0.00000000	0.24113067	NA
## ZNF557	0.585419624	0.00000000	0.40740594	NA
## SNX30	0.172861111	0.00000000	0.24284238	NA
## TNIP1	0.122903226	0.00000000	0.15200000	NA
## TTC7A	0.136769231	0.00000000	0.19878261	NA
## NKG7	0.575094340	0.00000000	0.15200000	NA
## SAMSN1	0.016387097	0.00000000	0.02419048	NA
## FBXL13	0.520965197	0.00000000	0.21723684	NA
## KIAA0100	0.096520000	0.00000000	0.19878261	NA
## WWP1	0.520965197	0.00000000	0.27006089	NA
## PTGER2	0.520965197	0.00000000	0.27709091	NA
## SLAMF1	0.410464000	0.00000000	0.19769458	NA
## TRBC1	0.577079498	0.00000000	0.24284238	NA
## TBC1D4	0.520965197	0.00000000	0.15200000	NA
## NSL1	0.472350877	0.00000000	0.18804420	NA
## MEFV	0.121572650	0.00000000	0.18730726	NA
## DCSTAMP	0.534678337	0.00000000	0.18730726	NA
## NUP98	0.096520000	0.00000000	0.20917647	NA
## NCR3LG1	0.378810345	0.00000000	0.20398456	NA
## CD8A	0.520965197	0.00000000	0.26007656	NA
## SPA17	0.640702041	0.00000000	0.30238095	NA
## DESI2	0.429240310	0.00000000	0.29316300	NA
## LOC100506258	0.520965197	0.00000000	0.50300000	NA
## PLD3	0.180697987	0.00000000	0.19878261	NA
## HMMR	0.520965197	0.00000000	0.32618947	NA
## BBS10	0.231493671	0.00000000	0.35352653	NA
## RRAS2	0.441656716	0.00000000	0.25400000	NA
## GNG2	0.119269565	0.00000000	0.00000000	NA
## DDIT4	0.121572650	0.00000000	0.13084848	NA
## AMFR	0.000000000	0.00000000	0.19769458	NA
## LMAN1	0.412876494	0.00000000	0.17669565	NA
## KLHDC8B	0.170517483	0.00000000	0.20831655	NA
## SLC25A36	0.386944681	0.00000000	0.24106166	NA
## MRPS25	0.520965197	0.00000000	0.19769458	NA
## KRT23	0.058615385	0.00000000	0.19149738	NA
## LRCH1	0.332912621	0.00000000	0.23222857	NA
## ADM	0.058615385	0.00000000	0.11501887	NA
## LINC01002	0.159657143	0.00000000	0.11501887	NA

## PPFIBP2	0.520965197	0.00000000	0.23222857	NA
## NOLC1	0.488797251	0.00000000	0.26007656	NA
## TNFAIP3	0.000000000	0.00000000	0.15630769	NA
## ADORA2A	0.000000000	0.00000000	0.14443137	NA
## ZNF28	0.520965197	0.00000000	0.34426446	NA
## IFITM3	0.148321168	0.00000000	0.14443137	NA
## PLK3	0.429240310	0.00000000	0.15573723	NA
## KLHL42	0.402253061	0.00000000	0.23881522	NA
## SLAMF7	0.602854772	0.00000000	0.19878261	NA
## SLC7A5	0.209754839	0.00000000	0.15630769	NA
## LPCAT1	0.000000000	0.00000000	0.11659016	NA
## PARN	0.337038462	0.00000000	0.20000000	NA
## PREPL	0.301625000	0.00000000	0.19878261	NA
## FAM65B	0.008610169	0.00000000	0.13170370	NA
## GNLY	0.527191111	0.00000000	0.24284238	NA
## MAP3K8	0.567764706	0.00000000	0.27550572	NA
## ATP1B1	0.268941176	0.00000000	0.11659016	NA
## MIOS	0.516141026	0.00000000	0.19878261	NA
## SULT1B1	0.403532258	0.00000000	0.20781818	NA
## ZCCHC6	0.520965197	0.00000000	0.19878261	NA
## CLEC4E	0.058615385	0.00000000	0.00000000	NA
## IFITM1	0.058615385	0.00000000	0.00000000	NA
## CLEC2D	0.520965197	0.00000000	0.23222857	NA
## POLR2M	0.526599542	0.00000000	0.27272811	NA
## MRPS33	0.119269565	0.00000000	0.21407358	NA
## BRAF	0.441656716	0.00000000	0.20831655	NA
## CDC40	0.488797251	0.00000000	0.24681748	NA
## RNF19B	0.520965197	0.00000000	0.11501887	NA
## FAM162A	0.008610169	0.00000000	0.20917647	NA
## ZFP69B	0.279251462	0.00000000	0.46691913	NA
## SLC25A20	0.058615385	0.00000000	0.25773529	NA
## FPR2	0.000000000	0.00000000	0.11501887	NA
## LCP2	0.000000000	0.00000000	0.00000000	NA
## TMEM88	0.502833898	0.00000000	0.11659016	NA
## C11orf31	0.520965197	0.00000000	0.15573723	NA
## ETV5	0.640702041	0.00000000	0.38865060	NA
## SMCHD1	0.144059701	0.00000000	0.11501887	NA
## NINJ1	0.008610169	0.00000000	0.12095238	NA
## SPACA6P	0.520965197	0.00000000	0.26837736	NA
## PTP4A3	0.433753846	0.00000000	0.20631418	NA
## LINC01000	0.520965197	0.00000000	0.11659016	NA
## HLA-DMB	0.000000000	0.00000000	0.04417391	NA
## RNF175	0.520965197	0.00000000	0.13745882	NA
## SCGB1A1	0.520965197	0.00000000	0.24099191	NA
## N4BP1	0.520965197	0.00000000	0.11501887	NA
## LINC01136	0.520965197	0.00000000	0.24119894	NA
## ARHGAP26	0.748896825	0.00000000	0.18035503	NA
## MYH10	0.244475000	0.00000000	0.24284238	NA
## OR2A7	0.526599542	0.00000000	0.19878261	NA
## ZNF570	0.559334737	0.00000000	0.38382222	NA
## IFITM2	0.000000000	0.00000000	0.11659016	NA
## TBPL1	0.545829787	0.00000000	0.27550572	NA
## CD300LF	0.398842975	0.00000000	0.17947305	NA
## ETFA	0.554181818	0.00000000	0.10885714	NA

## CXCR1	0.058615385	0.00000000	0.13170370	NA
## FTSJ2	0.062786517	0.00000000	0.19214508	NA
## PHF19	0.520965197	0.00000000	0.29706957	NA
## CYB5D1	0.191324675	0.00000000	0.23446154	NA
## RLF	0.302694301	0.00000000	0.19769458	NA
## LIPA	0.824623274	0.00000000	0.19149738	NA
## FAM135A	0.446593407	0.00000000	0.29706957	NA
## ANTXR2	0.348342857	0.00000000	0.13170370	NA
## KCNJ15	0.058615385	0.00000000	0.08128000	NA
## MRPL57	0.283534884	0.00000000	0.15200000	NA
## LIMK2	0.000000000	0.00000000	0.13170370	NA
## SORD	0.520965197	0.00000000	0.20831655	NA
## LOC388210	0.303752577	0.00000000	0.16821192	NA
## NLRP2	0.520965197	0.00000000	0.26007656	NA
## CD177	0.441656716	0.00000000	0.30827350	NA
## LINC01093	0.682817814	0.00000000	0.19878261	NA

```
write.table(FinalSelection, file = paste(PathToReport, "/DesicionfeaturesFor4Classes.txt" ,sep="") )
print(FinalSelection)
```

##	f.test	kruskal.test	component	boosting	random Forst
## CLC	0	0		0	0
## IL1RL1	0	0		0	0
## CPA3	1	0		0	0
## GNA15	0	0		0	0
## PRSS33	0	0		0	0
## CRLF2	0	0		0	0
## CCL22	0	0		0	0
## GATA2	1	0		0	0
## ALOX15	0	0		0	0
## VEGFA	0	0		0	0
## CCL17	0	0		0	0
## SATB1	0	0		0	0
## SOCS2	0	0		0	0
## SMOX	0	0		1	0
## BIRC3	0	0		0	0
## LOC101927770	0	0		0	0
## TARP	0	0		0	0
## CISH	0	0		0	0
## BST1	0	0		0	0
## HELZ	0	0		0	0
## GPR183	0	0		0	0
## FECH	0	0		0	0
## RFTN1	0	0		0	0
## FCER1A	0	1		0	0
## CCR7	0	0		0	0
## FAM118A	0	0		0	0
## GLCCI1	0	0		0	0
## LGALS12	0	0		0	0
## RUNX3	0	0		0	0
## NDFIP1	0	0		0	0
## RNF146	0	0		0	0
## CTSS	0	0		0	0
## MMP19	0	0		0	0
## LOC101060424	0	0		0	0

## TLR7	0	0	0	0
## NLRC4	0	0	0	0
## TRGC2	0	0	0	0
## COA7	0	0	0	0
## ZFYVE21	0	0	0	0
## CYLD	0	0	0	0
## KIF21B	0	0	0	0
## UTRN	0	0	0	0
## TRGV9	0	1	0	0
## GTF2H2B	0	0	0	0
## C21orf91-OT1	0	0	0	0
## TRAPPC12	0	0	0	0
## ARHGAP1	0	0	0	0
## XRCC5	0	0	0	0
## CD207	1	0	0	0
## TIPRL	0	0	0	0
## DUSP4	0	0	0	0
## ATP2A3	0	0	0	0
## HAUS1	0	0	0	0
## MEIS3P1	0	0	0	0
## SCOC	0	0	0	0
## ADORA3	1	0	0	0
## ICOSLG	0	0	0	0
## RASAL3	0	0	0	0
## UBA3	0	0	0	0
## IL18R1	0	1	0	0
## DAD1	0	0	0	0
## REL	0	0	0	0
## TBC1D2B	0	0	0	0
## SMG1P5	0	0	0	0
## DNAJB1	1	0	0	0
## COL4A3BP	0	0	0	0
## CD1E	0	0	0	0
## TRAF1	0	0	0	0
## VSTM1	0	0	0	0
## PLBD1	0	0	0	0
## PQLC3	0	0	0	0
## SIGLEC7	0	0	0	0
## TES	0	0	0	0
## TTYH2	0	0	0	0
## STX7	0	1	0	0
## SOCS1	0	0	0	0
## CCNYL1	1	1	1	0
## CAMP	0	0	0	0
## PTPRCAP	0	0	0	0
## GNB4	0	0	0	0
## STAC3	0	0	0	0
## ASXL1	0	0	0	0
## ARPC3	1	0	0	0
## ADAM19	0	0	0	0
## CD1C	0	0	0	0
## PTBP3	0	1	0	0
## ETS1	0	0	0	0
## GPR171	0	0	0	0

## GGT5	0	0	0	0
## HRH4	0	0	0	0
## BANK1	0	0	0	0
## THBS1	0	0	0	0
## IL2RA	0	0	0	0
## RNPEP	0	0	0	0
## TRAM1	1	0	1	0
## ANKRD10	0	0	0	0
## LINC01094	0	0	0	0
## BTBD19	0	0	0	0
## ADAM1A	0	0	0	0
## COPG1	0	0	0	0
## PAQR8	0	0	0	0
## C8orf60	0	0	0	0
## HN1	0	0	0	0
## SCARB2	0	0	1	0
## TPSB2	0	0	0	0
## ETS2	1	0	0	0
## FCF1	0	1	0	0
## C11orf49	0	0	0	0
## ANKRD44-IT1	0	0	0	0
## XPNPEP3	0	0	0	0
## TP53	0	0	0	0
## OTOA	0	0	0	0
## MAGOHB	0	0	0	0
## BROX	0	0	0	0
## PPP3R1	0	0	0	0
## COQ2	0	0	0	0
## CSTA	0	0	0	0
## ZNF610	0	0	0	0
## CUL2	0	1	0	0
## IRF4	0	0	0	0
## TMEM120A	0	0	1	0
## ITM2A	0	0	0	0
## UMPS	0	0	0	0
## C5orf22	0	0	0	0
## SUMO1	0	0	0	0
## PRDX3	0	0	0	0
## LOC284454	1	0	0	0
## C2CD5	0	1	0	0
## FLJ37453	0	0	0	0
## EXTL2	0	0	0	0
## ATG2A	0	0	0	0
## DCN	0	0	0	0
## FAM101B	0	0	0	0
## BTG1	1	0	0	0
## ERN1	0	1	0	0
## TGOLN2	0	0	0	0
## LOC100130264	0	0	0	0
## SLC7A11	0	0	0	0
## PRKCZ	0	0	0	0
## SH2D2A	0	0	0	0
## PDE2A	0	0	0	0
## GINM1	0	0	0	0

## SLC16A10	0	0	0	0
## MAP3K1	1	0	0	0
## FRMD4B	0	0	0	0
## MARS2	0	0	0	0
## DNAJC19	0	0	0	0
## FAM57A	0	0	0	0
## HIF1A	0	0	0	0
## Mar-01	0	0	0	0
## LSM6	0	0	0	0
## ZYG11B	0	0	0	0
## ZCRB1	0	0	0	0
## ACAA1	0	0	0	0
## P2RY10	0	0	0	0
## SLC35F5	0	0	0	0
## RNF135	1	0	0	0
## CCR3	0	0	0	0
## ADAT2	0	0	0	0
## PDIA6	0	1	0	0
## LOC286052	0	0	0	0
## CCDC115	0	0	0	0
## SFMBT2	0	1	0	0
## WNT5A	0	0	0	0
## FBX03	1	0	0	0
## ZFYVE26	1	0	0	0
## ADAM10	0	0	0	0
## DNM2	0	0	0	0
## NFKBIE	0	0	0	0
## CD300LB	0	0	0	0
## SRFBP1	0	1	0	0
## ANPEP	0	0	0	0
## ZKSCAN8	0	0	0	0
## GCSH	0	0	0	0
## LOC541473	0	0	0	0
## SUCLG2	0	0	0	0
## KIT	0	0	0	0
## FCGR3B	1	1	0	0
## BRCC3	0	0	0	0
## PCCA	0	0	0	0
## KCNJ13	0	0	0	0
## SPAG5-AS1	0	0	0	0
## ZNF587B	0	0	0	0
## FCER2	1	0	0	0
## LENG8	0	0	0	0
## SAMD9L	0	0	0	0
## LY96	0	0	0	0
## PPP1R14A	0	0	0	0
## SYMPK	0	0	0	0
## IL3RA	0	0	0	0
## FLVCR1	0	0	0	0
## MMP10	0	0	0	0
## MMP12	0	1	0	0
## SIAH2	0	0	0	0
## FCGR1B	1	1	0	0
## TLR1	0	1	0	0

## IFI16	0	1	0	0
## NR4A1	1	0	0	0
## GPR42	0	0	0	0
## RNA45S5	0	0	0	0
## CD1B	0	0	0	0
## RBM47	0	0	0	0
## KMT2A	0	0	0	0
## CD24	0	0	0	0
## CASP4	0	1	0	0
## TPSAB1	0	0	0	0
## DNASE1L3	0	0	0	0
## EPN2-AS1	0	0	0	0
## GIMAP4	1	0	0	0
## TLR8	1	0	0	0
## F13A1	0	1	0	0
## PJA2	0	0	0	0
## UGT2B28	0	0	0	0
## FCGR1A	0	0	0	0
## S100A8	0	0	0	0
## RRN3P2	1	0	0	0
## NFKBID	0	1	0	0
## TRIM22	0	0	0	0
## HSD17B11	1	0	0	0
## UBE2D1	0	1	0	0
## CD1A	0	0	0	0
## MNDA	0	0	0	0
## DIDO1	0	0	0	0
## SLA	0	0	0	0
## CTNS	0	0	0	0
## MAPK14	0	0	0	0
## NR4A3	0	0	0	0
## MORC3	0	0	0	0
## MSL2	1	0	0	0
## IFIT3	0	0	0	0
## PALLD	0	0	0	0
## SNX18	0	0	0	0
## CYSLTR2	0	0	0	0
## PSMB9	0	0	0	0
## PARP9	0	0	0	0
## NUB1	0	0	0	0
## SBF2	1	1	0	0
## CLIC4	0	0	0	0
## POLR2J4	0	0	0	0
## S100A9	0	0	0	0
## TLR4	0	0	0	0
## STARD4	0	0	0	0
## FHL3	0	0	0	0
## TANC2	0	0	0	0
## CTBS	0	0	0	0
## DPH1	0	1	0	0
## AREG	0	0	0	0
## IFIT2	0	0	0	0
## ARHGEF3	0	1	0	0
## OLIG2	0	1	0	0

## ACSL1	0	1	0	0
## NMI	0	0	0	0
## DACH1	1	0	0	0
## CSF1	0	0	0	0
## WDFY3	0	0	0	0
## TLR6	0	0	0	0
## CASP5	1	0	1	0
## PNPLA6	0	0	0	0
## CPEB4	1	0	0	0
## VAV1	0	1	0	0
## CARD16	0	0	0	0
## FAM129A	0	0	0	0
## GIMAP2	0	0	0	0
## HMG20B	1	0	0	0
## NT5DC1	1	0	0	0
## ABHD3	0	0	0	0
## S1PR1	0	0	0	0
## LAP3	0	0	0	0
## LOC100505812	0	0	0	0
## TMLHE	0	0	0	0
## ARL4C	0	0	0	0
## KRCC1	0	0	0	0
## CREB5	0	0	0	0
## YES1	0	0	0	0
## RNF149	0	1	0	0
## ZNF395	0	0	0	0
## SIGLEC5	0	0	0	0
## ACN9	0	0	0	0
## CLEC4D	0	0	1	0
## JARID2-AS1	0	0	0	0
## PKIB	0	0	0	0
## HERC5	0	0	0	0
## SYNE1	1	1	0	0
## CXCL10	0	0	0	0
## RBM7	0	0	0	0
## AP3M1	0	0	0	0
## IGLC1	0	0	0	0
## TRIM5	0	0	0	0
## FAM160B1	0	0	0	0
## CASP1	0	0	0	0
## STK3	0	1	0	0
## CDC73	0	1	0	0
## CR1	0	0	0	0
## MARCKSL1	0	0	0	0
## GAPT	0	0	0	0
## CLOCK	0	0	0	0
## TNFSF10	0	1	0	0
## CST1	0	0	0	0
## CPPED1	0	0	0	0
## NDFIP2	1	0	0	0
## PDCD2	0	0	0	0
## ASAP1-IT1	0	0	0	0
## SPG11	0	0	0	0
## POC1B	0	0	0	0

## KLHL15	0	0	0	0
## NAIP	0	0	0	0
## LOC101927066	1	0	0	0
## IFIH1	1	0	0	0
## MIR142	0	0	0	0
## OAS1	0	0	0	0
## UTP11L	1	0	0	0
## APOL3	0	0	0	0
## ATAD2B	0	0	0	0
## IL6ST	0	0	0	0
## RAB11FIP3	0	1	0	0
## GADD45A	0	0	0	0
## CXCR2	0	0	0	0
## SPATA13	0	0	0	0
## PARP8	0	0	0	0
## IGLV@	0	0	0	0
## OAS3	0	1	0	0
## MSRB1	0	0	0	0
## SLC7A11-AS1	0	0	0	0
## MRVI1	0	0	0	0
## PIGK	0	0	0	0
## VNN2	0	0	0	0
## NSUN7	1	0	0	0
## PTPN7	0	0	0	0
## UGCG	0	0	0	0
## BPIFB1	0	0	0	0
## BAZ1A	1	0	0	0
## FGFR10P2	0	0	0	0
## GZMB	0	1	0	0
## KLRC4-KLRK1	0	0	0	0
## LOC158402	0	0	0	0
## OR4F3	0	1	0	0
## LRRC8D	0	0	0	0
## CD93	0	0	0	0
## DENND5B	0	0	0	0
## AMELX	0	0	0	0
## R3HCC1	0	0	0	0
## LOC100506860	0	0	0	0
## GORASP2	0	0	0	0
## PRF1	0	1	0	0
## NFAT5	0	0	0	0
## UNC5B	0	0	0	0
## CDR1	0	0	0	0
## CLPTM1	0	0	0	0
## LRP5L	1	0	0	0
## IL1R2	0	0	0	0
## NELFCD	0	0	0	0
## DPY19L1	0	0	0	0
## TREML2	0	0	0	0
## LINC01366	0	0	0	0
## REPS2	0	0	0	0
## FLOT1	0	0	0	0
## FLJ44896	0	0	0	0
## IL18RAP	0	0	0	0

## CLEC12A	0	0	0	0
## SPINT1	0	0	0	0
## LOC100506235	0	0	0	0
## EPB41L5	0	0	0	0
## RYR1	0	0	0	0
## ING2	0	0	0	0
## LOC731424	0	0	0	0
## RNF125	0	0	0	0
## PHC2	0	0	0	0
## AKAP11	0	0	0	0
## LOC100127886	0	0	0	0
## PSMB8-AS1	0	0	0	0
## MAFF	0	0	0	0
## LOC100129406	1	0	0	0
## MBOAT1	0	0	0	0
## MIR101-1	0	0	0	0
## SERPINB8	0	0	0	0
## GTPBP10	0	0	0	0
## SLC25A37	0	0	0	0
## MGAM	0	0	0	0
## LOC642236	0	0	0	0
## VNN3	0	0	0	0
## LMO4	0	0	0	0
## DYSF	0	0	0	0
## MRPS10	0	0	0	0
## HIST1H2AC	0	0	0	0
## VPS36	0	0	0	0
## PIGP	0	0	0	0
## INAFM1	0	0	0	0
## IDI2-AS1	0	0	0	0
## SYNE2	0	0	0	0
## TSPAN2	0	1	0	0
## CD3E	0	0	0	0
## TMEM14B	0	0	0	0
## PITPNA	0	0	0	0
## RHOH	0	0	0	0
## DOCK5	0	0	0	0
## RELL1	0	0	0	0
## NSMCE1	0	0	0	0
## BCL9	1	0	0	0
## TRANK1	0	0	0	0
## NBN	0	0	0	0
## MYO6	0	0	0	0
## ZNF557	0	0	0	0
## SNX30	0	1	0	0
## TNIP1	0	0	0	0
## TTC7A	0	0	0	0
## NKG7	0	0	0	0
## SAMSN1	0	0	0	0
## FBXL13	0	1	0	0
## KIAA0100	0	0	0	0
## WWP1	0	0	0	0
## PTGER2	0	0	0	0
## SLAMF1	0	0	0	0

## TRBC1	0	0	0	0
## TBC1D4	0	0	0	0
## NSL1	1	1	0	0
## MEFV	0	0	0	0
## DCSTAMP	0	0	0	0
## NUP98	0	0	0	0
## NCR3LG1	1	0	0	0
## CD8A	0	0	0	0
## SPA17	0	0	0	0
## DESI2	0	0	0	0
## LOC100506258	0	0	0	0
## PLD3	0	0	0	0
## HMMR	0	0	0	0
## BBS10	0	0	0	0
## RRAS2	0	1	0	0
## GNG2	0	0	0	0
## DDIT4	0	0	0	0
## AMFR	1	0	0	0
## LMAN1	0	0	0	0
## KLHDC8B	0	0	0	0
## SLC25A36	0	0	0	0
## MRPS25	1	0	0	0
## KRT23	1	0	0	0
## LRCH1	0	0	0	0
## ADM	0	1	0	0
## LINC01002	0	0	0	0
## PPFIBP2	0	0	0	0
## NOLC1	0	1	0	0
## TNFAIP3	0	1	0	0
## ADORA2A	0	0	0	0
## ZNF28	0	0	0	0
## IFITM3	0	0	0	0
## PLK3	1	0	0	0
## KLHL42	0	0	0	0
## SLAMF7	0	0	0	0
## SLC7A5	0	0	0	0
## LPCAT1	0	0	0	0
## PARN	0	0	0	0
## PREPL	0	1	0	0
## FAM65B	0	0	0	0
## GNLY	0	0	0	0
## MAP3K8	0	0	0	0
## ATP1B1	1	0	0	0
## MIOS	0	0	0	0
## SULT1B1	0	1	0	0
## ZCCHC6	0	0	0	0
## CLEC4E	0	0	0	0
## IFITM1	0	0	0	0
## CLEC2D	0	0	0	0
## POLR2M	0	0	0	0
## MRPS33	1	0	0	0
## BRAF	0	0	0	0
## CDC40	0	0	0	0
## RNF19B	0	0	0	0

## FAM162A	0	0	0	0
## ZFP69B	0	0	0	0
## SLC25A20	0	0	0	0
## FPR2	0	0	0	0
## LCP2	0	0	0	0
## TMEM88	0	0	0	0
## C11orf31	0	0	0	0
## ETV5	0	0	0	0
## SMCHD1	0	0	0	0
## NINJ1	0	0	0	0
## SPACA6P	0	0	0	0
## PTP4A3	0	0	0	0
## LINC01000	0	0	0	0
## HLA-DMB	0	0	0	0
## RNF175	0	0	0	0
## SCGB1A1	0	0	0	0
## N4BP1	0	0	0	0
## LINC01136	0	0	0	0
## ARHGAP26	0	0	0	0
## MYH10	0	0	0	0
## OR2A7	1	1	0	0
## ZNF570	0	0	0	0
## IFITM2	0	0	0	0
## TBPL1	0	0	0	0
## CD300LF	0	0	0	0
## ETFA	0	0	0	0
## CXCR1	0	0	0	0
## FTSJ2	0	0	0	0
## PHF19	0	0	0	0
## CYB5D1	0	0	0	0
## RLF	0	0	0	0
## LIPA	0	0	0	0
## FAM135A	0	0	0	0
## ANTXR2	0	0	0	0
## KCNJ15	0	1	0	0
## MRPL57	0	0	0	0
## LIMK2	0	0	0	0
## SORD	0	0	0	0
## LOC388210	0	0	0	0
## NLRP2	1	0	0	0
## CD177	0	0	0	0
## LINC01093	0	0	0	0
##	foldChange			
## CLC	NA			
## IL1RL1	NA			
## CPA3	NA			
## GNA15	NA			
## PRSS33	NA			
## CRLF2	NA			
## CCL22	NA			
## GATA2	NA			
## ALOX15	NA			
## VEGFA	NA			
## CCL17	NA			

## SATB1	NA
## SOCS2	NA
## SMOX	NA
## BIRC3	NA
## LOC101927770	NA
## TARP	NA
## CISH	NA
## BST1	NA
## HELZ	NA
## GPR183	NA
## FECH	NA
## RFTN1	NA
## FCER1A	NA
## CCR7	NA
## FAM118A	NA
## GLCCI1	NA
## LGALS12	NA
## RUNX3	NA
## NDFIP1	NA
## RNF146	NA
## CTSS	NA
## MMP19	NA
## LOC101060424	NA
## TLR7	NA
## NLRC4	NA
## TRGC2	NA
## COA7	NA
## ZFYVE21	NA
## CYLD	NA
## KIF21B	NA
## UTRN	NA
## TRGV9	NA
## GTF2H2B	NA
## C21orf91-OT1	NA
## TRAPPC12	NA
## ARHGAP1	NA
## XRCC5	NA
## CD207	NA
## TIPRL	NA
## DUSP4	NA
## ATP2A3	NA
## HAUS1	NA
## MEIS3P1	NA
## SCOC	NA
## ADORA3	NA
## ICOSLG	NA
## RASAL3	NA
## UBA3	NA
## IL18R1	NA
## DAD1	NA
## REL	NA
## TBC1D2B	NA
## SMG1P5	NA
## DNAJB1	NA

## COL4A3BP	NA
## CD1E	NA
## TRAF1	NA
## VSTM1	NA
## PLBD1	NA
## PQLC3	NA
## SIGLEC7	NA
## TES	NA
## TTYH2	NA
## STX7	NA
## SOCS1	NA
## CCNYL1	NA
## CAMP	NA
## PTPRCAP	NA
## GNB4	NA
## STAC3	NA
## ASXL1	NA
## ARPC3	NA
## ADAM19	NA
## CD1C	NA
## PTBP3	NA
## ETS1	NA
## GPR171	NA
## GGT5	NA
## HRH4	NA
## BANK1	NA
## THBS1	NA
## IL2RA	NA
## RNPEP	NA
## TRAM1	NA
## ANKRD10	NA
## LINC01094	NA
## BTBD19	NA
## ADAM1A	NA
## COPG1	NA
## PAQR8	NA
## C8orf60	NA
## HN1	NA
## SCARB2	NA
## TPSB2	NA
## ETS2	NA
## FCF1	NA
## C11orf49	NA
## ANKRD44-IT1	NA
## XPNPEP3	NA
## TP53	NA
## OTOA	NA
## MAGOHB	NA
## BROX	NA
## PPP3R1	NA
## COQ2	NA
## CSTA	NA
## ZNF610	NA
## CUL2	NA

## IRF4	NA
## TMEM120A	NA
## ITM2A	NA
## UMPS	NA
## C5orf22	NA
## SUMO1	NA
## PRDX3	NA
## LOC284454	NA
## C2CD5	NA
## FLJ37453	NA
## EXTL2	NA
## ATG2A	NA
## DCN	NA
## FAM101B	NA
## BTG1	NA
## ERN1	NA
## TGOLN2	NA
## LOC100130264	NA
## SLC7A11	NA
## PRKCZ	NA
## SH2D2A	NA
## PDE2A	NA
## GINM1	NA
## SLC16A10	NA
## MAP3K1	NA
## FRMD4B	NA
## MARS2	NA
## DNAJC19	NA
## FAM57A	NA
## HIF1A	NA
## Mar-01	NA
## LSM6	NA
## ZYG11B	NA
## ZCRB1	NA
## ACAA1	NA
## P2RY10	NA
## SLC35F5	NA
## RNF135	NA
## CCR3	NA
## ADAT2	NA
## PDIA6	NA
## LOC286052	NA
## CCDC115	NA
## SFMBT2	NA
## WNT5A	NA
## FBX03	NA
## ZFYVE26	NA
## ADAM10	NA
## DNM2	NA
## NFKBIE	NA
## CD300LB	NA
## SRFBP1	NA
## ANPEP	NA
## ZKSCAN8	NA

## GCSH	NA
## LOC541473	NA
## SUCLG2	NA
## KIT	NA
## FCGR3B	NA
## BRCC3	NA
## PCCA	NA
## KCNJ13	NA
## SPAG5-AS1	NA
## ZNF587B	NA
## FCER2	NA
## LENG8	NA
## SAMD9L	NA
## LY96	NA
## PPP1R14A	NA
## SYMPK	NA
## IL3RA	NA
## FLVCR1	NA
## MMP10	NA
## MMP12	NA
## SIAH2	NA
## FCGR1B	NA
## TLR1	NA
## IFI16	NA
## NR4A1	NA
## GPR42	NA
## RNA45S5	NA
## CD1B	NA
## RBM47	NA
## KMT2A	NA
## CD24	NA
## CASP4	NA
## TPSAB1	NA
## DNASE1L3	NA
## EPN2-AS1	NA
## GIMAP4	NA
## TLR8	NA
## F13A1	NA
## PJA2	NA
## UGT2B28	NA
## FCGR1A	NA
## S100A8	NA
## RRN3P2	NA
## NFKBID	NA
## TRIM22	NA
## HSD17B11	NA
## UBE2D1	NA
## CD1A	NA
## MNDA	NA
## DIDO1	NA
## SLA	NA
## CTNS	NA
## MAPK14	NA
## NR4A3	NA

## MORC3	NA
## MSL2	NA
## IFIT3	NA
## PALLD	NA
## SNX18	NA
## CYSLTR2	NA
## PSMB9	NA
## PARP9	NA
## NUB1	NA
## SBF2	NA
## CLIC4	NA
## POLR2J4	NA
## S100A9	NA
## TLR4	NA
## STARD4	NA
## FHL3	NA
## TANC2	NA
## CTBS	NA
## DPH1	NA
## AREG	NA
## IFIT2	NA
## ARHGEF3	NA
## OLIG2	NA
## ACSL1	NA
## NMI	NA
## DACH1	NA
## CSF1	NA
## WDFY3	NA
## TLR6	NA
## CASP5	NA
## PNPLA6	NA
## CPEB4	NA
## VAV1	NA
## CARD16	NA
## FAM129A	NA
## GIMAP2	NA
## HMG20B	NA
## NT5DC1	NA
## ABHD3	NA
## S1PR1	NA
## LAP3	NA
## LOC100505812	NA
## TMLHE	NA
## ARL4C	NA
## KRCC1	NA
## CREB5	NA
## YES1	NA
## RNF149	NA
## ZNF395	NA
## SIGLEC5	NA
## ACN9	NA
## CLEC4D	NA
## JARID2-AS1	NA
## PKIB	NA

## HERC5	NA
## SYNE1	NA
## CXCL10	NA
## RBM7	NA
## AP3M1	NA
## IGLC1	NA
## TRIM5	NA
## FAM160B1	NA
## CASP1	NA
## STK3	NA
## CDC73	NA
## CR1	NA
## MARCKSL1	NA
## GAPT	NA
## CLOCK	NA
## TNFSF10	NA
## CST1	NA
## CPPED1	NA
## NDFIP2	NA
## PDCD2	NA
## ASAP1-IT1	NA
## SPG11	NA
## POC1B	NA
## KLHL15	NA
## NAIP	NA
## LOC101927066	NA
## IFIH1	NA
## MIR142	NA
## OAS1	NA
## UTP11L	NA
## APOL3	NA
## ATAD2B	NA
## IL6ST	NA
## RAB11FIP3	NA
## GADD45A	NA
## CXCR2	NA
## SPATA13	NA
## PARP8	NA
## IGLV@	NA
## OAS3	NA
## MSRB1	NA
## SLC7A11-AS1	NA
## MRVI1	NA
## PIGK	NA
## VNN2	NA
## NSUN7	NA
## PTPN7	NA
## UGCG	NA
## BPIFB1	NA
## BAZ1A	NA
## FGFR10P2	NA
## GZMB	NA
## KLRC4-KLRK1	NA
## LOC158402	NA

## OR4F3	NA
## LRRC8D	NA
## CD93	NA
## DENND5B	NA
## AMELX	NA
## R3HCC1	NA
## LOC100506860	NA
## GORASP2	NA
## PRF1	NA
## NFAT5	NA
## UNC5B	NA
## CDR1	NA
## CLPTM1	NA
## LRP5L	NA
## IL1R2	NA
## NELFCD	NA
## DPY19L1	NA
## TREML2	NA
## LINC01366	NA
## REPS2	NA
## FLOT1	NA
## FLJ44896	NA
## IL18RAP	NA
## CLEC12A	NA
## SPINT1	NA
## LOC100506235	NA
## EPB41L5	NA
## RYR1	NA
## ING2	NA
## LOC731424	NA
## RNF125	NA
## PHC2	NA
## AKAP11	NA
## LOC100127886	NA
## PSMB8-AS1	NA
## MAFF	NA
## LOC100129406	NA
## MBOAT1	NA
## MIR101-1	NA
## SERPINB8	NA
## GTPBP10	NA
## SLC25A37	NA
## MGAM	NA
## LOC642236	NA
## VNN3	NA
## LMO4	NA
## DYSF	NA
## MRPS10	NA
## HIST1H2AC	NA
## VPS36	NA
## PIGP	NA
## INAFM1	NA
## IDI2-AS1	NA
## SYNE2	NA

## TSPAN2	NA
## CD3E	NA
## TMEM14B	NA
## PITPNA	NA
## RH0H	NA
## DOCK5	NA
## RELL1	NA
## NSMCE1	NA
## BCL9	NA
## TRANK1	NA
## NBN	NA
## MYO6	NA
## ZNF557	NA
## SNX30	NA
## TNIP1	NA
## TTC7A	NA
## NKG7	NA
## SAMSN1	NA
## FBXL13	NA
## KIAA0100	NA
## WWP1	NA
## PTGER2	NA
## SLAMF1	NA
## TRBC1	NA
## TBC1D4	NA
## NSL1	NA
## MEFV	NA
## DCSTAMP	NA
## NUP98	NA
## NCR3LG1	NA
## CD8A	NA
## SPA17	NA
## DESI2	NA
## LOC100506258	NA
## PLD3	NA
## HMMR	NA
## BBS10	NA
## RRAS2	NA
## GNG2	NA
## DDIT4	NA
## AMFR	NA
## LMAN1	NA
## KLHDC8B	NA
## SLC25A36	NA
## MRPS25	NA
## KRT23	NA
## LRCH1	NA
## ADM	NA
## LINC01002	NA
## PPFIBP2	NA
## NOLC1	NA
## TNFAIP3	NA
## ADORA2A	NA
## ZNF28	NA

## IFITM3	NA
## PLK3	NA
## KLHL42	NA
## SLAMF7	NA
## SLC7A5	NA
## LPCAT1	NA
## PARN	NA
## PREPL	NA
## FAM65B	NA
## GNLY	NA
## MAP3K8	NA
## ATP1B1	NA
## MIOS	NA
## SULT1B1	NA
## ZCCHC6	NA
## CLEC4E	NA
## IFITM1	NA
## CLEC2D	NA
## POLR2M	NA
## MRPS33	NA
## BRAF	NA
## CDC40	NA
## RNF19B	NA
## FAM162A	NA
## ZFP69B	NA
## SLC25A20	NA
## FPR2	NA
## LCP2	NA
## TMEM88	NA
## C11orf31	NA
## ETV5	NA
## SMCHD1	NA
## NINJ1	NA
## SPACA6P	NA
## PTP4A3	NA
## LINC01000	NA
## HLA-DMB	NA
## RNF175	NA
## SCGB1A1	NA
## N4BP1	NA
## LINC01136	NA
## ARHGAP26	NA
## MYH10	NA
## OR2A7	NA
## ZNF570	NA
## IFITM2	NA
## TBPL1	NA
## CD300LF	NA
## ETFA	NA
## CXCR1	NA
## FTSJ2	NA
## PHF19	NA
## CYB5D1	NA
## RLF	NA

## LIPA	NA
## FAM135A	NA
## ANTXR2	NA
## KCNJ15	NA
## MRPL57	NA
## LIMK2	NA
## SORD	NA
## LOC388210	NA
## NLRP2	NA
## CD177	NA
## LINC01093	NA