MP10k

Summary

General

fastp version:	0.19.4 (https://github.com/OpenGene/fastp)
sequencing:	paired end (151 cycles + 151 cycles)
mean length before filtering:	151bp, 151bp
mean length after filtering:	150bp, 150bp
duplication rate:	70.067729%
Insert size peak:	0

Before filtering

total reads:	446.717352 M
total bases:	67.454320 G
Q20 bases:	62.581933 G (92.776761%)
Q30 bases:	57.303928 G (84.952198%)
GC content:	44.969723%

After filtering

total reads:	388.457622 M
total bases:	58.364281 G
Q20 bases:	55.595814 G (95.256573%)
Q30 bases:	51.419543 G (88.101047%)
GC content:	42.682058%

Filtering result

reads passed filters:	388.457622 M (86.958257%)
reads with low quality:	43.425834 M (9.721099%)
reads with too many N:	4.586000 K (0.001027%)
reads too short:	14.685600 M (3.287448%)
reads with low complexity:	143.710000 K (0.032170%)

Adapters

Adapter or bad ligation of read1

The input has little adapter percentage (~0.396219%), probably it's trimmed before.

Sequence	Occurrences
A	73927
AG	69294
AGA	70800
AGAT	68279
AGATC	

	68658
AGATCG	66726
AGATCGG	63439
AGATCGGA	60059
AGATCGGAA	60570
AGATCGGAAG	59743
AGATCGGAAGA	59369
AGATCGGAAGAG	58055
AGATCGGAAGAGC	56139
AGATCGGAAGAGCA	56413
AGATCGGAAGAGCAC	53685
AGATCGGAAGAGCACA	53857
AGATCGGAAGAGCACAC	50866
AGATCGGAAGAGCACACG	50719
AGATCGGAAGAGCACACGT	48312
AGATCGGAAGAGCACACGTC	48210
AGATCGGAAGAGCACACGTCT	46842
AGATCGGAAGAGCACACGTCTG	45625
AGATCGGAAGAGCACACGTCTGA	45280
AGATCGGAAGAGCACACGTCTGAA	44556
AGATCGGAAGAGCACACGTCTGAAC	43315
AGATCGGAAGAGCACACGTCTGAACT	41029
AGATCGGAAGAGCACACGTCTGAACTC	41219
AGATCGGAAGAGCACACGTCTGAACTCC	40438
AGATCGGAAGAGCACACGTCTGAACTCCA	40394
AGATCGGAAGAGCACACGTCTGAACTCCAG	38577
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTT	45958
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGAAAA	50994
other adapter sequences	2029764

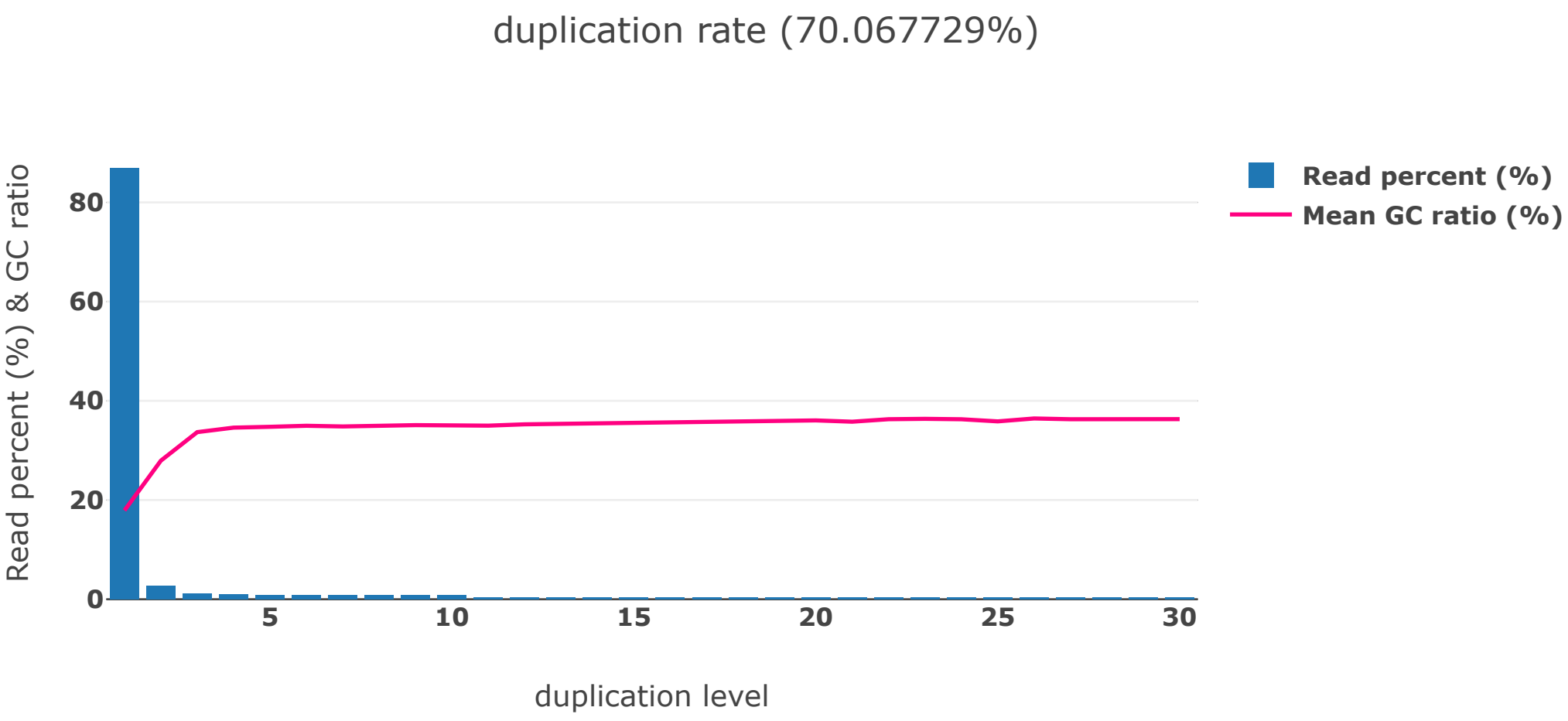
Adapter or bad ligation of read2

The input has little adapter percentage (~0.347312%), probably it's trimmed before.

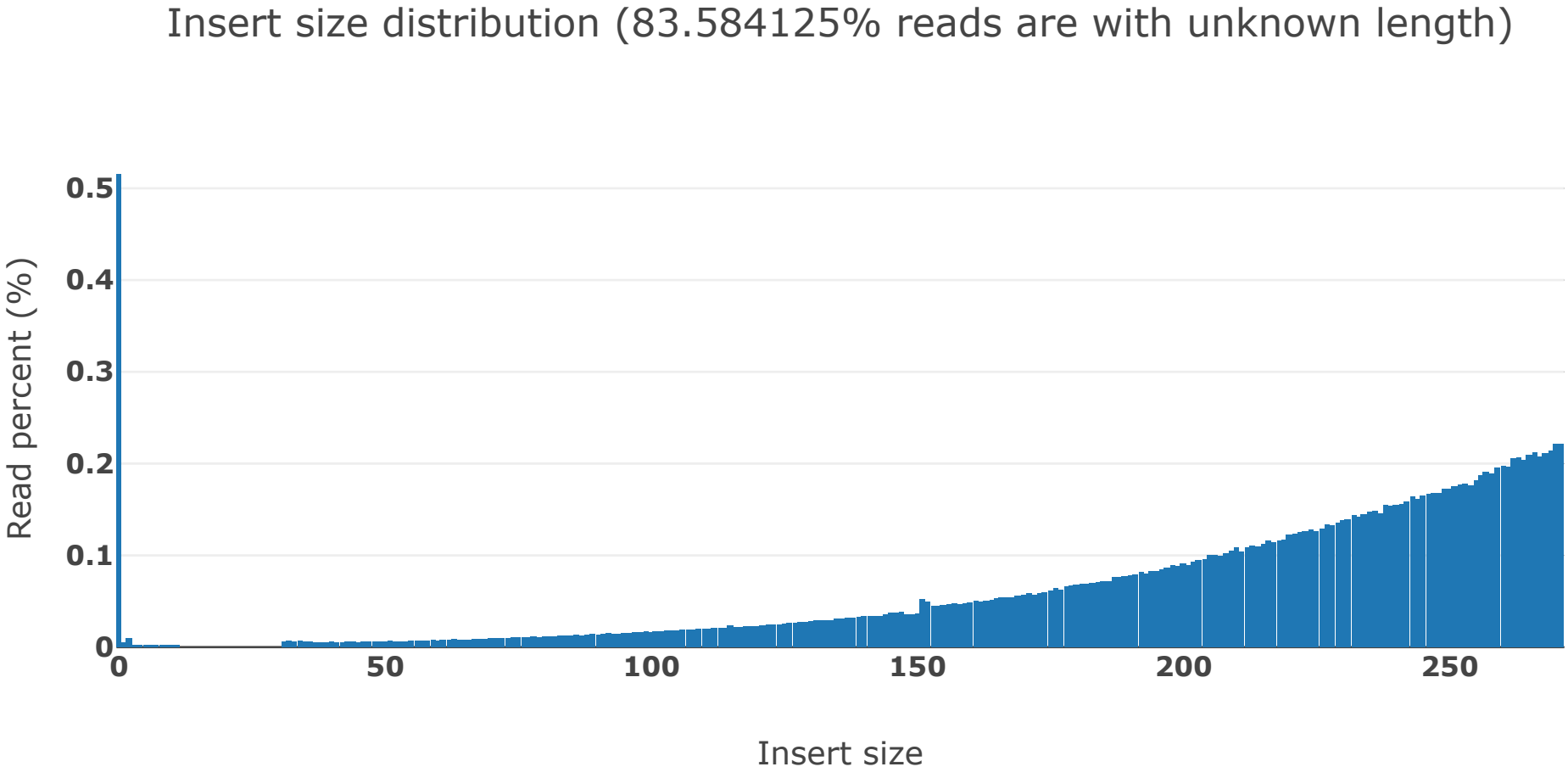
Sequence	Occurrences
A	73924
AG	69319
AGA	70763
AGAT	68718
AGATC	68941
AGATCG	67205
AGATCGG	64632
AGATCGGA	60215
AGATCGGAA	60367

AGATCGGAAG	60334
AGATCGGAAGA	59304
AGATCGGAAGAG	58668
AGATCGGAAGAGC	56676
AGATCGGAAGAGCG	56616
AGATCGGAAGAGCGT	51222
AGATCGGAAGAGCGTC	54225
AGATCGGAAGAGCGTCG	51137
AGATCGGAAGAGCGTCGT	48558
AGATCGGAAGAGCGTCGTG	49770
AGATCGGAAGAGCGTCGTGT	46900
AGATCGGAAGAGCGTCGTGTA	47455
AGATCGGAAGAGCGTCGTGTAG	44764
AGATCGGAAGAGCGTCGTGTAGG	55309
AGATCGGAAGAGCGTCGTGTAGGG	45414
AGATCGGAAGAGCGTCGTGTAGGGA	45315
AGATCGGAAGAGCGTCGTGTAGGGAA	39710
AGATCGGAAGAGCGTCGTGTAGGGAAA	60619
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT	51962
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTG	63656
other adapter sequences	2106054

Duplication



Insert size estimation

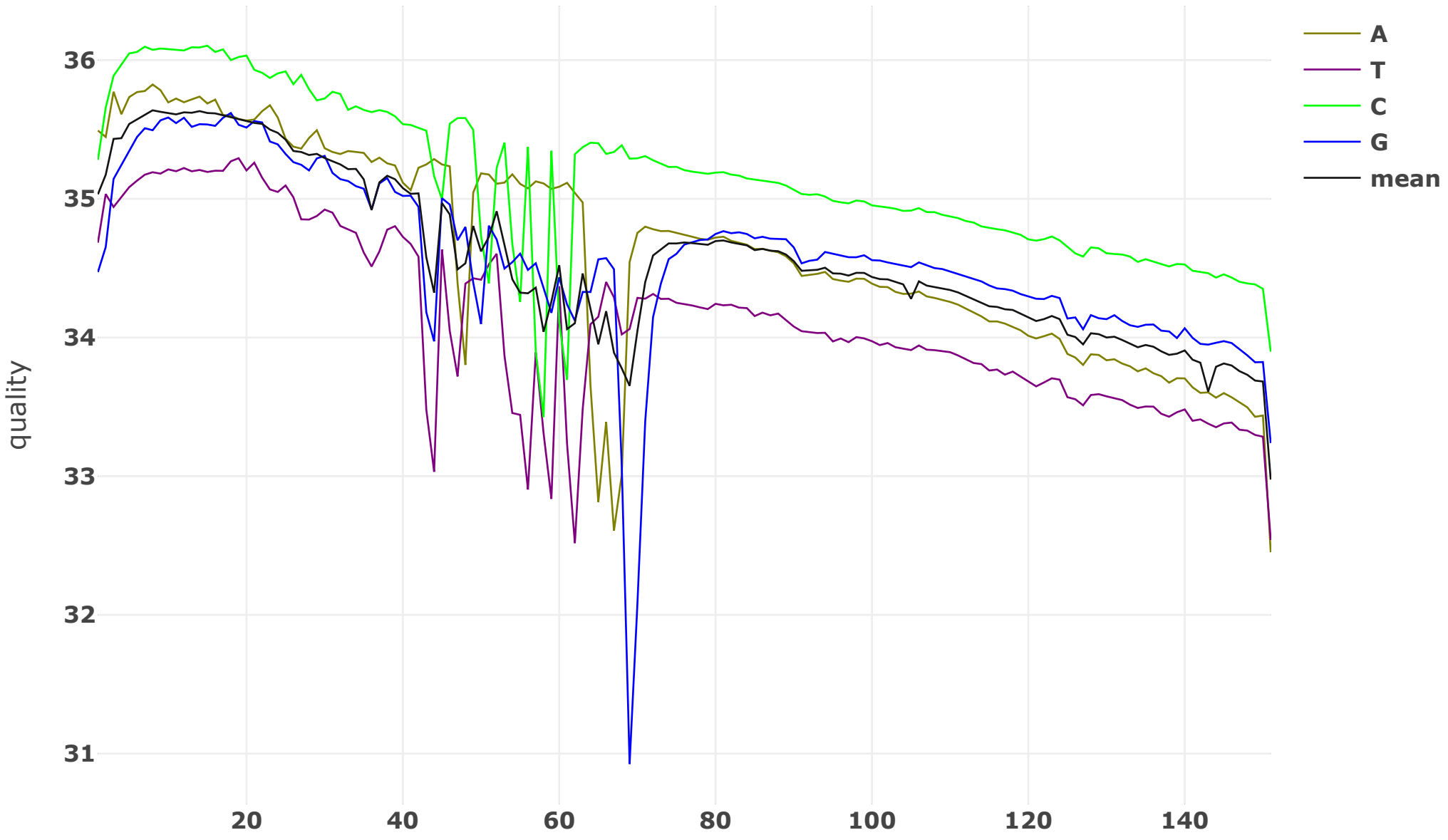


This estimation is based on paired-end overlap analysis, and there are 83.584125% reads found not overlapped.
The nonoverlapped read pairs may have insert size <30 or >272, or contain too much sequencing errors to be detected as overlapped.

Before filtering

Before filtering: read1: quality

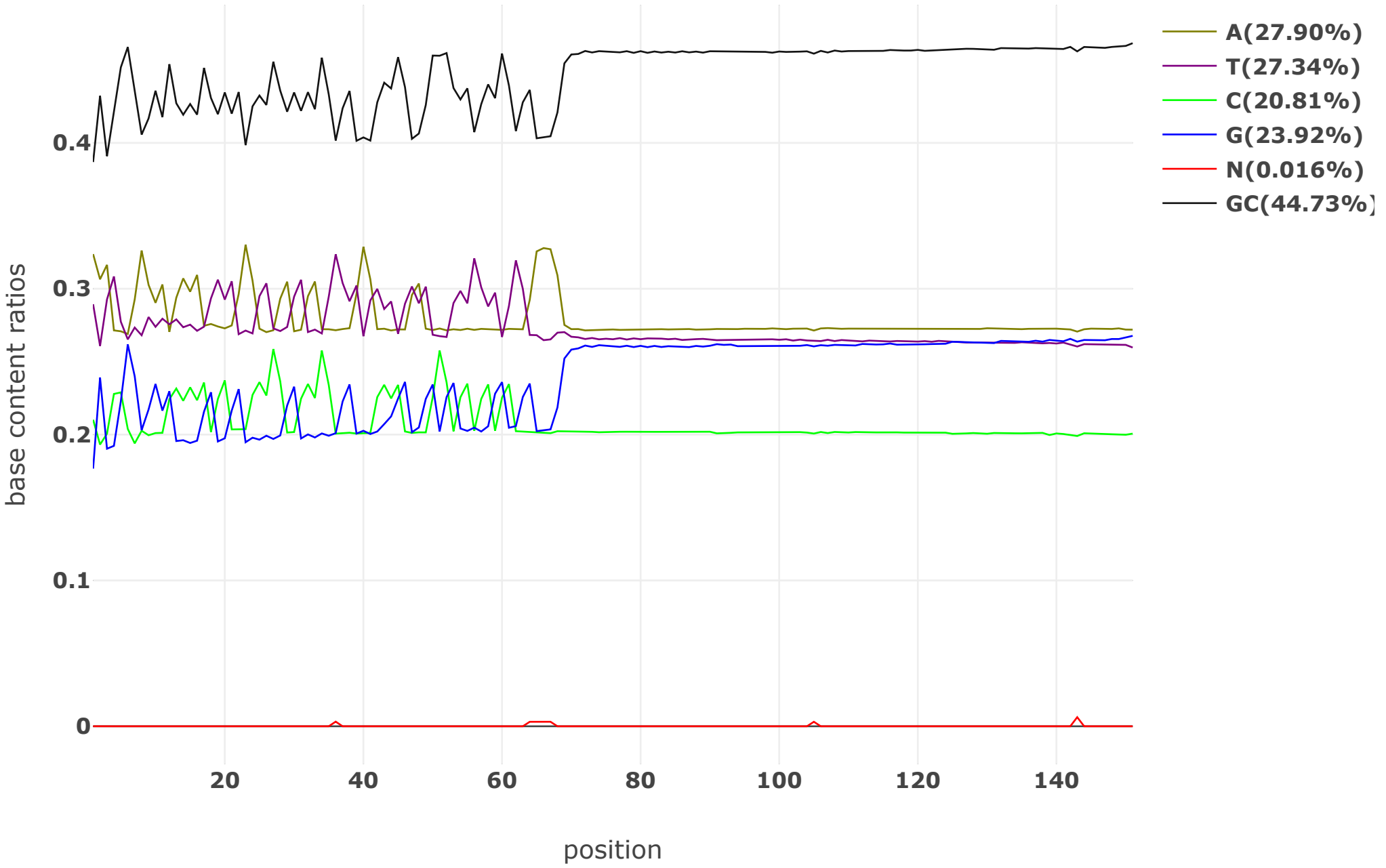
Value of each position will be shown on mouse over.



position

Before filtering: read1: base contents

Value of each position will be shown on mouse over.



Before filtering: read1: KMER counting

Darker background means larger counts. The count will be shown on mouse over.

	AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
AAA	AAAAA	AAAAT	AAAAC	AAAAG	AAATA	AAATT	AAATC	AAATG	AAACA	AAACT	AAACC	AAACG	AAAGA	AAAGT	AAAGC	AAAGG
AAT	AATAA	AATAT	AATAC	AATAG	AATTA	AATTT	AATTC	AATTG	AATCA	AATCT	AATCC	AATCG	AATGA	AATGT	AATGC	AATGG
AAC	AACAA	AACAT	AACAC	AACAG	AACTA	AACTT	AACTC	AACTG	AACCA	AACCT	AACCC	AACCG	AACGA	AACGT	AACGC	AACGG
AAG	AAGAA	AAGAT	AAGAC	AAGAG	AAGTA	AAGTT	AAGTC	AAGTG	AAGCA	AAGCT	AAGCC	AAGCG	AAGGA	AAGGT	AAGGC	AAGGG
ATA	ATAAA	ATAAT	ATAAC	ATAAG	ATATA	ATATT	ATATC	ATATG	ATACA	ATACT	ATACC	ATACG	ATAGA	ATAGT	ATAGC	ATAGG
ATT	ATTAA	ATTAT	ATTAC	ATTAG	ATTTA	ATTTT	ATTTC	ATTTG	ATTCA	ATTCT	ATTCC	ATTCG	ATTGA	ATTGT	ATTGC	ATTGG
ATC	ATCAA	ATCAT	ATCAC	ATCAG	ATCTA	ATCTT	ATCTC	ATCTG	ATCCA	ATCCT	ATCCC	ATCCG	ATCGA	ATCGT	ATCGC	ATCGG
ATG	ATGAA	ATGAT	ATGAC	ATGAG	ATGTA	ATGTT	ATGTC	ATGTG	ATGCA	ATGCT	ATGCC	ATGCG	ATGGA	ATGGT	ATGGC	ATGGG
ACA	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACAGG
ACT	ACTAA	ACTAT	ACTAC	ACTAG	ACTTA	ACTTT	ACTTC	ACTTG	ACTCA	ACTCT	ACTCC	ACTCG	ACTGA	ACTGT	ACTGC	ACTGG
ACC	ACCAA	ACCAT	ACCAC	ACCAG	ACCTA	ACCTT	ACCTC	ACCTG	ACCCA	ACCCT	ACCCC	ACCCG	ACCGA	ACCGT	ACCGC	ACCGG
ACG	ACGAA	ACGAT	ACGAC	ACGAG	ACGTA	ACGTT	ACGTC	ACGTG	ACGCA	ACGCT	ACGCC	ACGCG	ACGGA	ACGGT	ACGGC	ACGGG
AGA	AGAAA	AGAAT	AGAAC	AGAAG	AGATA	AGATT	AGATC	AGATG	AGACA	AGACT	AGACC	AGACG	AGAGA	AGAGT	AGAGC	AGAGG
AGT	AGTAA	AGTAT	AGTAC	AGTAG	AGTTA	AGTTT	AGTTC	AGTTG	AGTCA	AGTCT	AGTCC	AGTCG	AGTGA	AGTGT	AGTGC	AGTGG
AGC	AGCAA	AGCAT	AGCAC	AGCAG	AGCTA	AGCTT	AGCTC	AGCTG	AGCCA	AGCCT	AGCCC	AGCCG	AGCGA	AGCGT	AGCGC	AGCGG
AGG	AGGAA	AGGAT	AGGAC	AGGAG	AGGTA	AGGTT	AGGTC	AGGTG	AGGCA	AGGCT	AGGCC	AGGCG	AGGGA	AGGGT	AGGGC	AGGGG
TAA	TAAAA	TAAAT	TAAAC	TAAAG	TAATA	TAATT	TAATC	TAATG	TAACA	TAACT	TAACC	TAACG	TAAGA	TAAGT	TAAGC	TAAGG
TAT	TATAA	TATAT	TATAC	TATAG	TATTA	TATTT	TATTC	TATTG	TATCA	TATCT	TATCC	TATCG	TATGA	TATGT	TATGC	TATGG
TAC	TACAA	TACAT	TACAC	TACAG	TACTA	TACTT	TACTC	TACTG	TACCA	TACCT	TACCC	TACCG	TACGA	TACGT	TACGC	TACGG
TAG	TAGAA	TAGAT	TAGAC	TAGAG	TAGTA	TAGTT	TAGTC	TAGTG	TAGCA	TAGCT	TAGCC	TAGCG	TAGGA	TAGGT	TAGGC	TAGGG
TTA	TTAAA	TTAAT	TTAAC	TTAAG	TTATA	TTATT	TTATC	TTATG	TTACA	TTACT	TTACC	TTACG	TTAGA	TTAGT	TTAGC	TTAGG
TTT	TTTAA	TTTAT	TTTAC	TTTAG	TTTTA	TTTTT	TTTTC	TTTTG	TTTCA	TTTCT	TTTCC	TTTCG	TTTGA	TTTGT	TTTGC	TTTGG
TTC	TTCAA	TTCAT	TTCAC	TTCAG	TTCTA	TTCTT	TTCTC	TTCTG	TTCCA	TTCCT	TTCCC	TTCCG	TTCGA	TTCGT	TTCGC	TTCGG
TTG	TTGAA	TTGAT	TTGAC	TTGAG	TTGTA	TTGTT	TTGTC	TTGTG	TTGCA	TTGCT	TTGCC	TTGCG	TTGGA	TTGGT	TTGGC	TTGGG
TCA	TCAAA	TCAAT	TCAAC	TCAAG	TCATA	TCATT	TCATC	TCATG	TCACA	TCACT	TCACC	TCACG	TCAGA	TCAGT	TCAGC	TCAGG
TCT	TCTAA	TCTAT	TCTAC	TCTAG	TCTTA	TCTTT	TCTTC	TCTTG	TCTCA	TCTCT	TCTCC	TCTCG	TCTGA	TCTGT	TCTGC	TCTGG
TCC	TCCAA	TCCAT	TCCAC	TCCAG	TCCTA	TCCTT	TCCTC	TCCTG	TCCCA	TCCCT	TCCCC	TCCCG	TCCGA	TCCGT	TCCGC	TCCGG

TCG	TCGAA	TCGAT	TCGAC	TCGAG	TCGTA	TCGTT	TCGTC	TCGTG	TCGCA	TCGCT	TCGCC	TCGCG	TCGGA	TCGGT	TCGGC	TCGGG
TGA	TGAAA	TGAAT	TGAAC	TGAAG	TGATA	TGATT	TGATC	TGATG	TGACA	TGACT	TGACC	TGACG	TGAGA	TGAGT	TGAGC	TGAGG
TGT	TGTAA	TGTAT	TGTAC	TGTAG	TGTTA	TGTTT	TGTTC	TGTTG	TGTCA	TGTCT	TGTCC	TGTCG	TGTGA	TGTGT	TGTGC	TGTGG
TGC	TGCAA	TGCAT	TGCAC	TGCAG	TGCTA	TGCTT	TGCTC	TGCTG	TGCCA	TGCCT	TGCCC	TGCCG	TGCGA	TGCGT	TGCGC	TGCGG
TGG	TGGAA	TGGAT	TGGAC	TGGAG	TGGTA	TGGTT	TGGTC	TGGTG	TGGCA	TGGCT	TGGCC	TGGCG	TGGGA	TGGGT	TGGGC	TGGGG
CAA	CAAAA	CAAAT	CAAAC	CAAAG	CAATA	CAATT	CAATC	CAATG	CAACA	CAACT	CAACC	CAACG	CAAGA	CAAGT	CAAGC	CAAGG
CAT	CATAA	CATAT	CATAC	CATAG	CATTA	CATTT	CATTC	CATTG	CATCA	CATCT	CATCC	CATCG	CATGA	CATGT	CATGC	CATGG
CAC	CACAA	CACAT	CACAC	CACAG	CACTA	CACTT	CACTC	CACTG	CACCA	CACCT	CACCC	CACCG	CACGA	CACGT	CACGC	CACGG
CAG	CAGAA	CAGAT	CAGAC	CAGAG	CAGTA	CAGTT	CAGTC	CAGTG	CAGCA	CAGCT	CAGCC	CAGCG	CAGGA	CAGGT	CAGGC	CAGGG
CTA	CTAAA	CTAAT	CTAAC	CTAAG	CTATA	CTATT	CTATC	CTATG	CTACA	CTACT	CTACC	CTACG	CTAGA	CTAGT	CTAGC	CTAGG
CTT	CTTAA	CTTAT	CTTAC	CTTAG	CTTTA	CTTTT	CTTTC	CTTTG	CTTCA	CTTCT	CTTCC	CTTCG	CTTGA	CTTGT	CTTGC	CTTGG
CTC	CTCAA	CTCAT	CTCAC	CTCAG	CTCTA	CTCTT	CTCTC	CTCTG	CTCCA	CTCCT	CTCCC	CTCCG	CTCGA	CTCGT	CTCGC	CTCGG
CTG	CTGAA	CTGAT	CTGAC	CTGAG	CTGTA	CTGTT	CTGTC	CTGTG	CTGCA	CTGCT	CTGCC	CTGCG	CTGGA	CTGGT	CTGGC	CTGGG
CCA	CCAAA	CCAAT	CCAAC	CCAAG	CCATA	CCATT	CCATC	CCATG	CCACA	CCACT	CCACC	CCACG	CCAGA	CCAGT	CCAGC	CCAGG
CCT	CCTAA	CCTAT	CCTAC	CCTAG	CCTTA	CCTTT	CCTTC	CCTTG	CCTCA	CCTCT	CCTCC	CCTCG	CCTGA	CCTGT	CCTGC	CCTGG
CCC	CCCAA	CCCAT	CCCAC	CCCAG	CCCTA	CCCTT	CCCTC	CCCTG	CCCCA	CCCCT	CCCCC	CCCCG	CCCGA	CCCGT	CCCGC	CCCGG
CCG	CCGAA	CCGAT	CCGAC	CCGAG	CCGTA	CCGTT	CCGTC	CCGTG	CCGCA	CCGCT	CCGCC	CCGCG	CCGGA	CCGGT	CCGGC	CCGGG
CGA	CGAAA	CGAAT	CGAAC	CGAAG	CGATA	CGATT	CGATC	CGATG	CGACA	CGACT	CGACC	CGACG	CGAGA	CGAGT	CGAGC	CGAGG
CGT	CGTAA	CGTAT	CGTAC	CGTAG	CGTTA	CGTTT	CGTTC	CGTTG	CGTCA	CGTCT	CGTCC	CGTCG	CGTGA	CGTGT	CGTGC	CGTGG
CGC	CGCAA	CGCAT	CGCAC	CGCAG	CGCTA	CGCTT	CGCTC	CGCTG	CGCCA	CGCCT	CGCCC	CGCCG	CGCGA	CGCGT	CGCGC	CGCGG
CGG	CGGAA	CGGAT	CGGAC	CGGAG	CGGTA	CGGTT	CGGTC	CGGTG	CGGCA	CGGCT	CGGCC	CGGCG	CGGGA	CGGGT	CGGGC	CGGGG
GAA	GAAAA	GAAAT	GAAAC	GAAAG	GAATA	GAATT	GAATC	GAATG	GAACA	GAACT	GAACC	GAACG	GAAGA	GAAGT	GAAGC	GAAGG
GAT	GATAA	GATAT	GATAC	GATAG	GATTA	GATTT	GATTC	GATTG	GATCA	GATCT	GATCC	GATCG	GATGA	GATGT	GATGC	GATGG
GAC	GACAA	GACAT	GACAC	GACAG	GACTA	GACTT	GACTC	GACTG	GACCA	GACCT	GACCC	GACCG	GACGA	GACGT	GACGC	GACGG
GAG	GAGAA	GAGAT	GAGAC	GAGAG	GAGTA	GAGTT	GAGTC	GAGTG	GAGCA	GAGCT	GAGCC	GAGCG	GAGGA	GAGGT	GAGGC	GAGGG
GTA	GTAAA	GTAAT	GTAAC	GTAAG	GTATA	GTATT	GTATC	GTATG	GTACA	GTACT	GTACC	GTACG	GTAGA	GTAGT	GTAGC	GTAGG
GTT	GTTAA	GTTAT	GTTAC	GTTAG	GTTTA	GTTTT	GTTTC	GTTTG	GTTCA	GTTCT	GTTCC	GTTCG	GTTGA	GTTGT	GTTGC	GTTGG
GTC	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC	GTCTG	GTCCA	GTCCT	GTCCC	GTCCG	GTCGA	GTCGT	GTCGC	GTCGG
GTG	GTGAA	GTGAT	GTGAC	GTGAG	GTGTA	GTGTT	GTGTC	GTGTG	GTGCA	GTGCT	GTGCC	GTGCG	GTGGA	GTGGT	GTGGC	GTGGG
GCA	GCAAA	GCAAT	GCAAC	GCAAG	GCATA	GCATT	GCATC	GCATG	GCACA	GCACT	GCACC	GCACG	GCAGA	GCAGT	GCAGC	GCAGG
GCT	GCTAA	GCTAT	GCTAC	GCTAG	GCTTA	GCTTT	GCTTC	GCTTG	GCTCA	GCTCT	GCTCC	GCTCG	GCTGA	GCTGT	GCTGC	GCTGG
GCC	GCCAA	GCCAT	GCCAC	GCCAG	GCCTA	GCCTT	GCCTC	GCCTG	GCCCA	GCCCT	GCCCC	GCCCG	GCCGA	GCCGT	GCCGC	GCCGG
GCG	GCGAA	GCGAT	GCGAC	GCGAG	GCGTA	GCGTT	GCGTC	GCGTG	GCGCA	GCGCT	GCGCC	GCGCG	GCGGA	GCGGT	GCGGC	GCGGG
GGA	GGAAA	GGAAT	GGAAC	GGAAG	GGATA	GGATT	GGATC	GGATG	GGACA	GGACT	GGACC	GGACG	GGAGA	GGAGT	GGAGC	GGAGG
GGT	GGTAA	GGTAT	GGTAC	GGTAG	GGTTA	GGTTT	GGTTC	GGTTG	GGTCA	GGTCT	GGTCC	GGTCG	GGTGA	GGTGT	GGTGC	GGTGG
GGC	GGCAA	GGCAT	GGCAC	GGCAG	GGCTA	GGCTT	GGCTC	GGCTG	GGCCA	GGCCT	GGCCC	GGCCG	GGCGA	GGCGT	GGCGC	GGCGG
GGG	GGGAA	GGGAT	GGGAC	GGGAG	GGGTA	GGGTT	GGGTC	GGGTG	GGGCA	GGGCT	GGGCC	GGGCG	GGGGA	GGGGT	GGGGC	GGGGG

Before filtering: read1: overrepresented sequences

Sampling rate: 1 / 20

overrepresented sequence	count (% of bases)	distribution: cycle 1 ~ cycle 151
AAAGATGTGTATAAGAGACA	86282 (0.102329%)	
AAGATGTGTATAAGAGACAG	149980 (0.177874%)	
AAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	17427 (0.041336%)	
ACACACACACACACACACACACACACACACACACACAA	2326 (0.005517%)	
ACACACACACACACACACACACACACACACACACACAC	58007 (0.137591%)	
ACACACACACACACACACACACACACACACACACACAG	1568 (0.003719%)	
ACACACACACACACACACACACCTGTCTCTTATACACATC	15516 (0.036804%)	
ACACACACACACCTGTCTCTTATACACATCTAGATGTGTA	11379 (0.026991%)	
ACACACACACCTGTCTCTTATACACATCTAGATGTGTATA	1309 (0.003105%)	
ACACACACCTGTCTCTTATACACATCTAGATGTGTATAAG	1667 (0.003954%)	
ACACACCTGTCTCTTATACACATCTAGATGTGTATAAGAG	3488 (0.008273%)	
ACACATCTAGATGTGTATAAGAGACAGCACACACACACAC	157 (0.000372%)	
ACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTGTG	157 (0.000372%)	
ACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	21275 (0.050464%)	
ACAGATGTGTATAAGAGACA	98384 (0.116682%)	
ACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTGTG	199 (0.000472%)	
ACCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	27626 (0.065528%)	
ACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	31832 (0.075505%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	15738 (0.037330%)	

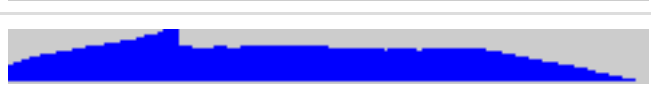
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	23027 (0.054619%)	
AGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	12233 (0.029016%)	
AGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAGAGAGAGAGAGAG	261 (0.001548%)	
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCGCGTATGCCGTCTTCGGCTTGAAAAGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	4095 (0.036182%)	
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCGCGTATGCCGTCTTCTGCTTGAAAAGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	34267 (0.302770%)	
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCGGCTTGAAAAGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	9238 (0.081623%)	
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCGTGAAAAGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	7055 (0.062335%)	
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGAAAAGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	129027 (1.140032%)	
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGAAAATGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	13776 (0.121719%)	
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGTAAAGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	7570 (0.066886%)	
AGATGTGTATAAGAGACAGCACACACACACACACACACAC	18099 (0.042930%)	
AGATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	16003 (0.037959%)	
AGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	28786 (0.068280%)	
AGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	30967 (0.073453%)	
AGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	29079 (0.068975%)	
ANATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGAAAAGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	74 (0.000654%)	
ATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	72 (0.000171%)	
ATACACATCTAGATGTGTATAAGAGACAGCACACACACAC	199 (0.000472%)	
ATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTG	151 (0.000358%)	
ATCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	20309 (0.048172%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCGCGTATGCCGTCTTCTGCGTGAAAAGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	4 (0.000035%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCGCGTATGCCGTCTTCTGCTTGAAAAGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	41 (0.000362%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCGCGTATGCCGTCTTCTGCTTGAAAATGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	14 (0.000124%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCGGCTTGAAAAAGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	10 (0.000088%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCGTGAAAAGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	24 (0.000212%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGAAAAAGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	123 (0.001087%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGAAAAGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	152 (0.001343%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGAAAATGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	78 (0.000689%)	
ATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	38484 (0.091283%)	
ATGCCGTCGTCTGCTTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	244 (0.001447%)	

ATGCCGTCTTCGGCGTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	166 (0.000984%)	
ATGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	28028 (0.066482%)	
ATGTGTATAAGAGACAGCACACACACACACACACACACAC	208 (0.000493%)	
ATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTG	138 (0.000327%)	
ATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	18805 (0.044605%)	
CAAGATGTGTATAAGAGACA	112826 (0.133810%)	
CACACACACACACACACACACACACACACACACACACAAA	1317 (0.003124%)	
CACACACACACACACACACACACACACACACACACACACA	20429 (0.048457%)	
CACACACACACACACACACACCTGTCTCTTATACACATCT	1900 (0.004507%)	
CACACACACACCTGTCTCTTATACACATCTAGATGTGTAT	1449 (0.003437%)	
CACACACACCTGTCTCTTATACACATCTAGATGTGTATAA	1300 (0.003084%)	
CACACACCTGTCTCTTATACACATCTAGATGTGTATAAGA	2705 (0.006416%)	
CACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	6115 (0.014505%)	
CACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTGTGT	163 (0.000387%)	
CACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22230 (0.052729%)	
CAGATGTGTATAAGAGACAG	118433 (0.140460%)	
CATCTAGATGTGTATAAGAGACAGGTGTGTGTGTGTGTGT	180 (0.000427%)	
CCAGATGTGTATAAGAGACA	108700 (0.128917%)	
CCCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22605 (0.053619%)	
CCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	44789 (0.106238%)	
CCGTCGTCTGCTTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	94 (0.000557%)	
CCGTCTTCGGCGTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	62 (0.000368%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	833 (0.001976%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	1856 (0.004402%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	2539 (0.006022%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	421 (0.000999%)	
CGTATGCCGTCGTCTGCTTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	7067 (0.041907%)	
CGTATGCCGTCTTCGGCGTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3268 (0.019379%)	
CGTCTTCGGCTTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	8733 (0.051786%)	
CGTCTTCTGCTTGTAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	6466 (0.038343%)	
CTCACACACACACACACACACACACACACACACACACACA	13926 (0.033032%)	
CTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT	5915 (0.014030%)	
CTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	23047 (0.054667%)	

CTCTTATACACATCTAGATGTGTATAAGAGACAGCACACA	81 (0.000192%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGT	63 (0.000149%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAC	2673 (0.006340%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAT	3189 (0.007564%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCA	682 (0.001618%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCC	367 (0.000871%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCT	384 (0.000911%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGA	350 (0.000830%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGC	343 (0.000814%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGG	461 (0.001093%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGT	839 (0.001990%)	
CTGTCTCTTATACACATCTC	388845 (0.461165%)	
CTGTCTCTTATACACATCTG	331290 (0.392906%)	
CTGTCTCTTATACACATCTT	344261 (0.408289%)	
CTTATACACATCTAGATGTGTATAAGAGACAGCACACACA	83 (0.000197%)	
CTTATACACATCTAGATGTGTATAAGAGACAGGTGTGTGT	41 (0.000097%)	
GACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	29208 (0.069281%)	
GACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	27175 (0.064458%)	
GAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	11165 (0.026483%)	
GAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG AGAGAGAGAGAGAGAGAGAGAGAGAGAGA	228 (0.001352%)	
GAGATGTGTATAAGAGACAG	243269 (0.288514%)	
GAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25076 (0.059480%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCGCGTATGCCGTCTTCGGCTTGAAAAGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	2208 (0.019509%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCGCGTATGCCGTCTTCTGCGTGAAAAGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	6937 (0.061293%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCGCGTATGCCGTCTTCTGCTTGAAAAGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	20573 (0.181775%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCGCGTATGCCGTCTTCTGCTTGAAAATGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	7476 (0.066055%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCGGCTTGAAAAAGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	1124 (0.009931%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCGGCTTGAAAAGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	5466 (0.048295%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCGTGAAAAGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	5335 (0.047138%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGAAAAAGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	20856 (0.184275%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGAAAAGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	65436 (0.578167%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGAAAATGGG		

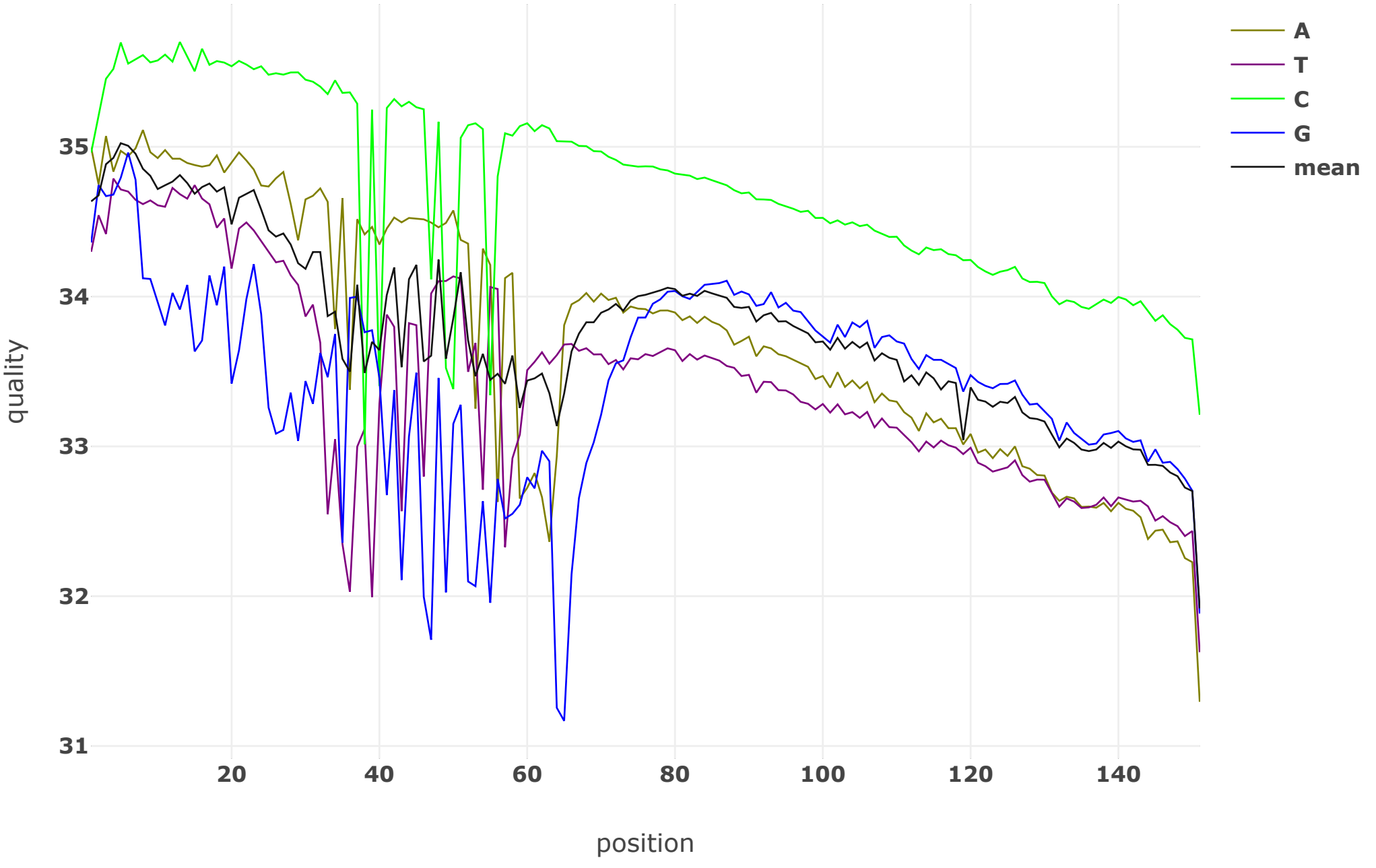
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	17067 (0.150797%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTATGCCGTCTTCTGCTTGTAAAGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	4211 (0.037207%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACCTTGTAATCTCGTTTGCCGTCTTCTGCTTGAAAAGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	2943 (0.026003%)	
GATGTGTATAAGAGACAGCACACACACACACACACACACA	139 (0.000330%)	
GATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGT	142 (0.000337%)	
GCACACACACACACACACACACACACACACACACACACAC	23470 (0.055670%)	
GCCGTCGTCTGCTTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	37 (0.000219%)	
GCCGTCTTCGGCGTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	11 (0.000065%)	
GCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	7907 (0.018755%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2749 (0.006521%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	5701 (0.013523%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	8751 (0.020757%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	1450 (0.003439%)	
GGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	26137 (0.061996%)	
GGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	21053 (0.049937%)	
GGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25376 (0.060191%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1185805 (2.812700%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2231 (0.013230%)	
GGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	28075 (0.066593%)	
GGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	10878 (0.025802%)	
GTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGTGTG	72 (0.000171%)	
GTATGCCGTCGTCTGCTTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	12 (0.000071%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGCACA	159 (0.000377%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTAT	40 (0.000095%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGT	153 (0.000363%)	
GTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	28088 (0.066624%)	
GTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	16550 (0.039256%)	
GTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	26294 (0.062369%)	
GTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGTG	107 (0.000254%)	
GTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	2611 (0.006193%)	
GTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGA	2185 (0.005183%)	
GTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAA	3503 (0.008309%)	
GTGTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTAT	2425 (0.005752%)	

GTGTGTGTGTGTGTGTGTGTGCTGTCTCTTATACACATCT	1545 (0.003665%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGA	1060 (0.002514%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	27027 (0.064107%)	
TACACACACACACACACACA	102139 (0.121136%)	
TACACATCTAGATGTGTATAAGAGACAGCACACACACACA	177 (0.000420%)	
TACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTGT	128 (0.000304%)	
TACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	37765 (0.089578%)	
TATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGTGTGT	35 (0.000083%)	
TATACACATCTAGATGTGTATAAGAGACAGCACACACACA	136 (0.000323%)	
TATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGT	133 (0.000315%)	
TATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	18576 (0.044062%)	
TCACACACACACACACACACACACACACACACACACACAC	6531 (0.015491%)	
TCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	42264 (0.100249%)	
TCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTC	8042 (0.019075%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	81 (0.000192%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTG	61 (0.000145%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2930 (0.006950%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	5939 (0.014087%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	9041 (0.021445%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGCACACAC	35 (0.000083%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGTG	31 (0.000074%)	
TGAGATGTGTATAAGAGACA	141907 (0.168300%)	
TGCCGTCGTCTGCTTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGG	175 (0.001038%)	
TGCCGTCTTCGGCGTGAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGG	105 (0.000623%)	
TGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25426 (0.060310%)	
TGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	31303 (0.074250%)	
TGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGTGT	47 (0.000111%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAC	293 (0.000695%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAT	122 (0.000289%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCC	81 (0.000192%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCT	88 (0.000209%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTC	95 (0.000225%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTG	64 (0.000152%)	

TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTT	56 (0.000133%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGAA	68 (0.000161%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGAG	86 (0.000204%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGAT	79 (0.000187%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGCA	62 (0.000147%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGCT	95 (0.000225%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGG	101 (0.000240%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGT	88 (0.000209%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTA	137 (0.000325%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTC	78 (0.000185%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTG	261 (0.000619%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTT	99 (0.000235%)	
TGTCTCTTATACACATCTCA	891 (0.001057%)	
TGTCTCTTATACACATCTCT	623 (0.000739%)	
TGTCTCTTATACACATCTTG	655 (0.000777%)	
TGTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	17648 (0.041861%)	
TGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	11772 (0.027923%)	
TGTGTATAAGAGACAGCACACACACACACACACACACACA	36 (0.000085%)	
TGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGT	49 (0.000116%)	
TGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAG	4414 (0.010470%)	
TGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAG	2093 (0.004965%)	
TGTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATA	3993 (0.009471%)	
TGTGTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTA	13161 (0.031218%)	
TGTGTGTGTGTGTGTGTGTGTGCTGTCTCTTATACACATC	16029 (0.038020%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	39916 (0.094680%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTT	1082 (0.002566%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACACAC	70 (0.000166%)	
TTATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTG	36 (0.000085%)	
TTCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	20890 (0.049551%)	

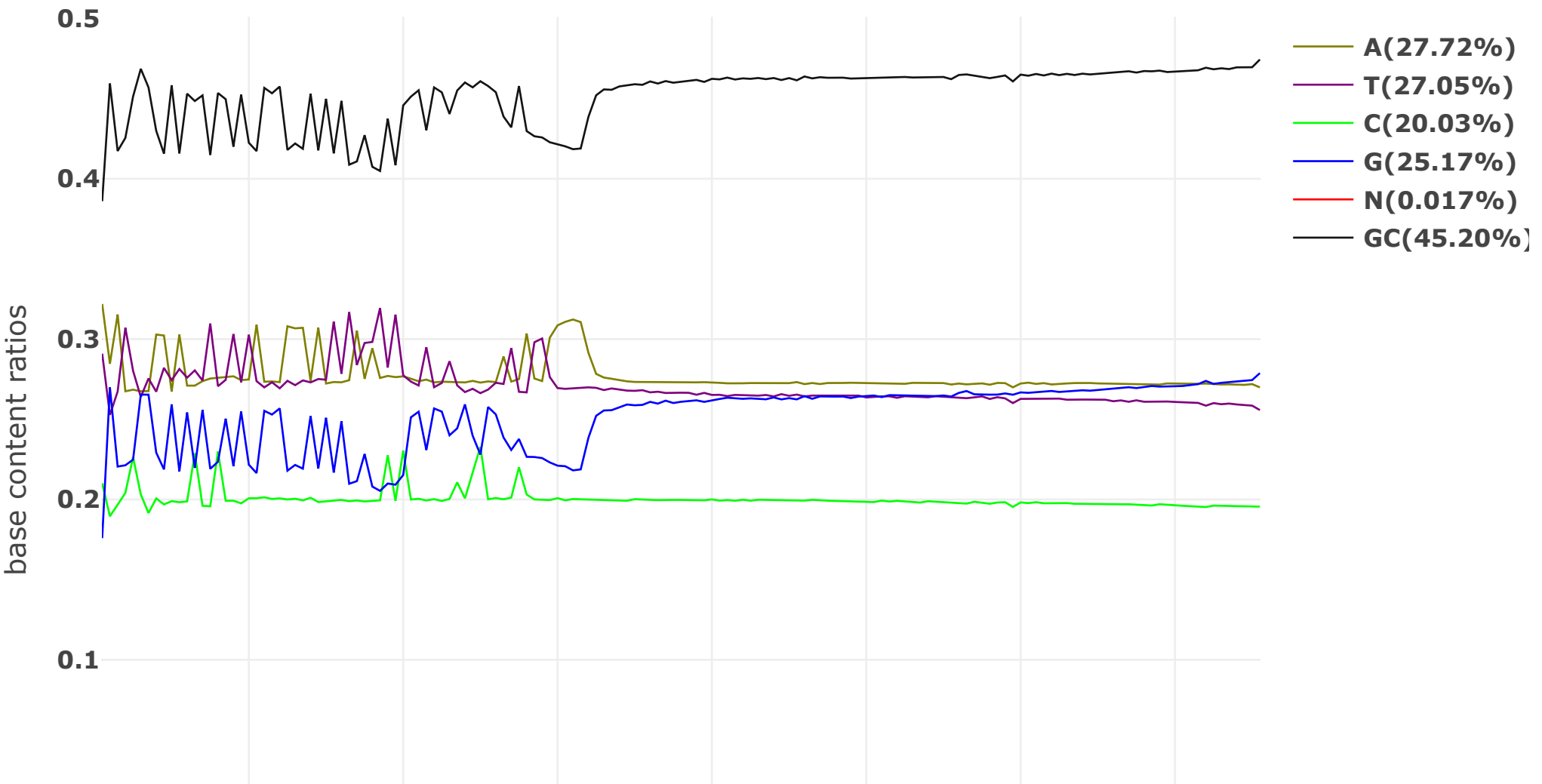
Before filtering: read2: quality

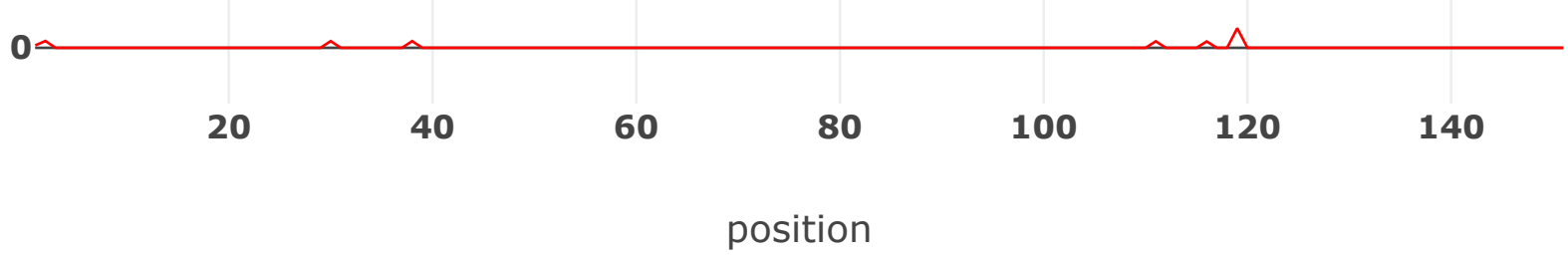
Value of each position will be shown on mouse over.



Before filtering: read2: base contents

Value of each position will be shown on mouse over.





Before filtering: read2: KMER counting

Darker background means larger counts. The count will be shown on mouse over.

	AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
AAA	AAAAA	AAAAT	AAAAC	AAAAG	AAATA	AAATT	AAATC	AAATG	AAACA	AAACT	AAACC	AAACG	AAAGA	AAAGT	AAAGC	AAAGG
AAT	AATAA	AATAT	AATAC	AATAG	AATTA	AATTT	AATTC	AATTG	AATCA	AATCT	AATCC	AATCG	AATGA	AATGT	AATGC	AATGG
AAC	AACAA	AACAT	AACAC	AACAG	AACTA	AACTT	AACTC	AACTG	AACCA	AACCT	AACCC	AACCG	AACGA	AACGT	AACGC	AACGG
AAG	AAGAA	AAGAT	AAGAC	AAGAG	AAGTA	AAGTT	AAGTC	AAGTG	AAGCA	AAGCT	AAGCC	AAGCG	AAGGA	AAGGT	AAGGC	AAGGG
ATA	ATAAA	ATAAT	ATAAC	ATAAG	ATATA	ATATT	ATATC	ATATG	ATACA	ATACT	ATACC	ATACG	ATAGA	ATAGT	ATAGC	ATAGG
ATT	ATTAA	ATTAT	ATTAC	ATTAG	ATTTA	ATTTT	ATTTC	ATTTG	ATTCA	ATTCT	ATTCC	ATTCG	ATTGA	ATTGT	ATTGC	ATTGG
ATC	ATCAA	ATCAT	ATCAC	ATCAG	ATCTA	ATCTT	ATCTC	ATCTG	ATCCA	ATCCT	ATCCC	ATCCG	ATCGA	ATCGT	ATCGC	ATCGG
ATG	ATGAA	ATGAT	ATGAC	ATGAG	ATGTA	ATGTT	ATGTC	ATGTG	ATGCA	ATGCT	ATGCC	ATGCG	ATGGA	ATGGT	ATGGC	ATGGG
ACA	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACAGG
ACT	ACTAA	ACTAT	ACTAC	ACTAG	ACTTA	ACTTT	ACTTC	ACTTG	ACTCA	ACTCT	ACTCC	ACTCG	ACTGA	ACTGT	ACTGC	ACTGG
ACC	ACCAA	ACCAT	ACCAC	ACCAG	ACCTA	ACCTT	ACCTC	ACCTG	ACCCA	ACCCT	ACCCC	ACCCG	ACCGA	ACCGT	ACCGC	ACCGG
ACG	ACGAA	ACGAT	ACGAC	ACGAG	ACGTA	ACGTT	ACGTC	ACGTG	ACGCA	ACGCT	ACGCC	ACGCG	ACGGA	ACGGT	ACGGC	ACGGG
AGA	AGAAA	AGAAT	AGAAC	AGAAG	AGATA	AGATT	AGATC	AGATG	AGACA	AGACT	AGACC	AGACG	AGAGA	AGAGT	AGAGC	AGAGG
AGT	AGTAA	AGTAT	AGTAC	AGTAG	AGTTA	AGTTT	AGTTC	AGTTG	AGTCA	AGTCT	AGTCC	AGTCG	AGTGA	AGTGT	AGTGC	AGTGG
AGC	AGCAA	AGCAT	AGCAC	AGCAG	AGCTA	AGCTT	AGCTC	AGCTG	AGCCA	AGCCT	AGCCC	AGCCG	AGCGA	AGCGT	AGCGC	AGCGG
AGG	AGGAA	AGGAT	AGGAC	AGGAG	AGGTA	AGGTT	AGGTC	AGGTG	AGGCA	AGGCT	AGGCC	AGGCG	AGGGA	AGGGT	AGGGC	AGGGG
TAA	TAAAA	TAAAT	TAAAC	TAAAG	TAATA	TAATT	TAATC	TAATG	TAACA	TAACT	TAACC	TAACG	TAAGA	TAAGT	TAAGC	TAAGG
TAT	TATAA	TATAT	TATAC	TATAG	TATTA	TATTT	TATTC	TATTG	TATCA	TATCT	TATCC	TATCG	TATGA	TATGT	TATGC	TATGG
TAC	TACAA	TACAT	TACAC	TACAG	TACTA	TACTT	TACTC	TACTG	TACCA	TACCT	TACCC	TACCG	TACGA	TACGT	TACGC	TACGG
TAG	TAGAA	TAGAT	TAGAC	TAGAG	TAGTA	TAGTT	TAGTC	TAGTG	TAGCA	TAGCT	TAGCC	TAGCG	TAGGA	TAGGT	TAGGC	TAGGG
TTA	TTAAA	TTAAT	TTAAC	TTAAG	TTATA	TTATT	TTATC	TTATG	TTACA	TTACT	TTACC	TTACG	TTAGA	TTAGT	TTAGC	TTAGG
TTT	TTTAA	TTTAT	TTTAC	TTTAG	TTTTA	TTTTT	TTTTC	TTTTG	TTTCA	TTTCT	TTTCC	TTTCG	TTTGA	TTTGT	TTTGC	TTTGG
TTC	TTCAA	TTCAT	TTCAC	TTCAG	TTCTA	TTCTT	TTCTC	TTCTG	TTCCA	TTCCT	TTCCC	TTCCG	TTCGA	TTCGT	TTCGC	TTCGG
TTG	TTGAA	TTGAT	TTGAC	TTGAG	TTGTA	TTGTT	TTGTC	TTGTG	TTGCA	TTGCT	TTGCC	TTGCG	TTGGA	TTGGT	TTGGC	TTGGG
TCA	TCAAA	TCAAT	TCAAC	TCAAG	TCATA	TCATT	TCATC	TCATG	TCACA	TCACT	TCACC	TCACG	TCAGA	TCAGT	TCAGC	TCAGG
TCT	TCTAA	TCTAT	TCTAC	TCTAG	TCTTA	TCTTT	TCTTC	TCTTG	TCTCA	TCTCT	TCTCC	TCTCG	TCTGA	TCTGT	TCTGC	TCTGG
TCC	TCCAA	TCCAT	TCCAC	TCCAG	TCCTA	TCCTT	TCCTC	TCCTG	TCCCA	TCCCT	TCCCC	TCCCG	TCCGA	TCCGT	TCCGC	TCCGG
TCG	TCGAA	TCGAT	TCGAC	TCGAG	TCGTA	TCGTT	TCGTC	TCGTG	TCGCA	TCGCT	TCGCC	TCGCG	TCGGA	TCGGT	TCGGC	TCGGG
TGA	TGAAA	TGAAT	TGAAC	TGAAG	TGATA	TGATT	TGATC	TGATG	TGACA	TGACT	TGACC	TGACG	TGAGA	TGAGT	TGAGC	TGAGG
TGT	TGTAA	TGTAT	TGTAC	TGTAG	TGTTA	TGTTT	TGTTC	TGTTG	TGTCA	TGTCT	TGTCC	TGTCG	TGTGA	TGTGT	TGTGC	TGTGG
TGC	TGCAA	TGCAT	TGCAC	TGCAG	TGCTA	TGCTT	TGCTC	TGCTG	TGCCA	TGCCT	TGCCC	TGCCG	TGCGA	TGCGT	TGCGC	TGCGG
TGG	TGGAA	TGGAT	TGGAC	TGGAG	TGGTA	TGGTT	TGGTC	TGGTG	TGGCA	TGGCT	TGGCC	TGGCG	TGGGA	TGGGT	TGGGC	TGGGG
CAA	CAAAA	CAAAT	CAAAC	CAAAG	CAATA	CAATT	CAATC	CAATG	CAACA	CAACT	CAACC	CAACG	CAAGA	CAAGT	CAAGC	CAAGG
CAT	CATAA	CATAT	CATAC	CATAG	CATTA	CATTT	CATTC	CATTG	CATCA	CATCT	CATCC	CATCG	CATGA	CATGT	CATGC	CATGG
CAC	CACAA	CACAT	CACAC	CACAG	CACTA	CACTT	CACTC	CACTG	CACCA	CACCT	CACCC	CACCG	CACGA	CACGT	CACGC	CACGG
CAG	CAGAA	CAGAT	CAGAC	CAGAG	CAGTA	CAGTT	CAGTC	CAGTG	CAGCA	CAGCT	CAGCC	CAGCG	CAGGA	CAGGT	CAGGC	CAGGG
CTA	CTAAA	CTAAT	CTAAC	CTAAG	CTATA	CTATT	CTATC	CTATG	CTACA	CTACT	CTACC	CTACG	CTAGA	CTAGT	CTAGC	CTAGG
CTT	CTTAA	CTTAT	CTTAC	CTTAG	CTTTA	CTTTT	CTTTC	CTTTG	CTTCA	CTTCT	CTTCC	CTTCG	CTTGA	CTTGT	CTTGC	CTTGG
CTC	CTCAA	CTCAT	CTCAC	CTCAG	CTCTA	CTCTT	CTCTC	CTCTG	CTCCA	CTCCT	CTCCC	CTCCG	CTCGA	CTCGT	CTCGC	CTCGG
CTG	CTGAA	CTGAT	CTGAC	CTGAG	CTGTA	CTGTT	CTGTC	CTGTG	CTGCA	CTGCT	CTGCC	CTGCG	CTGGA	CTGGT	CTGGC	CTGGG
CCA	CCAAA	CCAAT	CCAAC	CCAAG	CCATA	CCATT	CCATC	CCATG	CCACA	CCACT	CCACC	CCACG	CCAGA	CCAGT	CCAGC	CCAGG
CCT	CCTAA	CCTAT	CCTAC	CCTAG	CCTTA	CCTTT	CCTTC	CCTTG	CCTCA	CCTCT	CCTCC	CCTCG	CCTGA	CCTGT	CCTGC	CCTGG
CCC	CCCAA	CCCAT	CCCAC	CCCAG	CCCTA	CCCTT	CCCTC	CCCTG	CCCCA	CCCCT	CCCCC	CCCCG	CCCGA	CCCGT	CCCGC	CCCGG
CCG	CCGAA	CCGAT	CCGAC	CCGAG	CCGTA	CCGTT	CCGTC	CCGTG	CCGCA	CCGCT	CCGCC	CCGCG	CCGGA	CCGGT	CCGGC	CCGGG
CGA	CGAAA	CGAAT	CGAAC	CGAAG	CGATA	CGATT	CGATC	CGATG	CGACA	CGACT	CGACC	CGACG	CGAGA	CGAGT	CGAGC	CGAGG
CGT	CGTAA	CGTAT	CGTAC	CGTAG	CGTTA	CGTTT	CGTTC	CGTTG	CGTCA	CGTCT	CGTCC	CGTCG	CGTGA	CGTGT	CGTGC	CGTGG
CGC	CGCAA	CGCAT	CGCAC	CGCAG	CGCTA	CGCTT	CGCTC	CGCTG	CGCCA	CGCCT	CGCCC	CGCCG	CGCGA	CGCGT	CGCGC	CGCGG
CGG	CGGAA	CGGAT	CGGAC	CGGAG	CGGTA	CGGTT	CGGTC	CGGTG	CGGCA	CGGCT	CGGCC	CGGCG	CGGGA	CGGGT	CGGGC	CGGGG
GAA	GAAAA	GAAAT	GAAAC	GAAAG	GAATA	GAATT	GAATC	GAATG	GAACA	GAACT	GAACC	GAACG	GAAGA	GAAGT	GAAGC	GAAGG
GAT	GATAA	GATAT	GATAC	GATAG	GATTA	GATTT	GATTC	GATTG	GATCA	GATCT	GATCC	GATCG	GATGA	GATGT	GATGC	GATGG
GAC	GACAA	GACAT	GACAC	GACAG	GACTA	GACTT	GACTC	GACTG	GACCA	GACCT	GACCC	GACCG	GACGA	GACGT	GACGC	GACGG
GAG	GAGAA	GAGAT	GAGAC	GAGAG	GAGTA	GAGTT	GAGTC	GAGTG	GAGCA	GAGCT	GAGCC	GAGCG	GAGGA	GAGGT	GAGGC	GAGGG
GTA	GTAAA	GTAAT	GTAAC	GTAAG	GTATA	GTATT	GTATC	GTATG	GTACA	GTACT	GTACC	GTACG	GTAGA	GTAGT	GTAGC	GTAGG
GTT	GTTAA	GTTAT	GTTAC	GTTAG	GTTTA	GTTTT	GTTTC	GTTTG	GTTCA	GTTCT	GTTCC	GTTCG	GTTGA	GTTGT	GTTGC	GTTGG
GTC	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC	GTCTG	GTCCA	GTCCT	GTCCC	GTCCG	GTCGA	GTCGT	GTCGC	GTCGG
GTG	GTGAA	GTGAT	GTGAC	GTGAG	GTGTA	GTGTT	GTGTC	GTGTG	GTGCA	GTGCT	GTGCC	GTGCG	GTGGA	GTGGT	GTGGC	GTGGG
GCA	GCAAA	GCAAT	GCAAC	GCAAG	GCATA	GCATT	GCATC	GCATG	GCACA	GCACT	GCACC	GCACG	GCAGA	GCAGT	GCAGC	GCAGG
GCT	GCTAA	GCTAT	GCTAC	GCTAG	GCTTA	GCTTT	GCTTC	GCTTG	GCTCA	GCTCT	GCTCC	GCTCG	GCTGA	GCTGT	GCTGC	GCTGG
GCC	GCCAA	GCCAT	GCCAC	GCCAG	GCCTA	GCCTT	GCCTC	GCCTG	GCCCA	GCCCT	GCCCC	GCCCG	GCCGA	GCCGT	GCCGC	GCCGG
GCG	GCGAA	GCGAT	GCGAC	GCGAG	GCGTA	GCGTT	GCGTC	GCGTG	GCGCA	GCGCT	GCGCC	GCGCG	GCGGA	GCGGT	GCGGC	GCGGG
GGA	GGAAA	GGAAT	GGAAC	GGAAG	GGATA	GGATT	GGATC	GGATG	GGACA	GGACT	GGACC	GGACG	GGAGA	GGAGT	GGAGC	GGAGG
GGT	GGTAA	GGTAT	GGTAC	GGTAG	GGTTA	GGTTT	GGTTC	GGTTG	GGTCA	GGTCT	GGTCC	GGTCG	GGTGA	GGTGT	GGTGC	GGTGG
GGC	GGCAA	GGCAT	GGCAC	GGCAG	GGCTA	GGCTT	GGCTC	GGCTG	GGCCA	GGCCT	GGCCC	GGCCG	GGCGA	GGCGT	GGCGC	GGCGG
GGG	GGGAA	GGGAT	GGGAC	GGGAG	GGGTA	GGGTT	GGGTC	GGGTG	GGGCA	GGGCT	GGGCC	GGGCG	GGGGA	GGGGT	GGGGC	GGGGG

Before filtering: read2: overrepresented sequences

Sampling rate: 1 / 20

overrepresented sequence	count (% of bases)	distribution: cycle 1 ~ cycle 151
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	10218 (0.024237%)	
AAAATGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	26622 (0.063147%)	
AAATGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	5980 (0.014184%)	
AACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25390 (0.060224%)	

AAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGGGGGG	40 (0.000095%)	
AAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGTGGTC	213 (0.000505%)	
AAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGGGG	58 (0.000138%)	
AAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGGTG	34 (0.000081%)	
AAGATGTGTATAAGAGACAG	346094 (0.410463%)	
AATGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3669 (0.008703%)	
ACACACACACACACACACACACACACACACACACACACAA	2132 (0.005057%)	
ACACACACACACACACACACACACACACACACACACACAC	50726 (0.120321%)	
ACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACA CACACACACACACACACACACACACAC	182 (0.001079%)	
ACACACACACACACACACACACACACACACACACACACAG	1494 (0.003544%)	
ACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	45731 (0.108473%)	
ACCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	23554 (0.055870%)	
ACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	1507 (0.003575%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	20874 (0.049513%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	30250 (0.071752%)	
AGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	11004 (0.026101%)	
AGAGATGTGTATAAGAGACA	114506 (0.135803%)	
AGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGGGGGGG	18 (0.000043%)	
AGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGTGGTCG	83 (0.000197%)	
AGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGGGGG	14 (0.000033%)	
AGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGGTGG	11 (0.000026%)	
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTC	105355 (0.249899%)	
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTC	58965 (0.139864%)	
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTATATCTC	50938 (0.120824%)	
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTATTTCTC	36655 (0.086945%)	
AGATGTGTATAAGAGACAGCACACACACACACACACACAC	18849 (0.044709%)	
AGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	24246 (0.057511%)	
AGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGTGGTCGCC	276 (0.000655%)	
AGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGGGGGGC	26 (0.000062%)	
AGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	66143 (0.156890%)	
AGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25302 (0.060016%)	
ATACACATCTAGATGTGTATAAGAGACAGCACACACACAC	161 (0.000382%)	
ATACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	16474 (0.039076%)	
ATCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	17659 (0.041887%)	

ATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGG	687 (0.001630%)
ATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGG	208 (0.000493%)
ATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTATATCTCGG	221 (0.000524%)
ATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTATTTCTCGG	58 (0.000138%)
ATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	47838 (0.113471%)
ATGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	23649 (0.056095%)
ATGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	8667 (0.020558%)
ATTTCTCGGGGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	23 (0.000136%)
CACACACACACACACACACACACACACACACACACACACA	17607 (0.041763%)
CACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACA	243 (0.001441%)
CACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	18648 (0.044233%)
CAGATGTGTATAAGAGACAG	217594 (0.258064%)
CCAGATGTGTATAAGAGACA	109741 (0.130151%)
CCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	58647 (0.139109%)
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	696 (0.001651%)
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	1421 (0.003371%)
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	1900 (0.004507%)
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	307 (0.000728%)
CGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGGG	21 (0.000050%)
CGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGTG	53 (0.000126%)
CGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGG	6 (0.000014%)
CGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGTG	17 (0.000040%)
CGGAAGAGCGTCGTGTAGGGAAAGAGTGTATATCTCGGTG	17 (0.000040%)
CGGAAGAGCGTCGTGTAGGGAAAGAGTGTATTTCTCGGGG	6 (0.000014%)
CGGAAGAGCGTCGTGTAGGGAAAGAGTGTATTTCTCGGTG	11 (0.000026%)
CGGGGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	36 (0.000213%)
CGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	21402 (0.050765%)
CGGGTCATTAAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	5188 (0.030765%)
CGGGTCATTTAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2178 (0.012915%)
CGGGTGAGTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	518 (0.003072%)
CGGGTGATTAAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	4105 (0.024342%)
CGGGTGATTTAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1249 (0.007406%)
CGGTGGGGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	13 (0.000077%)

GGGGGGGGGGGGGGGGGGGGGGGGGGGGG		
CGGTGGGGGGCGGGTCATTAAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	7 (0.000042%)	
CGGTGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	24 (0.000142%)	
CGGTGGTGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	6 (0.000036%)	
CGGTGGTGGGCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	23 (0.000136%)	
CGGTTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	933 (0.005533%)	
CGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGGGGGGCGG	47 (0.000111%)	
CTCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25060 (0.059442%)	
CTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT	7388 (0.017524%)	
CTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	19590 (0.046467%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGCACACA	91 (0.000216%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAA	1289 (0.003057%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAC	3422 (0.008117%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAG	1760 (0.004175%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAT	3993 (0.009471%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCA	465 (0.001103%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCC	262 (0.000621%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCT	274 (0.000650%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGA	255 (0.000605%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGC	328 (0.000778%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGG	313 (0.000742%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGT	593 (0.001407%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGTC	1898 (0.004502%)	
CTGTCTCTTATACACATCTC	355414 (0.421517%)	
CTGTCTCTTATACACATCTG	297770 (0.353152%)	
CTGTCTCTTATACACATCTT	312084 (0.370128%)	
CTTATACACATCTAGATGTGTATAAGAGACAGCACACACA	60 (0.000142%)	
GAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	9637 (0.022859%)	
GAAAGAGTGTATTTCTCGGGGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	612 (0.003629%)	
GAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGGGGG	80 (0.000190%)	
GAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGTGGG	144 (0.000342%)	
GAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGTGGT	348 (0.000825%)	
GAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGGG	91 (0.000216%)	
GAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGGT	53 (0.000126%)	

GAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGTGGG	124 (0.000294%)	
GAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGTGGT	90 (0.000213%)	
GAAGAGCGTCGTGTAGGGAAAGAGTGTATTTCTCGGTGGG	53 (0.000126%)	
GACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25199 (0.059771%)	
GAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	10232 (0.024270%)	
GAGATGTGTATAAGAGACAG	129152 (0.153173%)	
GAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGTGGTCGC	73 (0.000173%)	
GAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGGGGGG	10 (0.000024%)	
GATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCG	167 (0.000396%)	
GATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCG	85 (0.000202%)	
GATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTATATCTCG	105 (0.000249%)	
GATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTATTTCTCG	53 (0.000126%)	
GATGTGTATAAGAGACAGCACACACACACACACACACACA	150 (0.000356%)	
GCACACACACACACACACACACACACACACACACACACAC	20823 (0.049392%)	
GCCGGGGGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGG	82 (0.000486%)	
GCCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGG	2420 (0.014350%)	
GCCGGGTCATTTAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGG	313 (0.001856%)	
GCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGG	483 (0.002864%)	
GCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	50401 (0.119550%)	
GCGTCGTGTAGGGAAAGAGTGTAGATCTCGGTGGTCGCCG	158 (0.000375%)	
GCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGGGGGGCG	11 (0.000026%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2499 (0.005928%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	4927 (0.011687%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	7663 (0.018176%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	1298 (0.003079%)	
GGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGGGG	66 (0.000157%)	
GGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGTGG	264 (0.000626%)	
GGAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGGGG	61 (0.000145%)	
GGAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGTGG	90 (0.000213%)	
GGAAGAGCGTCGTGTAGGGAAAGAGTGTATATCTCGGTGG	115 (0.000273%)	
GGAAGAGCGTCGTGTAGGGAAAGAGTGTATTTCTCGGGGG	44 (0.000104%)	
GGAAGAGCGTCGTGTAGGGAAAGAGTGTATTTCTCGGTGG	44 (0.000104%)	
GGCCGGGGGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	428 (0.002538%)	

GGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	
GGCCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2855 (0.016930%)
GGCCGGGTCATTTAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1224 (0.007258%)
GGCGGGGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	115 (0.000682%)
GGCGGGTCATTAAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	630 (0.003736%)
GGCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1172 (0.006950%)
GGCGGGTGAGTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	87 (0.000516%)
GGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	503 (0.002983%)
GGCGGGTGATTTAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	198 (0.001174%)
GGCGGTTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	199 (0.001180%)
GGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	18662 (0.044266%)
GGGCGGGGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1316 (0.007804%)
GGGCGGGTCATTAAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	979 (0.005805%)
GGGCGGGTGAGTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	910 (0.005396%)
GGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2436 (0.014445%)
GGGCGGGTGATTTAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1434 (0.008504%)
GGGCGGTTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1952 (0.011575%)
GGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22736 (0.053929%)
GGGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	5 (0.000030%)
GGGGGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	44 (0.000261%)
GGGGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	753 (0.004465%)
GGGGGCGGGTCATTAAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3 (0.000018%)
GGGGGCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3 (0.000018%)
GGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	9 (0.000053%)
GGGGGCGGGTGATTTAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	7 (0.000042%)
GGGGGGCGGGTCATTAAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	527 (0.003125%)
GGGGGGCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3129 (0.018555%)
GGGGGGCGGGTGATTTAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3045 (0.018057%)
GGGGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	96 (0.000569%)
GGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	36 (0.000213%)
GGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	62 (0.000368%)
GGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	114 (0.000676%)
GGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	172 (0.001020%)
GGGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	325 (0.001927%)

GGGGGGGGGGGGGGGGGGGGGGGGGGGGG		
GGGGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	449 (0.002663%)	
GGGGGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	540 (0.003202%)	
GGGGGGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	678 (0.004020%)	
GGGGGGGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1046 (0.006203%)	
GGGGGGGGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	951 (0.005639%)	
GGGGGGGGGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1311 (0.007774%)	
GGGGGGGGGGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	21 (0.000125%)	
GGGGGGGGGGGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2238 (0.013271%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1106432 (2.624430%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	11841 (0.070216%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGG	9584 (0.084680%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGTGGG	5769 (0.013684%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	4623 (0.027414%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	610 (0.003617%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	772 (0.004578%)	
GGGGGGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1301 (0.007715%)	
GGGGGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1646 (0.009761%)	
GGGGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3184 (0.018881%)	
GGGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	60 (0.000356%)	
GGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3677 (0.021804%)	
GGGGGGGGGGGGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3166 (0.018774%)	
GGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	42 (0.000249%)	
GGGGGGGGGGGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	643 (0.003813%)	
GGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3113 (0.018460%)	
GGGGGGGGGGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	710 (0.004210%)	
GGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	34 (0.000202%)	
GGGGGGGGGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	484 (0.002870%)	
GGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2132 (0.012643%)	
GGGGGGGGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	529 (0.003137%)	
GGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1605 (0.009518%)	
GGGGGGGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	348 (0.002064%)	
GGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1106 (0.006559%)	
GGGGGGGGGGGGGGGTGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG		

GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2713 (0.016088%)	
GGGGGGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	331 (0.001963%)	
GGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	927 (0.005497%)	
GGGGGGGGGGGGGGTGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	158 (0.000937%)	
GGGGGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	254 (0.001506%)	
GGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	642 (0.003807%)	
GGGGGGGGGGGGGTGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	113 (0.000670%)	
GGGGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	164 (0.000973%)	
GGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	395 (0.002342%)	
GGGGGGGGGGGGTGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	82 (0.000486%)	
GGGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	105 (0.000623%)	
GGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	378 (0.002242%)	
GGGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	107 (0.000635%)	
GGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	218 (0.001293%)	
GGGGGGGGGGTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	39 (0.000231%)	
GGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	284 (0.001684%)	
GGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	307 (0.001820%)	
GGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	526 (0.003119%)	
GGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	691 (0.004098%)	
GGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1224 (0.007258%)	
GGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1682 (0.009974%)	
GGGTCATTAAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	75 (0.000445%)	
GGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	168 (0.000996%)	
GGGTCATTTAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	96 (0.000569%)	
GGGTGAGTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	48 (0.000285%)	
GGGTGATTAAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	117 (0.000694%)	
GGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	300 (0.001779%)	
GGGTGATTTAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	252 (0.001494%)	
GGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3500 (0.020755%)	
GGTGGCCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2174 (0.012892%)	
GGTGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	443 (0.002627%)	
GGTGGGCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	939 (0.005568%)	
GGTGGGGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	13 (0.000077%)	
GGTGGGGGGCGGGTCATTAAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	17 (0.000101%)	

GGGGGGGGGGGGGGGGGGGGGGGGGGGGG		
GGTGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	62 (0.000368%)	
GGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	46 (0.000273%)	
GGTGGTGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	10 (0.000059%)	
GGTGGTGGGCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	16 (0.000095%)	
GGTTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	156 (0.000925%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGCACA	144 (0.000342%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGT	137 (0.000325%)	
GTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	39143 (0.092846%)	
GTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	14792 (0.035086%)	
GTGGCCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	6 (0.000036%)	
GTGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3 (0.000018%)	
GTGGGCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3 (0.000018%)	
GTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	73 (0.000433%)	
GTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	2296 (0.005446%)	
GTGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	4982 (0.029543%)	
GTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGA	1921 (0.004557%)	
GTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAA	2913 (0.006910%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGA	1542 (0.003658%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	36160 (0.085771%)	
GTGTTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1753 (0.010395%)	
GTTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2433 (0.014428%)	
GTTTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3182 (0.018869%)	
TACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	16238 (0.038516%)	
TATACACATCTAGATGTGTATAAGAGACAGCACACACACA	103 (0.000244%)	
TCACACACACACACACACACACACACACACACACACACAC	17047 (0.040435%)	
TCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	30866 (0.073213%)	
TCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGG	10 (0.000024%)	
TCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTCGGT	18 (0.000043%)	
TCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTCGGT	6 (0.000014%)	
TCGGAAGAGCGTCGTGTAGGGAAAGAGTGTATATCTCGGT	6 (0.000014%)	
TCGGGGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	310 (0.001838%)	
TCGGTGGGGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG GGGGGGGGGGGGGGGGGGGGGGGGGGGGG	39 (0.000231%)	

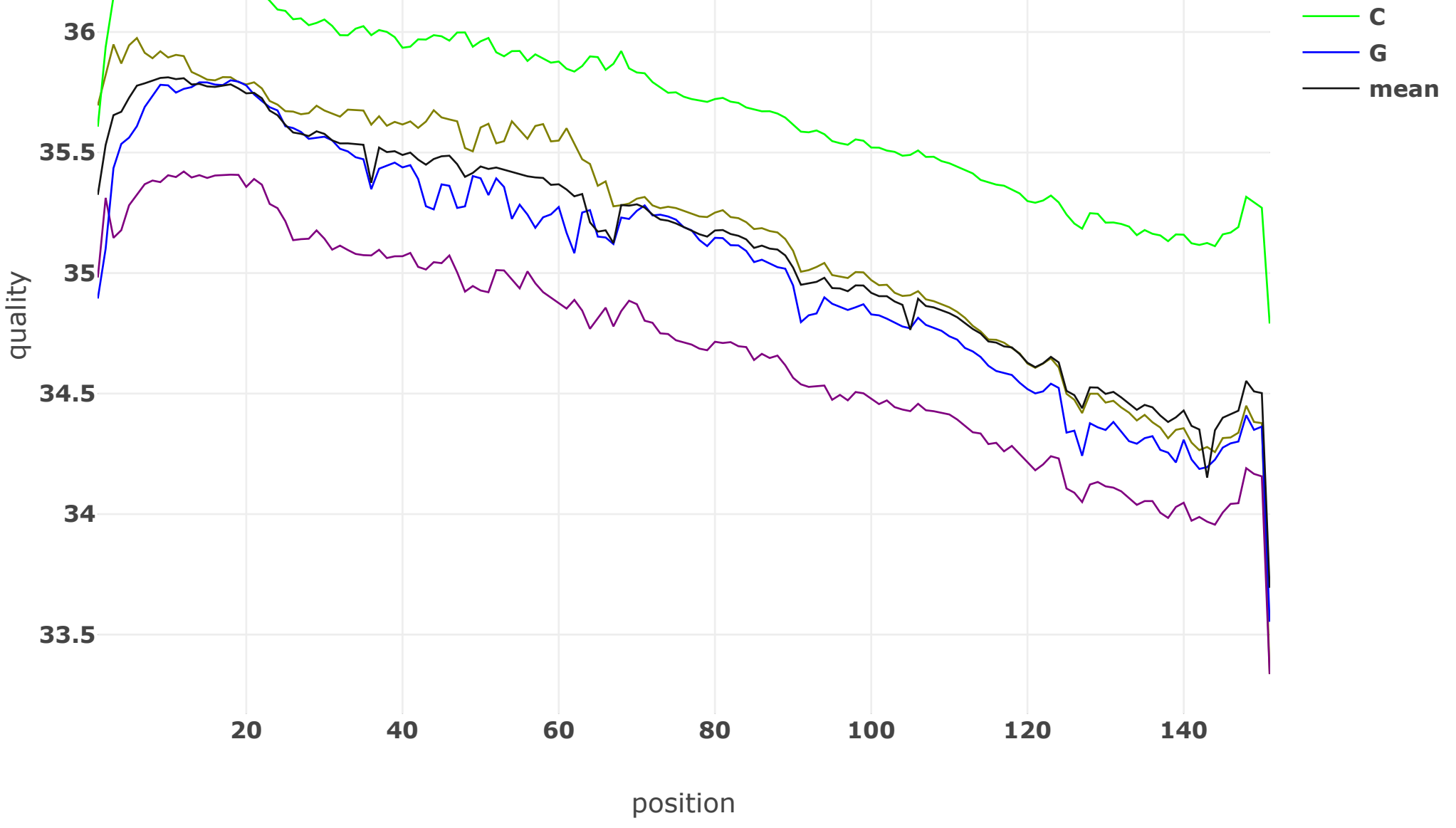
TCGGTGGGGGGCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	585 (0.003469%)	
TCGGTGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	165 (0.000978%)	
TCGGTGGTGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	44 (0.000261%)	
TCGGTGGTGGGCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	93 (0.000551%)	
TCTCGGGGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	649 (0.003849%)	
TCTCGGTGGGGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	731 (0.004335%)	
TCTCGGTGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	462 (0.002740%)	
TCTCGGTGGTGGCCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	500 (0.002965%)	
TCTCGGTGGTGGGCGGGTCATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1051 (0.006232%)	
TCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTC	10129 (0.024026%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	74 (0.000176%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTG	37 (0.000088%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	181 (0.000429%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	403 (0.000956%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	583 (0.001383%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGCACACAC	49 (0.000116%)	
TGAGATGTGTATAAGAGACA	143977 (0.170755%)	
TGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	27467 (0.065151%)	
TGGGGGGGGGGGGGGGGGGGGGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1513 (0.008972%)	
TGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	114 (0.000676%)	
TGGGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3075 (0.018235%)	
TGGGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2741 (0.016254%)	
TGGGGGGGGGGGGGGGGGGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2130 (0.012631%)	
TGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	4342 (0.025748%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAC	299 (0.000709%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAT	99 (0.000235%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCC	101 (0.000240%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCT	98 (0.000232%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTC	142 (0.000337%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGAG	127 (0.000301%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGCA	77 (0.000183%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGA	70 (0.000166%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGC	109 (0.000259%)	

TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGG	83 (0.000197%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGT	109 (0.000259%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTA	143 (0.000339%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTC	123 (0.000292%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTG	345 (0.000818%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTT	117 (0.000278%)	
TGTCTCTTATACACATCTCA	1066 (0.001264%)	
TGTCTCTTATACACATCTCT	911 (0.001080%)	
TGTCTCTTATACACATCTGG	710 (0.000842%)	
TGTCTCTTATACACATCTGT	756 (0.000897%)	
TGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	10101 (0.023959%)	
TGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	5635 (0.033415%)	
TGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAG	3726 (0.008838%)	
TGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAG	1650 (0.003914%)	
TGTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATA	21153 (0.050174%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	51013 (0.121002%)	
TGTTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2182 (0.012939%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACACAC	59 (0.000140%)	
TTCTCGGGGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	715 (0.004240%)	
TTCTCGGTGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1073 (0.006363%)	
TTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	16181 (0.038381%)	
TTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	28 (0.000166%)	
TTTCTCGGGGGGGGGCGGGTGATTAAAAAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	109 (0.000646%)	
TTTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	13 (0.000077%)	
TTTTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	2100 (0.012453%)	
TTTTTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	5536 (0.032828%)	

After filtering

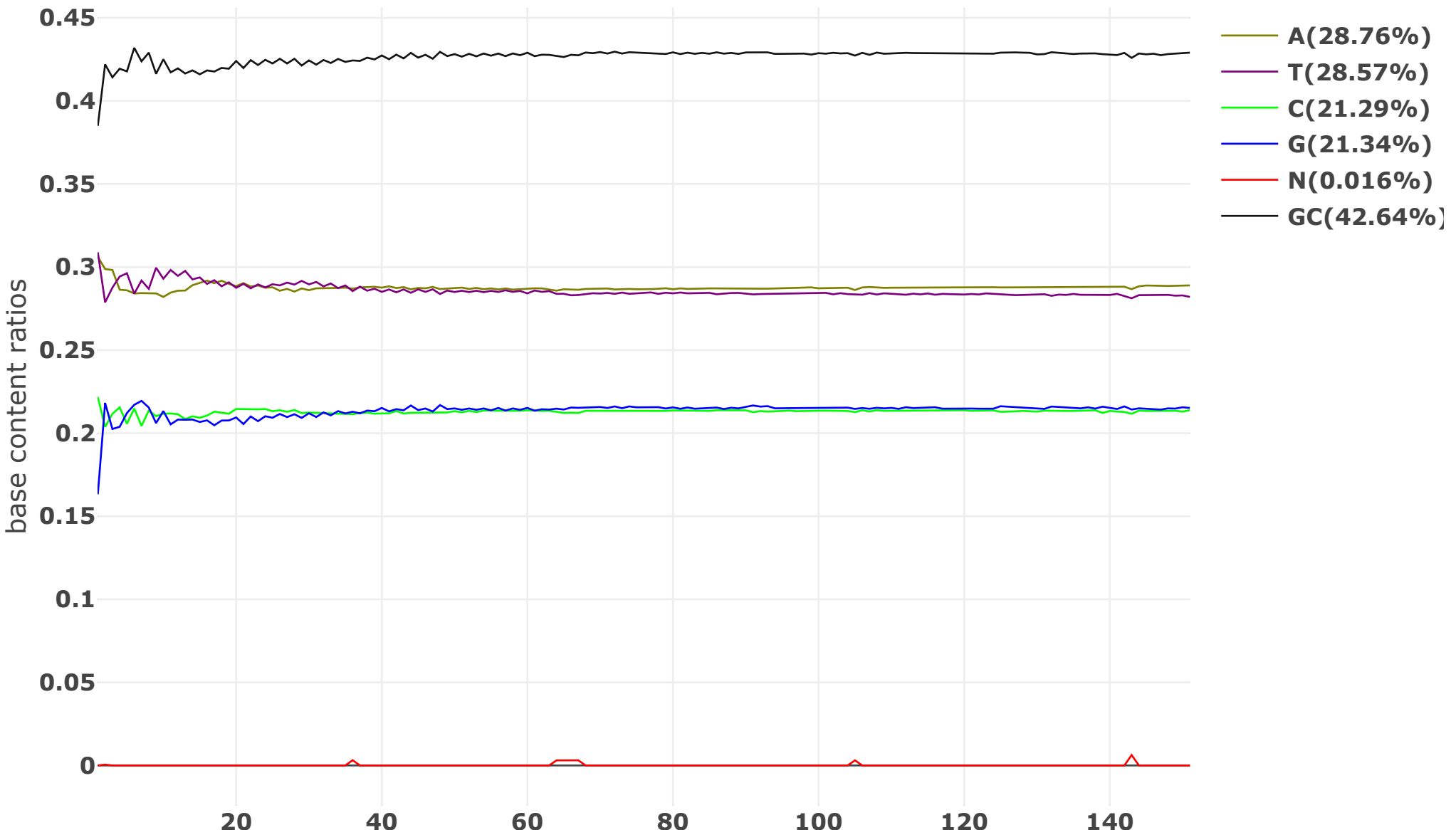
After filtering: read1: quality

Value of each position will be shown on mouse over.



After filtering: read1: base contents

Value of each position will be shown on mouse over.



position

After filtering: read1: KMER counting

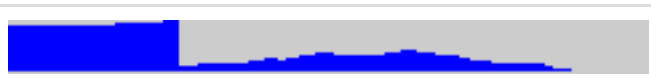
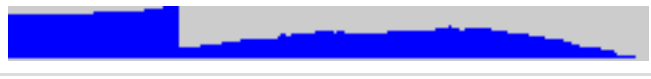
Darker background means larger counts. The count will be shown on mouse over.

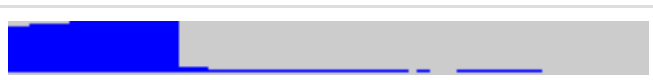
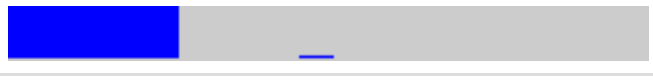
	AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
AAA	AAAAA	AAAAT	AAAAC	AAAAG	AAATA	AAATT	AAATC	AAATG	AAACA	AAACT	AAACC	AAACG	AAAGA	AAAGT	AAAGC	AAAGG
AAT	AATAA	AATAT	AATAC	AATAG	AATTA	AATTT	AATTC	AATTG	AATCA	AATCT	AATCC	AATCG	AATGA	AATGT	AATGC	AATGG
AAC	AACAA	AACAT	AACAC	AACAG	AACTA	AACTT	AACTC	AACTG	AACCA	AACCT	AACCC	AACCG	AACGA	AACGT	AACGC	AACGG
AAG	AAGAA	AAGAT	AAGAC	AAGAG	AAGTA	AAGTT	AAGTC	AAGTG	AAGCA	AAGCT	AAGCC	AAGCG	AAGGA	AAGGT	AAGGC	AAGGG
ATA	ATAAA	ATAAT	ATAAC	ATAAG	ATATA	ATATT	ATATC	ATATG	ATACA	ATACT	ATACC	ATACG	ATAGA	ATAGT	ATAGC	ATAGG
ATT	ATTAA	ATTAT	ATTAC	ATTAG	ATTTA	ATTTT	ATTTC	ATTTG	ATTCA	ATTCT	ATTCC	ATTCG	ATTGA	ATTGT	ATTGC	ATTGG
ATC	ATCAA	ATCAT	ATCAC	ATCAG	ATCTA	ATCTT	ATCTC	ATCTG	ATCCA	ATCCT	ATCCC	ATCCG	ATCGA	ATCGT	ATCGC	ATCGG
ATG	ATGAA	ATGAT	ATGAC	ATGAG	ATGTA	ATGTT	ATGTC	ATGTG	ATGCA	ATGCT	ATGCC	ATGCG	ATGGA	ATGGT	ATGGC	ATGGG
ACA	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACAGG
ACT	ACTAA	ACTAT	ACTAC	ACTAG	ACTTA	ACTTT	ACTTC	ACTTG	ACTCA	ACTCT	ACTCC	ACTCG	ACTGA	ACTGT	ACTGC	ACTGG
ACC	ACCAA	ACCAT	ACCAC	ACCAG	ACCTA	ACCTT	ACCTC	ACCTG	ACCCA	ACCCT	ACCCC	ACCCG	ACCGA	ACCGT	ACCGC	ACCGG
ACG	ACGAA	ACGAT	ACGAC	ACGAG	ACGTA	ACGTT	ACGTC	ACGTG	ACGCA	ACGCT	ACGCC	ACGCG	ACGGA	ACGGT	ACGGC	ACGGG
AGA	AGAAA	AGAAT	AGAAC	AGAAG	AGATA	AGATT	AGATC	AGATG	AGACA	AGACT	AGACC	AGACG	AGAGA	AGAGT	AGAGC	AGAGG
AGT	AGTAA	AGTAT	AGTAC	AGTAG	AGTTA	AGTTT	AGTTC	AGTTG	AGTCA	AGTCT	AGTCC	AGTCG	AGTGA	AGTGT	AGTGC	AGTGG
AGC	AGCAA	AGCAT	AGCAC	AGCAG	AGCTA	AGCTT	AGCTC	AGCTG	AGCCA	AGCCT	AGCCC	AGCCG	AGCGA	AGCGT	AGCGC	AGCGG
AGG	AGGAA	AGGAT	AGGAC	AGGAG	AGGTA	AGGTT	AGGTC	AGGTG	AGGCA	AGGCT	AGGCC	AGGCG	AGGGA	AGGGT	AGGGC	AGGGG
TAA	TAAAA	TAAAT	TAAAC	TAAAG	TAATA	TAATT	TAATC	TAATG	TAACA	TAACT	TAACC	TAACG	TAAGA	TAAGT	TAAGC	TAAGG
TAT	TATAA	TATAT	TATAC	TATAG	TATTA	TATTT	TATTC	TATTG	TATCA	TATCT	TATCC	TATCG	TATGA	TATGT	TATGC	TATGG
TAC	TACAA	TACAT	TACAC	TACAG	TACTA	TACTT	TACTC	TACTG	TACCA	TACCT	TACCC	TACCG	TACGA	TACGT	TACGC	TACGG
TAG	TAGAA	TAGAT	TAGAC	TAGAG	TAGTA	TAGTT	TAGTC	TAGTG	TAGCA	TAGCT	TAGCC	TAGCG	TAGGA	TAGGT	TAGGC	TAGGG
TTA	TTAAA	TTAAT	TTAAC	TTAAG	TTATA	TTATT	TTATC	TTATG	TTACA	TTACT	TTACC	TTACG	TTAGA	TTAGT	TTAGC	TTAGG
TTT	TTTAA	TTTAT	TTTAC	TTTAG	TTTTA	TTTTT	TTTTC	TTTTG	TTTCA	TTTCT	TTTCC	TTTCG	TTTGA	TTTGT	TTTGC	TTTGG
TTC	TTCAA	TTCAT	TTCAC	TTCAG	TTCTA	TTCTT	TTCTC	TTCTG	TTCCA	TTCCT	TTCCC	TTCCG	TTCGA	TTCGT	TTCGC	TTCGG
TTG	TTGAA	TTGAT	TTGAC	TTGAG	TTGTA	TTGTT	TTGTC	TTGTG	TTGCA	TTGCT	TTGCC	TTGCG	TTGGA	TTGGT	TTGGC	TTGGG
TCA	TCAAA	TCAAT	TCAAC	TCAAG	TCATA	TCATT	TCATC	TCATG	TCACA	TCACT	TCACC	TCACG	TCAGA	TCAGT	TCAGC	TCAGG
TCT	TCTAA	TCTAT	TCTAC	TCTAG	TCTTA	TCTTT	TCTTC	TCTTG	TCTCA	TCTCT	TCTCC	TCTCG	TCTGA	TCTGT	TCTGC	TCTGG
TCC	TCCAA	TCCAT	TCCAC	TCCAG	TCCTA	TCCTT	TCCTC	TCCTG	TCCCA	TCCCT	TCCCC	TCCCG	TCCGA	TCCGT	TCCGC	TCCGG
TCG	TCGAA	TCGAT	TCGAC	TCGAG	TCGTA	TCGTT	TCGTC	TCGTG	TCGCA	TCGCT	TCGCC	TCGCG	TCGGA	TCGGT	TCGGC	TCGGG
TGA	TGAAA	TGAAT	TGAAC	TGAAG	TGATA	TGATT	TGATC	TGATG	TGACA	TGACT	TGACC	TGACG	TGAGA	TGAGT	TGAGC	TGAGG
TGT	TGTAA	TGTAT	TGTAC	TGTAG	TGTTA	TGTTT	TGTTC	TGTTG	TGTCA	TGTCT	TGTCC	TGTCG	TGTGA	TGTGT	TGTGC	TGTGG
TGC	TGCAA	TGCAT	TGCAC	TGCAG	TGCTA	TGCTT	TGCTC	TGCTG	TGCCA	TGCCT	TGCCC	TGCCG	TGCGA	TGCGT	TGCGC	TGCGG
TGG	TGGAA	TGGAT	TGGAC	TGGAG	TGGTA	TGGTT	TGGTC	TGGTG	TGGCA	TGGCT	TGGCC	TGGCG	TGGGA	TGGGT	TGGGC	TGGGG
CAA	CAAAA	CAAAT	CAAAC	CAAAG	CAATA	CAATT	CAATC	CAATG	CAACA	CAACT	CAACC	CAACG	CAAGA	CAAGT	CAAGC	CAAGG
CAT	CATAA	CATAT	CATAC	CATAG	CATTA	CATTT	CATTC	CATTG	CATCA	CATCT	CATCC	CATCG	CATGA	CATGT	CATGC	CATGG
CAC	CACAA	CACAT	CACAC	CACAG	CACTA	CACTT	CACTC	CACTG	CACCA	CACCT	CACCC	CACCG	CACGA	CACGT	CACGC	CACGG
CAG	CAGAA	CAGAT	CAGAC	CAGAG	CAGTA	CAGTT	CAGTC	CAGTG	CAGCA	CAGCT	CAGCC	CAGCG	CAGGA	CAGGT	CAGGC	CAGGG
CTA	CTAAA	CTAAT	CTAAC	CTAAG	CTATA	CTATT	CTATC	CTATG	CTACA	CTACT	CTACC	CTACG	CTAGA	CTAGT	CTAGC	CTAGG
CTT	CTTAA	CTTAT	CTTAC	CTTAG	CTTTA	CTTTT	CTTTC	CTTTG	CTTCA	CTTCT	CTTCC	CTTCG	CTTGA	CTTGT	CTTGC	CTTGG
CTC	CTCAA	CTCAT	CTCAC	CTCAG	CTCTA	CTCTT	CTCTC	CTCTG	CTCCA	CTCCT	CTCCC	CTCCG	CTCGA	CTCGT	CTCGC	CTCGG
CTG	CTGAA	CTGAT	CTGAC	CTGAG	CTGTA	CTGTT	CTGTC	CTGTG	CTGCA	CTGCT	CTGCC	CTGCG	CTGGA	CTGGT	CTGGC	CTGGG
CCA	CCAAA	CCAAT	CCAAC	CCAAG	CCATA	CCATT	CCATC	CCATG	CCACA	CCACT	CCACC	CCACG	CCAGA	CCAGT	CCAGC	CCAGG
CCT	CCTAA	CCTAT	CCTAC	CCTAG	CCTTA	CCTTT	CCTTC	CCTTG	CCTCA	CCTCT	CCTCC	CCTCG	CCTGA	CCTGT	CCTGC	CCTGG
CCC	CCCAA	CCCAT	CCCAC	CCCAG	CCCTA	CCCTT	CCCTC	CCCTG	CCCCA	CCCCT	CCCCC	CCCCG	CCCGA	CCCGT	CCCGC	CCCGG
CCG	CCGAA	CCGAT	CCGAC	CCGAG	CCGTA	CCGTT	CCGTC	CCGTG	CCGCA	CCGCT	CCGCC	CCGCG	CCGGA	CCGGT	CCGGC	CCGGG
CGA	CGAAA	CGAAT	CGAAC	CGAAG	CGATA	CGATT	CGATC	CGATG	CGACA	CGACT	CGACC	CGACG	CGAGA	CGAGT	CGAGC	CGAGG
CGT	CGTAA	CGTAT	CGTAC	CGTAG	CGTTA	CGTTT	CGTTC	CGTTG	CGTCA	CGTCT	CGTCC	CGTCG	CGTGA	CGTGT	CGTGC	CGTGG
CGC	CGCAA	CGCAT	CGCAC	CGCAG	CGCTA	CGCTT	CGCTC	CGCTG	CGCCA	CGCCT	CGCCC	CGCCG	CGCGA	CGCGT	CGCGC	CGCGG
CGG	CGGAA	CGGAT	CGGAC	CGGAG	CGGTA	CGGTT	CGGTC	CGGTG	CGGCA	CGGCT	CGGCC	CGGCG	CGGGA	CGGGT	CGGGC	CGGGG
GAA	GAAAA	GAAAT	GAAAC	GAAAG	GAATA	GAATT	GAATC	GAATG	GAACA	GAACT	GAACC	GAACG	GAAGA	GAAGT	GAAGC	GAAGG
GAT	GATAA	GATAT	GATAC	GATAG	GATTA	GATTT	GATTC	GATTG	GATCA	GATCT	GATCC	GATCG	GATGA	GATGT	GATGC	GATGG
GAC	GACAA	GACAT	GACAC	GACAG	GACTA	GACTT	GACTC	GACTG	GACCA	GACCT	GACCC	GACCG	GACGA	GACGT	GACGC	GACGG
GAG	GAGAA	GAGAT	GAGAC	GAGAG	GAGTA	GAGTT	GAGTC	GAGTG	GAGCA	GAGCT	GAGCC	GAGCG	GAGGA	GAGGT	GAGGC	GAGGG
GTA	GTAAA	GTAAT	GTAAC	GTAAG	GTATA	GTATT	GTATC	GTATG	GTACA	GTACT	GTACC	GTACG	GTAGA	GTAGT	GTAGC	GTAGG
GTT	GTTAA	GTTAT	GTTAC	GTTAG	GTTTA	GTTTT	GTTTC	GTTTG	GTTCA	GTTCT	GTTCC	GTTCG	GTTGA	GTTGT	GTTGC	GTTGG
GTC	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC	GTCTG	GTCCA	GTCCT	GTCCC	GTCCG	GTCGA	GTCGT	GTCGC	GTCGG
GTG	GTGAA	GTGAT	GTGAC	GTGAG	GTGTA	GTGTT	GTGTC	GTGTG	GTGCA	GTGCT	GTGCC	GTGCG	GTGGA	GTGGT	GTGGC	GTGGG
GCA	GCAAA	GCAAT	GCAAC	GCAAG	GCATA	GCATT	GCATC	GCATG	GCACA	GCACT	GCACC	GCACG	GCAGA	GCAGT	GCAGC	GCAGG
GCT	GCTAA	GCTAT	GCTAC	GCTAG	GCTTA	GCTTT	GCTTC	GCTTG	GCTCA	GCTCT	GCTCC	GCTCG	GCTGA	GCTGT	GCTGC	GCTGG
GCC	GCCAA	GCCAT	GCCAC	GCCAG	GCCTA	GCCTT	GCCTC	GCCTG	GCCCA	GCCCT	GCCCC	GCCCG	GCCGA	GCCGT	GCCGC	GCCGG
GCG	GCGAA	GCGAT	GCGAC	GCGAG	GCGTA	GCGTT	GCGTC	GCGTG	GCGCA	GCGCT	GCGCC	GCGCG	GCGGA	GCGGT	GCGGC	GCGGG
GGA	GGAAA	GGAAT	GGAAC	GGAAG	GGATA	GGATT	GGATC	GGATG	GGACA	GGACT	GGACC	GGACG	GGAGA	GGAGT	GGAGC	GGAGG
GGT	GGTAA	GGTAT	GGTAC	GGTAG	GGTTA	GGTTT	GGTTC	GGTTG	GGTCA	GGTCT	GGTCC	GGTCG	GGTGA	GGTGT	GGTGC	GGTGG
GGC	GGCAA	GGCAT	GGCAC	GGCAG	GGCTA	GGCTT	GGCTC	GGCTG	GGCCA	GGCCT	GGCCC	GGCCG	GGCGA	GGCGT	GGCGC	GGCGG
GGG	GGGAA	GGGAT	GGGAC	GGGAG	GGGTA	GGGTT	GGGTC	GGGTG	GGGCA	GGGCT	GGGCC	GGGCG	GGGGA	GGGGT	GGGGC	GGGGG

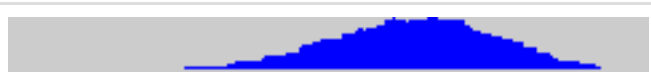
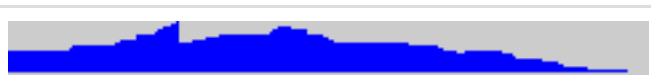
After filtering: read1: overrepresented sequences

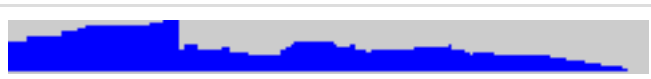
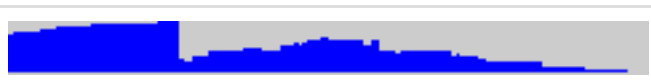
Sampling rate: 1 / 20

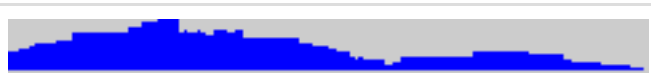
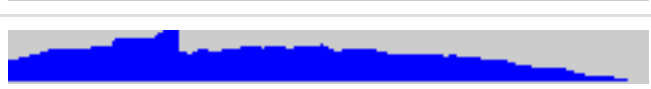
overrepresented sequence	count (% of bases)	distribution: cycle 1 ~ cycle 151
AAAGATGTGTATAAGAGACA	82577 (0.113170%)	
AAGATGTGTATAAGAGACAG	142516 (0.195314%)	
AAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	17095 (0.046856%)	
ACACACACACACACACACACACACACACACACACACACAA	1655 (0.004536%)	
ACACACACACACACACACACACACACACACACACACACAC	47647 (0.130598%)	
ACACACACACACACACACACACACACACACACACACACAG	1316 (0.003607%)	

ACACACACACACACACACACCTGTCTCTTATACACATC	14714 (0.040330%)	
ACACACACACCTGTCTCTTATACACATCTAGATGTGTA	10869 (0.029791%)	
ACACACACACCTGTCTCTTATACACATCTAGATGTGTATA	1230 (0.003371%)	
ACACACACCTGTCTCTTATACACATCTAGATGTGTATAAG	1593 (0.004366%)	
ACACACCTGTCTCTTATACACATCTAGATGTGTATAAGAG	3323 (0.009108%)	
ACACATCTAGATGTGTATAAGAGACAGCACACACACACAC	149 (0.000408%)	
ACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTGTG	114 (0.000312%)	
ACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	20423 (0.055978%)	
ACAGATGTGTATAAGAGACA	93125 (0.127625%)	
ACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTGTG	174 (0.000477%)	
ACCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	26441 (0.072473%)	
ACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	30505 (0.083613%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	15135 (0.041484%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	22258 (0.061008%)	
AGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	10439 (0.028613%)	
AGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	271 (0.001857%)	
AGATGTGTATAAGAGACAGCACACACACACACACACACAC	16008 (0.043877%)	
AGATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	13677 (0.037488%)	
AGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	27759 (0.076086%)	
AGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	30239 (0.082884%)	
AGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	28046 (0.076873%)	
ATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGTGTG	55 (0.000151%)	
ATACACATCTAGATGTGTATAAGAGACAGCACACACACAC	163 (0.000447%)	
ATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTG	133 (0.000365%)	
ATCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	19572 (0.053646%)	
ATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	37008 (0.101437%)	
ATGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	27518 (0.075425%)	
ATGTGTATAAGAGACAGCACACACACACACACACACAC	145 (0.000397%)	
ATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	115 (0.000315%)	
ATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	16401 (0.044954%)	
CAAGATGTGTATAAGAGACA	105762 (0.144944%)	
CACACACACACACACACACACACACACACACACACACAAA	914 (0.002505%)	
CACACACACACACACACACACACACACACACACACACA	15905 (0.043595%)	
CACACACACACACACACACCTGTCTCTTATACACATCT	1794 (0.004917%)	

		
CACACACACACCTGTCTCTTATACACATCTAGATGTGTAT	1514 (0.004150%)	
CACACACACCTGTCTCTTATACACATCTAGATGTGTATAA	1226 (0.003360%)	
CACACACCTGTCTCTTATACACATCTAGATGTGTATAAGA	2568 (0.007039%)	
CACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	5941 (0.016284%)	
CACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTGTGT	133 (0.000365%)	
CACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	21127 (0.057908%)	
CAGATGTGTATAAGAGACAG	113028 (0.154902%)	
CATCTAGATGTGTATAAGAGACAGGTGTGTGTGTGTGTGT	151 (0.000414%)	
CCAGATGTGTATAAGAGACA	103373 (0.141670%)	
CCCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	21814 (0.059791%)	
CCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	42989 (0.117831%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	774 (0.002121%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	1760 (0.004824%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	2430 (0.006661%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	398 (0.001091%)	
CTCACACACACACACACACACACACACACACACACACACA	11921 (0.032675%)	
CTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT	4865 (0.013335%)	
CTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	22256 (0.061003%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGCACACA	96 (0.000263%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGT	49 (0.000134%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAC	2718 (0.007450%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAT	3101 (0.008500%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCA	584 (0.001601%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCC	345 (0.000946%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCT	319 (0.000874%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGA	319 (0.000874%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGC	343 (0.000940%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGG	444 (0.001217%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGT	814 (0.002231%)	
CTGTCTCTTATACACATCTC	370290 (0.507473%)	
CTGTCTCTTATACACATCTG	318051 (0.435881%)	
CTGTCTCTTATACACATCTT	331418 (0.454200%)	
CTTATACACATCTAGATGTGTATAAGAGACAGCACACACA	58 (0.000159%)	

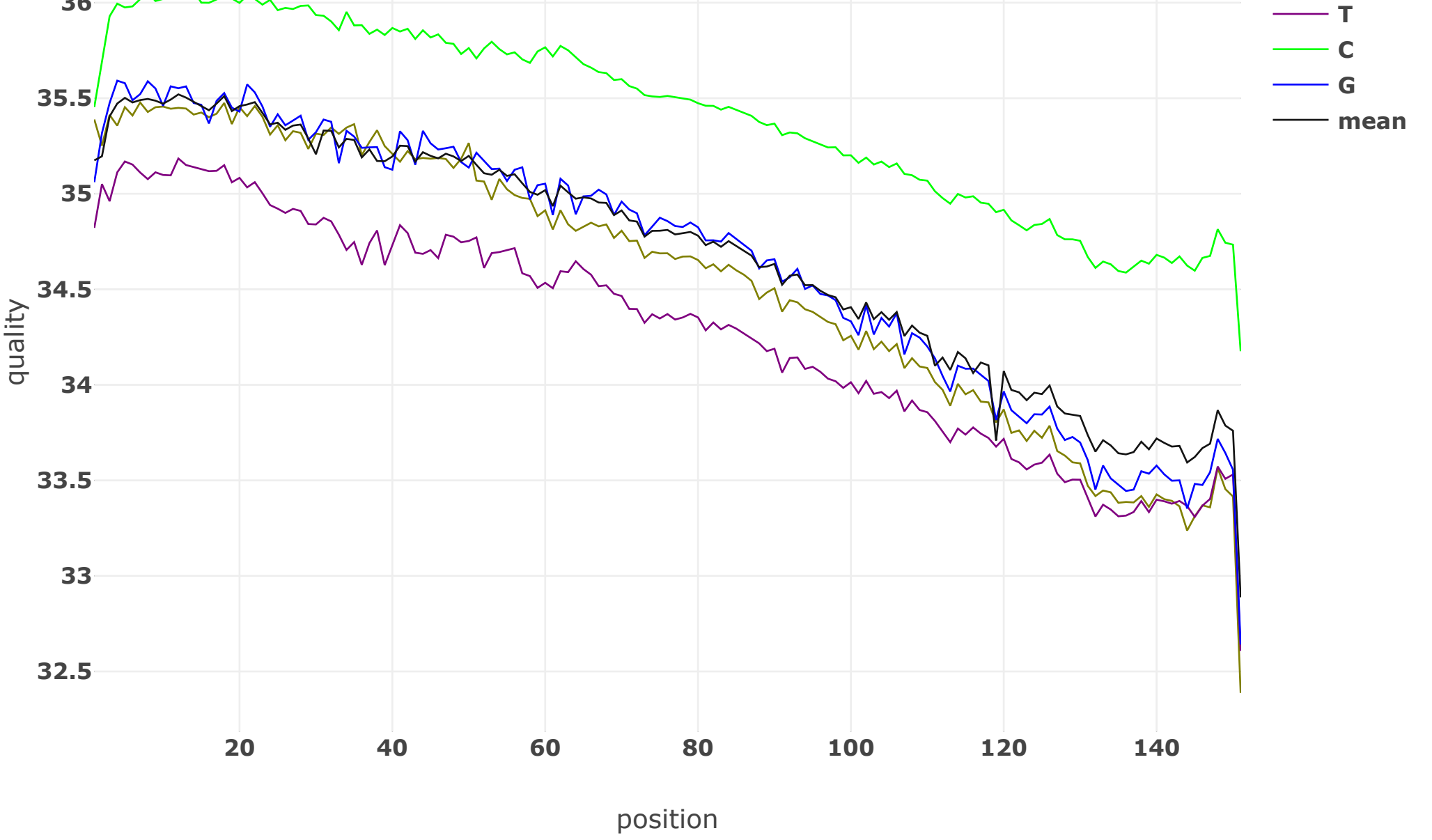
CTTATACACATCTAGATGTGTATAAGAGACAGGTGTGTGT	35 (0.000096%)	
GACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	28212 (0.077328%)	
GACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	26047 (0.071393%)	
GAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	9705 (0.026601%)	
GAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	228 (0.001562%)	
GAGATGTGTATAAGAGACAG	230555 (0.315970%)	
GAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	24209 (0.066356%)	
GATGTGTATAAGAGACAGCACACACACACACACACACACA	148 (0.000406%)	
GATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGT	129 (0.000354%)	
GCACACACACACACACACACACACACACACACACACACAC	19921 (0.054602%)	
GCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	7728 (0.021182%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2617 (0.007173%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	5580 (0.015294%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	8314 (0.022788%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	1357 (0.003719%)	
GGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25331 (0.069431%)	
GGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	20278 (0.055581%)	
GGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	24221 (0.066388%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	39 (0.000107%)	
GGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	24 (0.000066%)	
GGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	9379 (0.025707%)	
GTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGTG	56 (0.000153%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGCACA	135 (0.000370%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTAT	50 (0.000137%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGT	138 (0.000378%)	
GTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	27480 (0.075321%)	
GTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	15878 (0.043521%)	
GTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	27 (0.000074%)	
GTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGTG	123 (0.000337%)	
GTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	2518 (0.006902%)	
GTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGA	2047 (0.005611%)	
GTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAA	3404 (0.009330%)	
GTGTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTAT	2245 (0.006153%)	

GTGTGTGTGTGTGTGTGTGCTGTCTCTTATACACATCT	1409 (0.003862%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGA	828 (0.002270%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	23346 (0.063990%)	
TACACACACACACACACACA	87313 (0.119660%)	
TACACATCTAGATGTGTATAAGAGACAGCACACACACACA	147 (0.000403%)	
TACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTGT	108 (0.000296%)	
TACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	36917 (0.101188%)	
TATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGTGT	28 (0.000077%)	
TATACACATCTAGATGTGTATAAGAGACAGCACACACACA	98 (0.000269%)	
TATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGT	79 (0.000217%)	
TATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	17904 (0.049074%)	
TCACACACACACACACACACACACACACACACACACAC	5414 (0.014839%)	
TCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	41050 (0.112516%)	
TCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTC	6341 (0.017380%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	75 (0.000206%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTG	50 (0.000137%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2830 (0.007757%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	5698 (0.015618%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	8667 (0.023756%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGCACACAC	43 (0.000118%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGTG	16 (0.000044%)	
TGAGATGTGTATAAGAGACA	136004 (0.186390%)	
TGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	24963 (0.068422%)	
TGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	30250 (0.082914%)	
TGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGT	43 (0.000118%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAC	218 (0.000598%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAT	132 (0.000362%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCC	79 (0.000217%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCT	96 (0.000263%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTC	102 (0.000280%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTG	56 (0.000153%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTT	54 (0.000148%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGAA	62 (0.000170%)	

		
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGAG	80 (0.000219%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGAT	91 (0.000249%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGCA	56 (0.000153%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGCT	104 (0.000285%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGG	89 (0.000244%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGT	98 (0.000269%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTA	114 (0.000312%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTC	72 (0.000197%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTG	243 (0.000666%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTT	88 (0.000241%)	
TGTCTCTTATACACATCTCA	749 (0.001026%)	
TGTCTCTTATACACATCTCT	566 (0.000776%)	
TGTCTCTTATACACATCTTG	559 (0.000766%)	
TGTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	17239 (0.047251%)	
TGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	11371 (0.031167%)	
TGTGTATAAGAGACAGCACACACACACACACACACACACA	29 (0.000079%)	
TGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGT	37 (0.000101%)	
TGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAG	4228 (0.011589%)	
TGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAG	1933 (0.005298%)	
TGTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATA	3942 (0.010805%)	
TGTGTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTA	12604 (0.034547%)	
TGTGTGTGTGTGTGTGTGTGTGCTGTCTCTTATACACATC	15567 (0.042668%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	34347 (0.094143%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTT	870 (0.002385%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACACAC	58 (0.000159%)	
TTATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTG	36 (0.000099%)	
TTCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	20104 (0.055104%)	

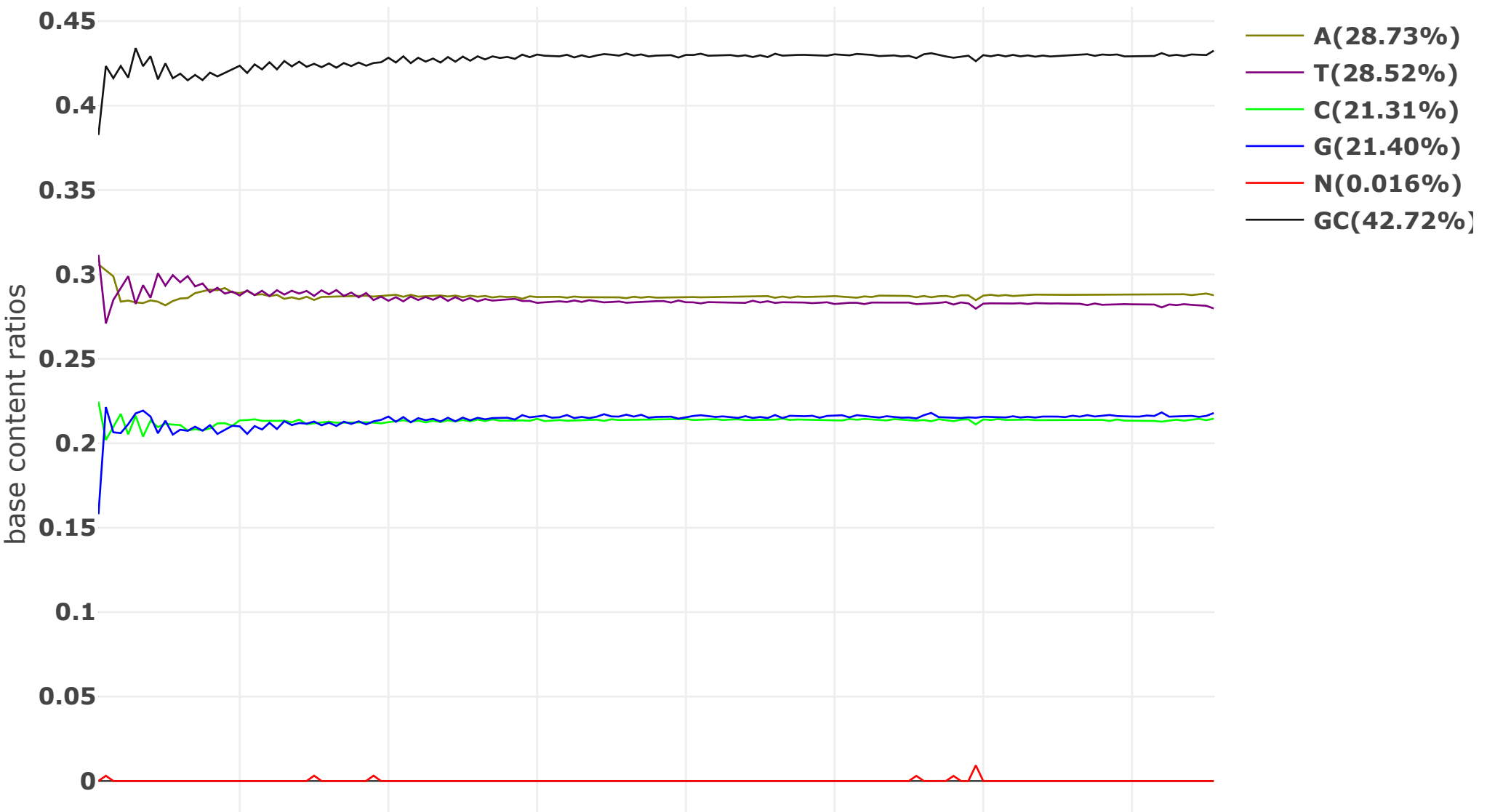
After filtering: read2: quality

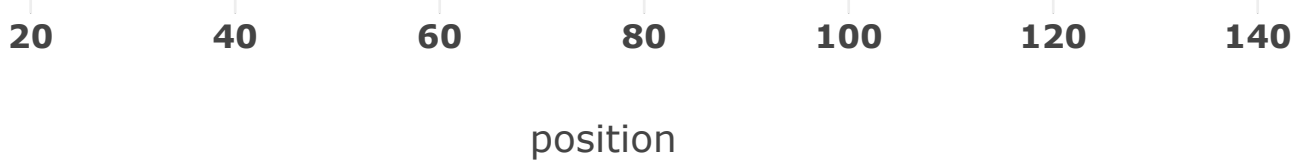
Value of each position will be shown on mouse over.



After filtering: read2: base contents

Value of each position will be shown on mouse over.





After filtering: read2: KMER counting

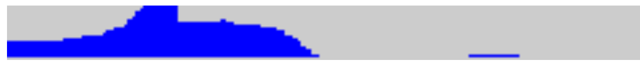
Darker background means larger counts. The count will be shown on mouse over.

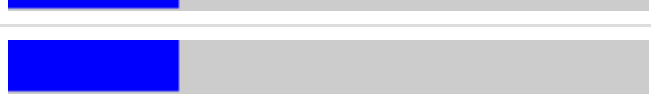
	AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
AAA	AAAAA	AAAAT	AAAAC	AAAAG	AAATA	AAATT	AAATC	AAATG	AAACA	AAACT	AAACC	AAACG	AAAGA	AAAGT	AAAGC	AAAGG
AAT	AATAA	AATAT	AATAC	AATAG	AATTA	AATTT	AATTC	AATTG	AATCA	AATCT	AATCC	AATCG	AATGA	AATGT	AATGC	AATGG
AAC	AACAA	AACAT	AACAC	AACAG	AACTA	AACTT	AACTC	AACTG	AACCA	AACCT	AACCC	AACCG	AACGA	AACGT	AACGC	AACGG
AAG	AAGAA	AAGAT	AAGAC	AAGAG	AAGTA	AAGTT	AAGTC	AAGTG	AAGCA	AAGCT	AAGCC	AAGCG	AAGGA	AAGGT	AAGGC	AAGGG
ATA	ATAAA	ATAAT	ATAAC	ATAAG	ATATA	ATATT	ATATC	ATATG	ATACA	ATACT	ATACC	ATACG	ATAGA	ATAGT	ATAGC	ATAGG
ATT	ATTAA	ATTAT	ATTAC	ATTAG	ATTTA	ATTTT	ATTTC	ATTTG	ATTCA	ATTCT	ATTCC	ATTCG	ATTGA	ATTGT	ATTGC	ATTGG
ATC	ATCAA	ATCAT	ATCAC	ATCAG	ATCTA	ATCTT	ATCTC	ATCTG	ATCCA	ATCCT	ATCCC	ATCCG	ATCGA	ATCGT	ATCGC	ATCGG
ATG	ATGAA	ATGAT	ATGAC	ATGAG	ATGTA	ATGTT	ATGTC	ATGTG	ATGCA	ATGCT	ATGCC	ATGCG	ATGGA	ATGGT	ATGGC	ATGGG
ACA	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACAGG
ACT	ACTAA	ACTAT	ACTAC	ACTAG	ACTTA	ACTTT	ACTTC	ACTTG	ACTCA	ACTCT	ACTCC	ACTCG	ACTGA	ACTGT	ACTGC	ACTGG
ACC	ACCAA	ACCAT	ACCAC	ACCAG	ACCTA	ACCTT	ACCTC	ACCTG	ACCCA	ACCCT	ACCCC	ACCCG	ACCGA	ACCGT	ACCGC	ACCGG
ACG	ACGAA	ACGAT	ACGAC	ACGAG	ACGTA	ACGTT	ACGTC	ACGTG	ACGCA	ACGCT	ACGCC	ACGCG	ACGGA	ACGGT	ACGGC	ACGGG
AGA	AGAAA	AGAAT	AGAAC	AGAAG	AGATA	AGATT	AGATC	AGATG	AGACA	AGACT	AGACC	AGACG	AGAGA	AGAGT	AGAGC	AGAGG
AGT	AGTAA	AGTAT	AGTAC	AGTAG	AGTTA	AGTTT	AGTTC	AGTTG	AGTCA	AGTCT	AGTCC	AGTCG	AGTGA	AGTGT	AGTGC	AGTGG
AGC	AGCAA	AGCAT	AGCAC	AGCAG	AGCTA	AGCTT	AGCTC	AGCTG	AGCCA	AGCCT	AGCCC	AGCCG	AGCGA	AGCGT	AGCGC	AGCGG
AGG	AGGAA	AGGAT	AGGAC	AGGAG	AGGTA	AGGTT	AGGTC	AGGTG	AGGCA	AGGCT	AGGCC	AGGCG	AGGGA	AGGGT	AGGGC	AGGGG
TAA	TAAAA	TAAAT	TAAAC	TAAAG	TAATA	TAATT	TAATC	TAATG	TAACA	TAACT	TAACC	TAACG	TAAGA	TAAGT	TAAGC	TAAGG
TAT	TATAA	TATAT	TATAC	TATAG	TATTA	TATTT	TATTC	TATTG	TATCA	TATCT	TATCC	TATCG	TATGA	TATGT	TATGC	TATGG
TAC	TACAA	TACAT	TACAC	TACAG	TACTA	TACTT	TACTC	TACTG	TACCA	TACCT	TACCC	TACCG	TACGA	TACGT	TACGC	TACGG
TAG	TAGAA	TAGAT	TAGAC	TAGAG	TAGTA	TAGTT	TAGTC	TAGTG	TAGCA	TAGCT	TAGCC	TAGCG	TAGGA	TAGGT	TAGGC	TAGGG
TTA	TTAAA	TTAAT	TTAAC	TTAAG	TTATA	TTATT	TTATC	TTATG	TTACA	TTACT	TTACC	TTACG	TTAGA	TTAGT	TTAGC	TTAGG
TTT	TTTAA	TTTAT	TTTAC	TTTAG	TTTTA	TTTTT	TTTTC	TTTTG	TTTCA	TTTCT	TTTCC	TTTCG	TTTGA	TTTGT	TTTGC	TTTGG
TTC	TTCAA	TTCAT	TTCAC	TTCAG	TTCTA	TTCTT	TTCTC	TTCTG	TTCCA	TTCCT	TTCCC	TTCCG	TTCGA	TTCGT	TTCGC	TTCGG
TTG	TTGAA	TTGAT	TTGAC	TTGAG	TTGTA	TTGTT	TTGTC	TTGTG	TTGCA	TTGCT	TTGCC	TTGCG	TTGGA	TTGGT	TTGGC	TTGGG
TCA	TCAAA	TCAAT	TCAAC	TCAAG	TCATA	TCATT	TCATC	TCATG	TCACA	TCACT	TCACC	TCACG	TCAGA	TCAGT	TCAGC	TCAGG
TCT	TCTAA	TCTAT	TCTAC	TCTAG	TCTTA	TCTTT	TCTTC	TCTTG	TCTCA	TCTCT	TCTCC	TCTCG	TCTGA	TCTGT	TCTGC	TCTGG
TCC	TCCAA	TCCAT	TCCAC	TCCAG	TCCTA	TCCTT	TCCTC	TCCTG	TCCCA	TCCCT	TCCCC	TCCCG	TCCGA	TCCGT	TCCGC	TCCGG
TCG	TCGAA	TCGAT	TCGAC	TCGAG	TCGTA	TCGTT	TCGTC	TCGTG	TCGCA	TCGCT	TCGCC	TCGCG	TCGGA	TCGGT	TCGGC	TCGGG
TGA	TGAAA	TGAAT	TGAAC	TGAAG	TGATA	TGATT	TGATC	TGATG	TGACA	TGACT	TGACC	TGACG	TGAGA	TGAGT	TGAGC	TGAGG
TGT	TGTAA	TGTAT	TGTAC	TGTAG	TGTTA	TGTTT	TGTTC	TGTTG	TGTCA	TGTCT	TGTCC	TGTCG	TGTGA	TGTGT	TGTGC	TGTGG
TGC	TGCAA	TGCAT	TGCAC	TGCAG	TGCTA	TGCTT	TGCTC	TGCTG	TGCCA	TGCCT	TGCCC	TGCCG	TGCGA	TGCGT	TGCGC	TGCGG
TGG	TGGAA	TGGAT	TGGAC	TGGAG	TGGTA	TGGTT	TGGTC	TGGTG	TGGCA	TGGCT	TGGCC	TGGCG	TGGGA	TGGGT	TGGGC	TGGGG
CAA	CAAAA	CAAAT	CAAAC	CAAAG	CAATA	CAATT	CAATC	CAATG	CAACA	CAACT	CAACC	CAACG	CAAGA	CAAGT	CAAGC	CAAGG
CAT	CATAA	CATAT	CATAC	CATAG	CATTA	CATTT	CATTC	CATTG	CATCA	CATCT	CATCC	CATCG	CATGA	CATGT	CATGC	CATGG
CAC	CACAA	CACAT	CACAC	CACAG	CACTA	CACTT	CACTC	CACTG	CACCA	CACCT	CACCC	CACCG	CACGA	CACGT	CACGC	CACGG
CAG	CAGAA	CAGAT	CAGAC	CAGAG	CAGTA	CAGTT	CAGTC	CAGTG	CAGCA	CAGCT	CAGCC	CAGCG	CAGGA	CAGGT	CAGGC	CAGGG
CTA	CTAAA	CTAAT	CTAAC	CTAAG	CTATA	CTATT	CTATC	CTATG	CTACA	CTACT	CTACC	CTACG	CTAGA	CTAGT	CTAGC	CTAGG
CTT	CTTAA	CTTAT	CTTAC	CTTAG	CTTTA	CTTTT	CTTTC	CTTTG	CTTCA	CTTCT	CTTCC	CTTCG	CTTGA	CTTGT	CTTGC	CTTGG
CTC	CTCAA	CTCAT	CTCAC	CTCAG	CTCTA	CTCTT	CTCTC	CTCTG	CTCCA	CTCCT	CTCCC	CTCCG	CTCGA	CTCGT	CTCGC	CTCGG
CTG	CTGAA	CTGAT	CTGAC	CTGAG	CTGTA	CTGTT	CTGTC	CTGTG	CTGCA	CTGCT	CTGCC	CTGCG	CTGGA	CTGGT	CTGGC	CTGGG
CCA	CCAAA	CCAAT	CCAAC	CCAAG	CCATA	CCATT	CCATC	CCATG	CCACA	CCACT	CCACC	CCACG	CCAGA	CCAGT	CCAGC	CCAGG
CCT	CCTAA	CCTAT	CCTAC	CCTAG	CCTTA	CCTTT	CCTTC	CCTTG	CCTCA	CCTCT	CCTCC	CCTCG	CCTGA	CCTGT	CCTGC	CCTGG
CCC	CCCAA	CCCAT	CCCAC	CCCAG	CCCTA	CCCTT	CCCTC	CCCTG	CCCCA	CCCCT	CCCCC	CCCCG	CCCGA	CCCGT	CCCGC	CCCGG
CCG	CCGAA	CCGAT	CCGAC	CCGAG	CCGTA	CCGTT	CCGTC	CCGTG	CCGCA	CCGCT	CCGCC	CCGCG	CCGGA	CCGGT	CCGGC	CCGGG
CGA	CGAAA	CGAAT	CGAAC	CGAAG	CGATA	CGATT	CGATC	CGATG	CGACA	CGACT	CGACC	CGACG	CGAGA	CGAGT	CGAGC	CGAGG
CGT	CGTAA	CGTAT	CGTAC	CGTAG	CGTTA	CGTTT	CGTTC	CGTTG	CGTCA	CGTCT	CGTCC	CGTCG	CGTGA	CGTGT	CGTGC	CGTGG
CGC	CGCAA	CGCAT	CGCAC	CGCAG	CGCTA	CGCTT	CGCTC	CGCTG	CGCCA	CGCCT	CGCCC	CGCCG	CGCGA	CGCGT	CGCGC	CGCGG
CGG	CGGAA	CGGAT	CGGAC	CGGAG	CGGTA	CGGTT	CGGTC	CGGTG	CGGCA	CGGCT	CGGCC	CGGCG	CGGGA	CGGGT	CGGGC	CGGGG
GAA	GAAAA	GAAAT	GAAAC	GAAAG	GAATA	GAATT	GAATC	GAATG	GAACA	GAACT	GAACC	GAACG	GAAGA	GAAGT	GAAGC	GAAGG
GAT	GATAA	GATAT	GATAC	GATAG	GATTA	GATTT	GATTC	GATTG	GATCA	GATCT	GATCC	GATCG	GATGA	GATGT	GATGC	GATGG
GAC	GACAA	GACAT	GACAC	GACAG	GACTA	GACTT	GACTC	GACTG	GACCA	GACCT	GACCC	GACCG	GACGA	GACGT	GACGC	GACGG
GAG	GAGAA	GAGAT	GAGAC	GAGAG	GAGTA	GAGTT	GAGTC	GAGTG	GAGCA	GAGCT	GAGCC	GAGCG	GAGGA	GAGGT	GAGGC	GAGGG
GTA	GTAAA	GTAAT	GTAAC	GTAAG	GTATA	GTATT	GTATC	GTATG	GTACA	GTACT	GTACC	GTACG	GTAGA	GTAGT	GTAGC	GTAGG
GTT	GTTAA	GTTAT	GTTAC	GTTAG	GTTTA	GTTTT	GTTTC	GTTTG	GTTCA	GTTCT	GTTCC	GTTCG	GTTGA	GTTGT	GTTGC	GTTGG
GTC	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC	GTCTG	GTCCA	GTCCT	GTCCC	GTCCG	GTCGA	GTCGT	GTCGC	GTCGG
GTG	GTGAA	GTGAT	GTGAC	GTGAG	GTGTA	GTGTT	GTGTC	GTGTG	GTGCA	GTGCT	GTGCC	GTGCG	GTGGA	GTGGT	GTGGC	GTGGG
GCA	GCAAA	GCAAT	GCAAC	GCAAG	GCATA	GCATT	GCATC	GCATG	GCACA	GCACT	GCACC	GCACG	GCAGA	GCAGT	GCAGC	GCAGG
GCT	GCTAA	GCTAT	GCTAC	GCTAG	GCTTA	GCTTT	GCTTC	GCTTG	GCTCA	GCTCT	GCTCC	GCTCG	GCTGA	GCTGT	GCTGC	GCTGG
GCC	GCCAA	GCCAT	GCCAC	GCCAG	GCCTA	GCCTT	GCCTC	GCCTG	GCCCA	GCCCT	GCCCC	GCCCG	GCCGA	GCCGT	GCCGC	GCCGG
GCG	GCGAA	GCGAT	GCGAC	GCGAG	GCGTA	GCGTT	GCGTC	GCGTG	GCGCA	GCGCT	GCGCC	GCGCG	GCGGA	GCGGT	GCGGC	GCGGG
GGA	GGAAA	GGAAT	GGAAC	GGAAG	GGATA	GGATT	GGATC	GGATG	GGACA	GGACT	GGACC	GGACG	GGAGA	GGAGT	GGAGC	GGAGG
GGT	GGTAA	GGTAT	GGTAC	GGTAG	GGTTA	GGTTT	GGTTC	GGTTG	GGTCA	GGTCT	GGTCC	GGTCG	GGTGA	GGTGT	GGTGC	GGTGG
GGC	GGCAA	GGCAT	GGCAC	GGCAG	GGCTA	GGCTT	GGCTC	GGCTG	GGCCA	GGCCT	GGCCC	GGCCG	GGCGA	GGCGT	GGCGC	GGCGG
GGG	GGGAA	GGGAT	GGGAC	GGGAG	GGGTA	GGGTT	GGGTC	GGGTG	GGGCA	GGGCT	GGGCC	GGGCG	GGGGA	GGGGT	GGGGC	GGGGG

After filtering: read2: overrepresented sequences

Sampling rate: 1 / 20

overrepresented sequence	count (% of bases)	distribution: cycle 1 ~ cycle 151
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	182 (0.000499%)	
AACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	24838 (0.068102%)	
AAGATGTGTATAAGAGACAG	335251 (0.459605%)	
ACACACACACACACACACACACACACACACACACACAA	1578 (0.004327%)	
ACACACACACACACACACACACACACACACACACACAC	44138 (0.121020%)	

ACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACA CACACACACACACACACACACACACAC	183 (0.001254%)	
ACACACACACACACACACACACACACACACACACACACAG	1260 (0.003455%)	
ACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	44849 (0.122970%)	
ACCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22905 (0.062802%)	
ACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	1398 (0.003833%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	19973 (0.054763%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	29892 (0.081960%)	
AGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	9472 (0.025971%)	
AGAGATGTGTATAAGAGACA	111540 (0.152913%)	
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCTC	204 (0.000559%)	
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGTTCTC	57 (0.000156%)	
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTATATCTC	78 (0.000214%)	
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTATTTCTC	9 (0.000025%)	
AGATGTGTATAAGAGACAGCACACACACACACACACACAC	16945 (0.046461%)	
AGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	23964 (0.065706%)	
AGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	65648 (0.179998%)	
AGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	24141 (0.066191%)	
ATACACATCTAGATGTGTATAAGAGACAGCACACACACAC	107 (0.000293%)	
ATACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	15975 (0.043801%)	
ATCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	17026 (0.046683%)	
ATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	46725 (0.128113%)	
ATGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	23411 (0.064190%)	
CACACACACACACACACACACACACACACACACACACACA	14290 (0.039181%)	
CACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACAC ACACACACACACACACACACACACACA	251 (0.001721%)	
CACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	18397 (0.050442%)	
CAGATGTGTATAAGAGACAG	211246 (0.289603%)	
CCAGATGTGTATAAGAGACA	105990 (0.145305%)	
CCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	57335 (0.157204%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	618 (0.001694%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	1390 (0.003811%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	1911 (0.005240%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	311 (0.000853%)	
CGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	33 (0.000090%)	
CTCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA		

	24294 (0.066611%)	
CTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT	6509 (0.017847%)	
CTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	19153 (0.052515%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGCACACA	87 (0.000239%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAA	1322 (0.003625%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAC	3395 (0.009309%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAG	1705 (0.004675%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAT	3978 (0.010907%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCA	472 (0.001294%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCC	258 (0.000707%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCT	245 (0.000672%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGA	226 (0.000620%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGC	288 (0.000790%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGG	313 (0.000858%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGT	591 (0.001620%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGTC	1818 (0.004985%)	
CTGTCTCTTATACACATCTC	346673 (0.475264%)	
CTGTCTCTTATACACATCTG	289353 (0.396682%)	
CTGTCTCTTATACACATCTT	305120 (0.418298%)	
CTTATACACATCTAGATGTGTATAAGAGACAGCACACACA	66 (0.000181%)	
GACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	24839 (0.068105%)	
GAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	8682 (0.023805%)	
GAGATGTGTATAAGAGACAG	124164 (0.170220%)	
GATGTGTATAAGAGACAGCACACACACACACACACACA	146 (0.000400%)	
GCACACACACACACACACACACACACACACACACACAC	18857 (0.051703%)	
GCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	49259 (0.135061%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2315 (0.006347%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	4840 (0.013271%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	7342 (0.020131%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	1289 (0.003534%)	
GGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	18700 (0.051273%)	
GGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22191 (0.060845%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	45 (0.000123%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGCACA	110 (0.000302%)	

GTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGT	117 (0.000321%)	
GTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	38180 (0.104684%)	
GTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	14173 (0.038860%)	
GTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	2274 (0.006235%)	
GTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGA	1811 (0.004966%)	
GTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAA	2913 (0.007987%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGA	1215 (0.003331%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	31155 (0.085423%)	
TACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	15668 (0.042959%)	
TATACACATCTAGATGTGTATAAGAGACAGCACACACACA	85 (0.000233%)	
TCACACACACACACACACACACACACACACACACACACAC	15346 (0.042077%)	
TCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	30209 (0.082829%)	
TCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTC	8746 (0.023980%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	76 (0.000208%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTG	45 (0.000123%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	183 (0.000502%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	357 (0.000979%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	553 (0.001516%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGCACACAC	48 (0.000132%)	
TGAGATGTGTATAAGAGACA	138851 (0.190355%)	
TGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	26751 (0.073347%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAC	295 (0.000809%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAT	105 (0.000288%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCC	108 (0.000296%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCT	91 (0.000250%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTC	124 (0.000340%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGAG	91 (0.000250%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGCA	68 (0.000186%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGA	98 (0.000269%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGC	109 (0.000299%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGG	107 (0.000293%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGT	106 (0.000291%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTA	124 (0.000340%)	

		
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTC	134 (0.000367%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTG	358 (0.000982%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTT	135 (0.000370%)	
TGTCTCTTATACACATCTCA	951 (0.001304%)	
TGTCTCTTATACACATCTCT	791 (0.001084%)	
TGTCTCTTATACACATCTGG	663 (0.000909%)	
TGTCTCTTATACACATCTGT	752 (0.001031%)	
TGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	9797 (0.026862%)	
TGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAG	3702 (0.010150%)	
TGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAG	1671 (0.004582%)	
TGTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATA	20876 (0.057239%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	42541 (0.116641%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACACAC	56 (0.000154%)	
TTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	15670 (0.042965%)	

```
fastp -i ../RAW_READS/10-12kb_S17_L002_R1_001.fastq.gz -I ../RAW_READS/10-12kb_S17_L002_R2_001.fastq.gz -o MP10k_F.trimmed.fq.gz
-O MP10k_R.trimmed.fq.gz -n 5 -q 20 -u 30 --length_required=70 --low_complexity_filter --complexity_threshold=20 --
cut_by_quality3 --cut_by_quality5 --cut_window_size=4 --cut_mean_quality=20 --trim_poly_g --poly_g_min_len=10 --
overrepresentation_analysis --json=MP10k.json --html=MP10k.html --report_title=MP10k --thread=8

fastp 0.19.4, at 2018-12-19 16:16:28
```