fastp report

Summary

General

fastp version:	<pre>0.19.10 (https://github.com/OpenGene/fastp)</pre>
sequencing:	paired end (151 cycles + 151 cycles)
mean length before filtering:	151bp, 151bp
mean length after filtering:	128bp, 128bp
duplication rate:	33.377162%
Insert size peak:	145
Detected read1 adapter:	AGATCGGAAGAGCACACGTCTGAACTCCAGTCA
Detected read2 adapter:	AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGT

Before filtering

total reads:	58.421052 M
total bases:	8.821579 G
Q20 bases:	8.611655 G (97.620337%)
Q30 bases:	8.280739 G (93.869130%)
GC content:	50.181722%

After filtering

total reads:	57.280906 M
total bases:	7.366429 G
Q20 bases:	7.228813 G (98.131852%)
Q30 bases:	6.968340 G (94.595903%)
GC content:	50.041684%

Filtering result

reads passed filters:	57.280906 M (98.048399%)
reads with low quality:	838.284000 K (1.434901%)
reads with too many N:	273.594000 K (0.468314%)
reads too short:	5.178000 K (0.008863%)
reads with low complexity:	23.090000 K (0.039523%)

Adapters

Adapter or bad ligation of read1

Sequence	Occurrences
A	256107
AG	258777
AGA	267890
AGAT	271243
AGATC	293348
AGATCG	285563
AGATCGG	278316

AGATCGGA	271228
AGATCGGAA	261425
AGATCGGAAG	253478
AGATCGGAAGA	252508
AGATCGGAAGAG	249862
AGATCGGAAGAGC	253030
AGATCGGAAGAGCA	257765
AGATCGGAAGAGCAC	258771
AGATCGGAAGAGCACA	260035
AGATCGGAAGAGCACAC	254107
AGATCGGAAGAGCACACG	246150
AGATCGGAAGAGCACACGT	232679
AGATCGGAAGAGCACACGTC	223996
AGATCGGAAGAGCACACGTCT	216712
AGATCGGAAGAGCACACGTCTG	211267
AGATCGGAAGAGCACACGTCTGA	209425
AGATCGGAAGAGCACACGTCTGAA	210353
AGATCGGAAGAGCACACGTCTGAAC	207942
AGATCGGAAGAGCACACGTCTGAACT	204778
AGATCGGAAGAGCACACGTCTGAACTC	201454
AGATCGGAAGAGCACACGTCTGAACTCC	189581
AGATCGGAAGAGCACACGTCTGAACTCCA	179495
AGATCGGAAGAGCACACGTCTGAACTCCAG	166953
AGATCGGAAGAGCACACGTCTGAACTCCAGT	155209
AGATCGGAAGAGCACACGTCTGAACTCCAGTC	149211
AGATCGGAAGAGCACACGTCTGAACTCCAGTCA	143457
AGATCGGAAGAGCACACGTCTGAACTCCAGTCAC	141264
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACG	138103
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGT	132337
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGTG	125746
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGTGA	118608
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGTGAA	107707
other adapter sequences	1621107

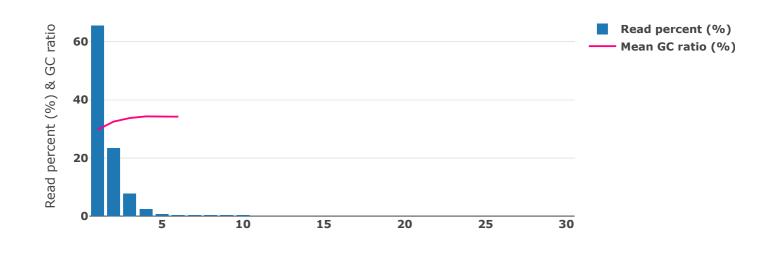
Adapter or bad ligation of read2

Sequence	Occurrences
A	254522
AG	259342
AGA	268178
AGAT	270216
AGATC	294164
AGATCG	284076
AGATCGG	278102
AGATCGGA	270241
AGATCGGAA	261291
AGATCGGAAG	254231

AGATCGGAAGA	252508
AGATCGGAAGAG	250597
AGATCGGAAGAGC	251865
AGATCGGAAGAGCG	257777
AGATCGGAAGAGCGT	244827
AGATCGGAAGAGCGTC	257746
AGATCGGAAGAGCGTCG	251697
AGATCGGAAGAGCGTCGT	223072
AGATCGGAAGAGCGTCGTG	228952
AGATCGGAAGAGCGTCGTGT	214287
AGATCGGAAGAGCGTCGTGTA	210694
AGATCGGAAGAGCGTCGTGTAG	207957
AGATCGGAAGAGCGTCGTGTAGG	205450
AGATCGGAAGAGCGTCGTGTAGGG	205254
AGATCGGAAGAGCGTCGTGTAGGGA	200018
AGATCGGAAGAGCGTCGTGTAGGGAA	200648
AGATCGGAAGAGCGTCGTGTAGGGAAA	196483
AGATCGGAAGAGCGTCGTGTAGGGAAAG	184344
AGATCGGAAGAGCGTCGTGTAGGGAAAGA	174606
AGATCGGAAGAGCGTCGTGTAGGGAAAGAG	163801
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT	139573
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTG	146002
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGT	140484
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTA	137547
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAG	135040
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGA	130012
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGAT	123198
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATC	115514
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGTGTAGATCT	105379
other adapter sequences	1761231

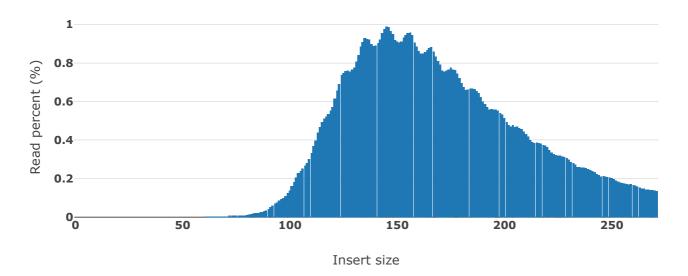
Duplication

duplication rate (33.377162%)



Insert size estimation

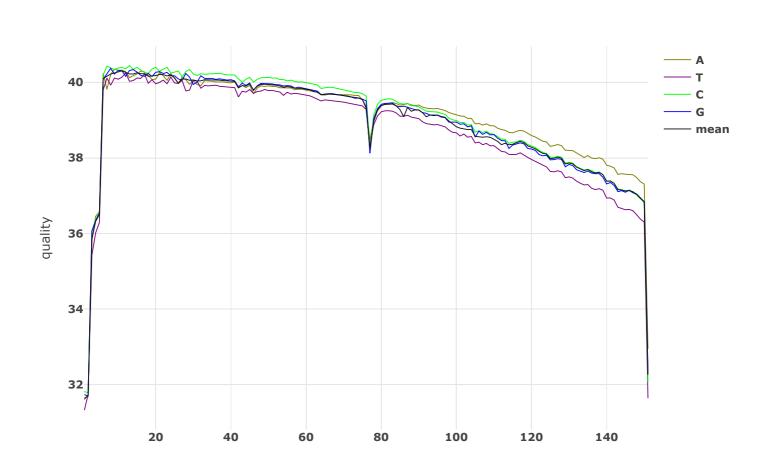
Insert size distribution (8.630549% reads are with unknown length)



This estimation is based on paired—end overlap analysis, and there are 8.630549% 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.

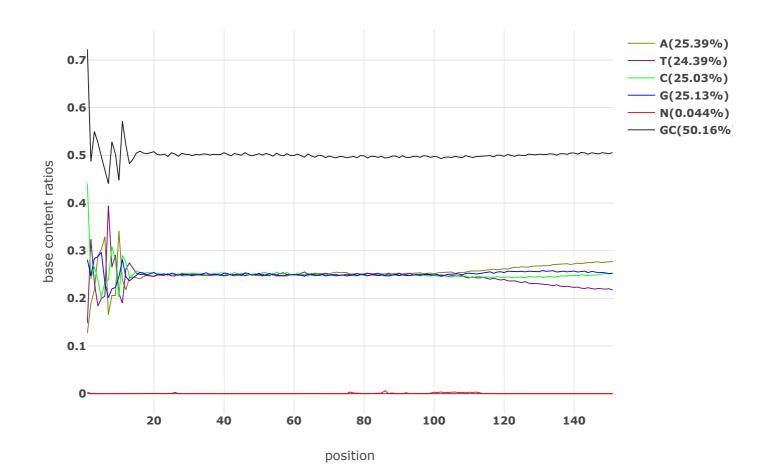
Before filtering

Before filtering: read1: quality Value of each position will be shown on mouse over.



Before filtering: read1: base contents

Value of each position will be shown on mouse over.



Before filtering: read1: KMER counting

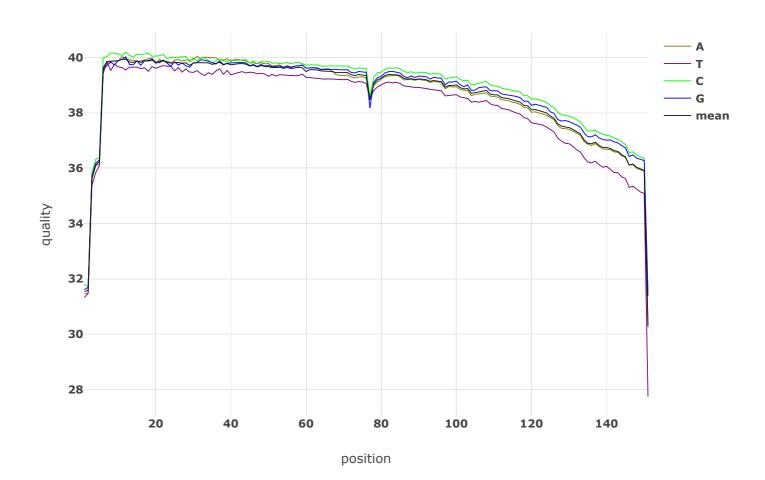
Darker background means larger counts. The count will be shown on mouse over.

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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
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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
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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
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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
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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
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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
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GGG	GGGAA	GGGAT	GGGAC	GGGAG	GGGTA	GGGTT	GGGTC	GGGTG	GGGCA	GGGCT	GGGCC	GGGCG	GGGGA	GGGGT	GGGGC	GGGGG

Before filtering: read2: quality

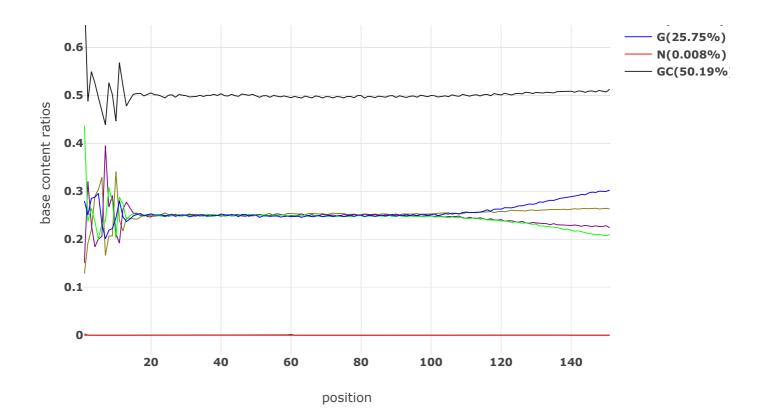
Value of each position will be shown on mouse over.



Before filtering: read2: base contents

Value of each position will be shown on mouse over.

				—— A(25.26%)
0.7				—— T(24.53%)
				—— C(24.44%)



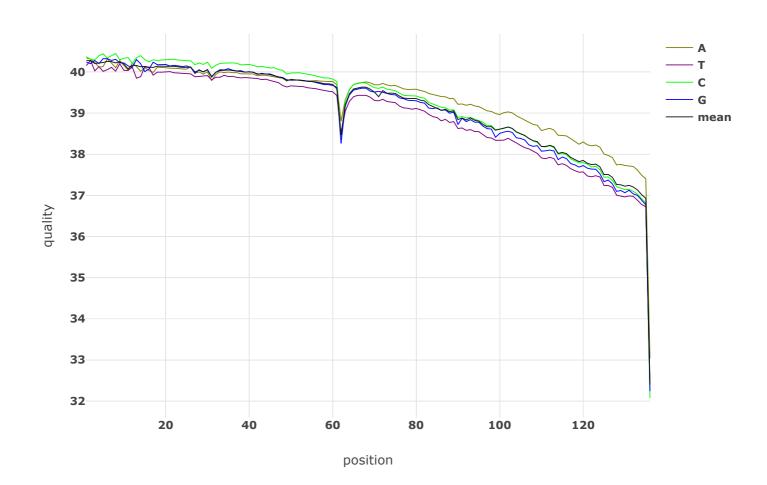
Before filtering: read2: KMER counting Darker background means larger counts. The count will be shown

ART ANTARA ARTATA ARTAGA ARTAG	Dark	er bac	kground	means	larger	counts.	The	count w	ill be	shown or	n mouse	over.					
ART ARTHAL ARCEA ARC		AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
ANT ALTAM ANTAM ANTAM ANTAM ANTAM ANTE ANTE ANTE ANTE ANTE ANTE ANTE ANTE	AAA	AAAAA	AAAAT	AAAAC	AAAAG	AAATA	AAATT		AAATG	AAACA	AAACT		AAACG	AAAGA	AAAGT	AAAGC	AAAGG
AACA AACAM A	AAT	AATAA	AATAT	AATAC	AATAG	AATTA	AATTT	AATTC		AATCA	AATCT		AATCG	AATGA	AATGT	AATGC	AATGG
ATA ATAMA ATAMA TAMA ATAMA ATA		AACAA	AACAT			AACTA	AACTT	AACTC			AACCT	AACCC	AACCG	AACGA	AACGT	AACGC	AACGG
ATA ATAMA ATAMA TAMA ATAMA ATA																	AAGGG
ATT ATTAM AT																	ATAGG
ATC AT ATCAM ACAM A										ATTCA							ATTGG
ATG A TREAM A										ATCCA							ATCGG
ACA A ACABA																	ATGGG
ACT ACTIAA ACTIAT ACTIAC ACTIAA ACTITA ACTITT ACTITC ACTIGA ACTICA ACTICA ACTICA ACTICA ACTICA ACCIA ACC																	ACAGG
ACC A ACCAR ACCAR ACCAR ACCAR ACCAR ACCAR ACCAR ACCOR ACCOR ACCOR ACCAR ACCOR ACCAR																	ACTGG
AGG AGGAA AGGAT AGGC ACGGA ACGTA AGGTT AGGTT AGGTC AGGTG AGGCA AGGT AGGCA AGGT AGGCA AGGAT AGGTA AGGT																	ACCGG
AGA AGAGAA AGAGA AGAGA AGAGA AGATA AGATA AGATA AGATA AGATA AGATA AGATA AGAGA AGAGA AGAGA AGATA AGATA AGTA																	ACGGG
AGT AGTIAN AGTIAT AGTIAC AGTIAC AGTIAC AGTIAC AGTICA AGTICA AGTICA AGTICA AGTICA AGTICA AGTICA AGCCC AGCCC AGCCC AGCCC AGCCCC AGCCCCCCCCCC																	AGAGG
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AGGA AGGAR AGGAR AGGAR AGGAR AGGAR AGGT AGGT																	AGCGG
TAAAA																	AGGGG
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TAGS TAGGA TAGGA TAGGA TAGGA TAGGA TAGGT T																	TACGG
THA																	TAGGG
TITC TITCA TITCAL TITCAC TITCACC TITCACCC TITCACCC TITCACCC TITCACCC TITCACCC TITCACCC TITCACCC TITCACCCC TITCACCCC TITCACCCC TITCACCCC TITCACCCCCCCCCC																	TTAGG
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TCA T CAAAA TCAAT TCAAC TCAAG TCATA TCATT TCATC TCATG TCACA TCACT TCACC TCACG TCAGA TCAGT TCAGC TCTCT TCTC TCTC										TTGCA							TTGGG
TCT TCTAA TCTAT TCTAC TCTAG TCTTA TCTTT TCTTC TCTTG TCTCA TCTCT TCTCG TCCCA TCCCA TCCCA TCCCA TCCCA TCCCA TCCCA TCCCA TCCCA TCCCC TCCC T																	TCAGG
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TCGA TCGAA TCGAT TCGAC TCGAG TCGTA TCGTT TCGTC TCGTG TCGCA TCGCT TCGCC TCGCG TCGGA TCGGT TCGGC TCGA TCGA					TCCAC									TCCCA			TCTGG TCCGG
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CAA CAAAAC CAAAC CAATA CAATA CAATC CAACC CAACC CAAGC CAAGA CAAGC CAAGC CAAGC CAAGC CAAGC CAAGC CAAGC CAAGC CAAGA CAATA CATTA CATTC CATTC CAATC CAACC CAAGA CAAGAA CAAATA CAATA <																	
CAT CATAA CATAT CATAC CATAC CATTA CATTT CATTC CATTC CATCA CATCT CATCC CATCG CATGA CATGA CATGA CACAGA C									CAATC	CAACA							TGGGG
CAC CACAA CACAT CACAC CACAG CACTA CACTT CACTT CACTC CACTG CACCA CACCT CACCC CACCG CAGGA CAGGT CAGGC CAGA CAGGT CAGGC CAGAA CAGAT CAGAC CAGAC CAGAT CAGAC CAGAT CAGAC CAGAT CAGAC CAGAT CAGAC CAGAT CAGAC CAGAC CAGAT CAGAC CAGAC CAGAT CAGAC CAGAT CAGAC CAGAT CAGAC CAGAT CAGAC CAGAT CAGAC CAGAC CAGAT CAGAC CAG																	CAAGG
CAGA CAGAA CAGAT CAGAC CAGAG CAGTA CAGTT CAGTC CAGTG CAGCA CAGCT CAGCC CAGCG CAGGA CAGGT CAGGC CAGAC C																	CATGG
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CTC CTCAA CTTAT CTTAC CTTAG CTTTAG CTTTA CTTTC CTTCC CTTCG CTTCA CTCTCT CTCCC CTCAC CTCAT CTCTT CTTCC CTCAC CTCAT CCACA CCCACA CCCCA CCCCA CCCCA CCCCACA CCCCACACA CCCCACACA CCCCACACA CCCCACACA CCCCACACA CCCCACACA CCCCACACACA CCACACA CCCACACA CCCCACACA CCCCACACA CCCCACACACACACACACACACACACACACACACACACAC																	CAGGG
TCG CTGAA CTGAT CTGAC CTGAG CTGTA CTGTT CTGTC CTGG CTGCA CTGCT CTGCC CTGGG CTGGA CTGGT CTGGC CTGG CTGA CTGGT CTGGC CTGA CTGGA CTGGT CTGGC CTGA CTGGT CTGGC CTGA CTGGT CTGGC CTGA CTGGT CTGGC CTGA CTGGT CTGGC CTGGA CTGGT CTGGC CTGGC CTGGC CTGGA CTGGT CTGGC CT																	CTAGG
CCA CCAAA CCAAT CCAAC CCAAG CCAAG CCATA CCATT CCGTC CCAGG CCACA CCACT CCACC CCACG CCCCT CCCTC CCTTC CCTC CCCCG CCCCC CCCCC CCCCC CCCCC CCCCC CCCCC CCCC																	CTTGG
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GGT CGTAA CGTAT CGTAC CGTAG CGTAG CGTTA CGTTT CGTTC CGTTG CGTCA CGTCA CGTCA CGTCA CGTCA CGTCA CGTCA CGTCA CGCCA CG																	CCGGG
CGC CGCAA CGCAC CGCAC CGCAG CGCTA CGCTT CGCTC CGCTG CGCCA CGCCT CGCCC CGCCG CGCGA CGCGT CGCGC CGCCC CGCCG CGCGA CGCGT CGCGC CGCCC CGCGA CGCGC CGGCG CGGCG CGGCG CGGCG CGGCG CGGCG CGGCG CGGCG CGGCG CGCGG CGCGG CGCGG CGCGC CGGCG CGGCA CGACA CAAACT GAAAC GAAAC GAACA GAACA GAACA GAACA GAACA GAACA GAACA GAACA GAACA GACCA																	CGAGG
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GAA GAAAA GAAAT GAAAC GAAAG GAATA GAATT GATTC GATTG GAACG GAACG GAACG GAACG GAACG GAACG GAACG GATG GAT								CCCTC									CGCGG
GAT GATAA GATAT GATAC GATAG GATAA GATTA GATTC GATTC GATTC GATTC GATCA GATCT GATCC GATCG GATCA GACCT GACCG GACGA GACGA GACTA GACTA GACTA GACTA GACAC GACAGA GACTA GACTA GACTA GACTA GACTA GACTA GACCA G																	CGGGG
GAC GACAA GACAT GACAC GACAG GACTA GACTT GACTC GACTG GACCA GACCT GACCG GACCG GACGA GACGT GACGC GACGA GACAA GA																	GAAGG
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GTT GTTAA GTTAAT GTTAC GTTAG GTTAG GTTAG GTTAT GTTTC GTTTC GTTTC GTTC G																	GAGGG
GTG GTGAA GTGAT GTGAC GTGAG GTCTA GTCTT GTCTC GTCTG GTCCA GTCCT GTCCC GTCCG GTCGA GTGGT GTCGC GTGGA GTGGT GTGCC GTGA GCTGT GCTGC GCTGA GCTGT GCTGC GCTGA GCTGT GCTGC GCTGA GCTGT GCTGC GCTGA GCTGA GCTGT GCTGC GCTGA GCTGA GCTGT GCTGC GCTGA GCTGA GCTGT GCTGC G																	GTAGG
GTG GTGAA GTGAT GTGAC GTGAG GTGTA GTGTT GTGTC GTGTG GTGCA GTGCT GTGCC GTGCG GTGGA GTGGT GTGGC GGCAC GCACA GC																	GTTGG
GCA GCAAAT GCAAC GCAAG GCAAT GCATT GCATC GCACG GCACC GCAGG GCAGT GCAGC GCAGG GCAGG GCAGC GCAGG																	GTCGG
GCT GCTAA GCTAT GCTAC GCTAG GCTTA GCTTT GCTTC GCTCA GCTCC GCTGA GCTGA GCTGC GC GC GCCAG GCCAG GCCTA GCCTT GCCTC GCCCA GCCCC GCCGA GCCGA GCCGT GCCGC GCCCC GCCGC GCCGA GCCGC GCGGC GCGGC GCGCC GCGCC GCGCG GCGCG GCGGA GCGGT GCGCC GCGCA GCGCC GCGCC GCGCG GCGCC GCGCC </td <td></td> <td>GTGGG</td>																	GTGGG
GCC GCCAA GCCAT GCCAC GCCAG GCCTA GCCTT GCCTC GCCCA GCCCA GCCGA GCCGA GCCGC GCGCC GCGCA GCCGC GCGCA GCCGC GCGCA GCCGC GCGCA GCCGC GCGCA GCGCC GCGCA GCGCA GCGCC GCGCA GCGCA GCGCC GCGCA GCCCA G																	GCAGG
GCG GCGAA GCGAT GCGAC GCGAG GCGTA GCGTT GCGTC GCGTG GCGCA GCGCT GCGCC GCGCG GCGGA GCGGT GCGCC GC GCGCA GCGCC GCGCA GCGCA GCGCC GCGCA GCGCA GCGCC GCGCA GCCCA GCCC										GCTCA							GCTGG
GGA GGAAA GGAAT GGAAC GGAAG GGATA GGATA GGATT GGATC GGATG GGACA GGACT GGACC GGACG GGAGA GGAGT GGAGC GGGC GG																	GCCGG
GGT GGTAA GGTAT GGTAC GGTAG GGTAT GGTTT GG																	GCGGG
GGC GGCAA GGCAT GGCAC GGCAG GGCTA GGCTT GGCTC GGCTG GGCCA GGCCA GGCCG GGCGA GGCGA GGCGT GGCGC GGCCA GGCGA GG																	GGAGG
																	GGTGG
GGG GGGAA GGGAT GGGAC GGGAG GGGTA GGGTT GGGTC GGGTG GGGCA GGGCT GGGCC GGGCG GGGGA GGGGT GGGGC G	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

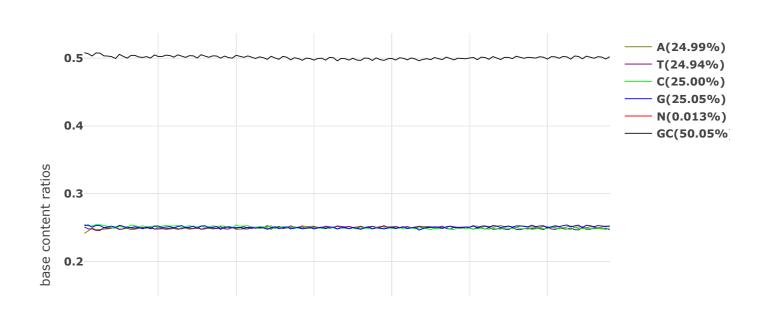
After filtering: read1: quality

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.





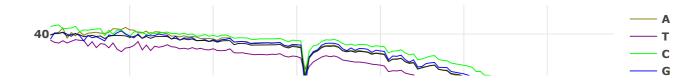
After filtering: read1: KMER counting

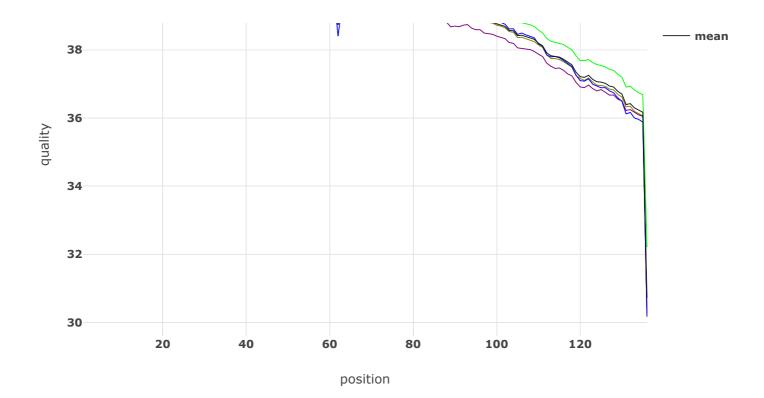
Darker background means larger counts. The count will be shown on mouse over.

vark	ei bac	kgrouna		Larger	counts.	ine	count wi		snown or							
	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
TAA	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
4AG	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	ATTG
ATC	ATCAA	ATCAT	ATCAC	ATCAG	ATCTA	ATCTT	ATCTC	ATCTG	ATCCA	ATCCT	ATCCC	ATCCG	ATCGA	ATCGT	ATCGC	ATCG
TG	ATGAA	ATGAT	ATGAC	ATGAG	ATGTA	ATGTT	ATGTC	ATGTG	ATGCA	ATGCT	ATGCC	ATGCG	ATGGA	ATGGT	ATGGC	ATGG
ACA	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACAGO
ACT	ACTAA	ACTAT	ACTAC	ACTAG	ACTTA	ACTTT	ACTTC	ACTTG	ACTCA	ACTCT	ACTCC	ACTCG	ACTGA	ACTGT	ACTGC	ACTG(
ACC	ACCAA	ACCAT	ACCAC	ACCAG	ACCTA	ACCTT	ACCTC	ACCTG	ACCCA	ACCCT	ACCCC	ACCCG	ACCGA	ACCGT	ACCGC	ACCG
ACG	ACGAA	ACGAT	ACGAC	ACGAG	ACGTA	ACGTT	ACGTC	ACGTG	ACGCA	ACGCT	ACGCC	ACGCG	ACGGA	ACGGT	ACGGC	ACGG
AGA	AGAAA	AGAAT	AGAAC	AGAAG	AGATA	AGATT	AGATC	AGATG	AGACA	AGACT	AGACC	AGACG	AGAGA	AGAGT	AGAGC	AGAG
AGT	AGTAA	AGTAT	AGTAC	AGTAG	AGTTA	AGTTT	AGTTC	AGTTG	AGTCA	AGTCT	AGTCC	AGTCG	AGTGA	AGTGT	AGTGC	AGTG
AGC	AGCAA	AGCAT	AGCAC	AGCAG	AGCTA	AGCTT	AGCTC	AGCTG	AGCCA	AGCCT	AGCCC	AGCCG	AGCGA	AGCGT	AGCGC	AGCG
AGG	AGGAA	AGGAT	AGGAC	AGGAG	AGGTA	AGGTT	AGGTC	AGGTG	AGGCA	AGGCT	AGGCC	AGGCG	AGGGA	AGGGT	AGGGC	AGGGG
ΓAΑ	TAAAA	TAAAT	TAAAC	TAAAG	TAATA	TAATT	TAATC	TAATG	TAACA	TAACT	TAACC	TAACG	TAAGA	TAAGT	TAAGC	TAAG
TAT	TATAA	TATAT	TATAC	TATAG	TATTA	TATTT	TATTC	TATTG	TATCA	TATCT	TATCC	TATCG	TATGA	TATGT	TATGC	TATGO
ГАС	TACAA	TACAT	TACAC	TACAG	TACTA	TACTT	TACTC	TACTG	TACCA	TACCT	TACCC	TACCG	TACGA	TACGT	TACGC	TACGO
TAG	TAGAA	TAGAT	TAGAC	TAGAG	TAGTA	TAGTT	TAGTC	TAGTG	TAGCA	TAGCT	TAGCC	TAGCG	TAGGA	TAGGT	TAGGC	TAGG
TA	TTAAA	TTAAT	TTAAC	TTAAG	TTATA	TTATT	TTATC	TTATG	TTACA	TTACT	TTACC	TTACG	TTAGA	TTAGT	TTAGC	TTAG
TT	TTTAA	TTTAT	TTTAC	TTTAG	TTTTA	TTTTT	TTTTC	TTTTG	TTTCA	TTTCT	TTTCC	TTTCG	TTTGA	TTTGT	TTTGC	TTTG
TC	TTCAA	TTCAT	TTCAC	TTCAG	TTCTA	TTCTT	TTCTC	TTCTG	TTCCA	TTCCT	TTCCC	TTCCG	TTCGA	TTCGT	TTCGC	TTCG
TG	TTGAA	TTGAT	TTGAC	TTGAG	TTGTA	TTGTT	TTGTC	TTGTG	TTGCA	TTGCT	TTGCC	TTGCG	TTGGA	TTGGT	TTGGC	TTGG
CA	TCAAA	TCAAT	TCAAC	TCAAG	TCATA	TCATT	TCATC	TCATG	TCACA	TCACT	TCACC	TCACG	TCAGA	TCAGT	TCAGC	TCAG
CT	TCTAA	TCTAT	TCTAC	TCTAG	TCTTA	TCTTT	TCTTC	TCTTG	TCTCA	TCTCT	TCTCC	TCTCG	TCTGA	TCTGT	TCTGC	TCTG
CC	TCCAA	TCCAT	TCCAC	TCCAG	TCCTA	TCCTT	TCCTC	TCCTG	TCCCA	TCCCT	TCCCC	TCCCG	TCCGA	TCCGT	TCCGC	TCCG
CG	TCGAA	TCGAT	TCGAC	TCGAG	TCGTA	TCGTT	TCGTC	TCGTG	TCGCA	TCGCT	TCGCC	TCGCG	TCGGA	TCGGT	TCGGC	TCGG
GA	TGAAA	TGAAT	TGAAC	TGAAG	TGATA	TGATT	TGATC	TGATG	TGACA	TGACT	TGACC	TGACG	TGAGA	TGAGT	TGAGC	TGAG
GT	TGTAA	TGTAT	TGTAC	TGTAG	TGTTA	TGTTT	TGTTC	TGTTG	TGTCA	TGTCT	TGTCC	TGTCG	TGTGA	TGTGT	TGTGC	TGTG
GC	TGCAA	TGCAT	TGCAC	TGCAG	TGCTA	TGCTT	TGCTC	TGCTG	TGCCA	TGCCT	TGCCC	TGCCG	TGCGA	TGCGT	TGCGC	TGCG
rGG	TGGAA	TGGAT	TGGAC	TGGAG	TGGTA	TGGTT	TGGTC	TGGTG	TGGCA	TGGCT	TGGCC	TGGCG	TGGGA	TGGGT	TGGGC	TGGGG
AA	CAAAA	CAAAT	CAAAC	CAAAG	CATTA	CAATT	CAATC	CAATG	CAACA	CAACT	CAACC	CAACG	CAAGA	CAAGT	CAAGC	CAAGO
AT	CATAA	CATAT	CATAC	CATAG		CATTT	CATTC	CATTG	CATCA	CATCT	CATCC	CATCG	CATGA	CATGT	CATGC	CATGO
CAC	CACAA	CACAT	CACAC	CACAG	CACTA	CACTT	CACTC	CACTG	CACCA	CACCT	CACCC	CACCG	CACGA	CACGT	CACGC	CACG
CAG	CAGAA	CAGAT	CAGAC	CAGAG	CAGTA	CAGTT	CAGTC	CAGTG	CAGCA	CAGCT	CAGCC	CAGCG	CAGGA	CAGGT	CAGGC	CAGG
TA	CTAAA	CTAAT	CTAAC	CTAAG	CTATA	CTATT	CTATC	CTATG	CTACA	CTACT	CTACC	CTACG	CTAGA	CTAGT	CTAGC	CTAGO
TT	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	CTCG
CTG	CTGAA	CTGAT	CTGAC	CTGAG	CTGTA	CTGTT	CTGTC	CTGTG	CTGCA	CTGCT	CTGCC	CTGCG	CTGGA	CTGGT	CTGGC	CTGG
CCA	CCAAA	CCAAT	CCAAC	CCAAG	CCATA	CCATT	CCATC	CCATG	CCACA	CCACT	CCACC	CCACG	CCAGA	CCAGT	CCAGC	CCAG
CT	CCTAA	CCTAT	CCTAC	CCTAG	CCTTA	CCTTT	CCTTC	CCTTG	CCTCA	CCTCT	CCTCC	CCTCG	CCTGA	CCTGT	CCTGC	CCTG
CCC	CCCAA	CCCAT	CCCAC	CCCAG	CCCTA	CCCTT	CCCTC	CCCTG	CCCCA	CCCCT	CCCCC	CCCCG	CCCGA	CCCGT	CCCGC	CCCG
CCG	CCGAA	CCGAT	CCGAC	CCGAG	CCGTA	CCGTT	CCGTC	CCGTG	CCGCA	CCGCT	CCGCC	CCGCG	CCGGA	CCGGT	CCGGC	CCGG
CGA	CGAAA	CGAAT	CGAAC	CGAAG	CGATA	CGATT	CGATC	CGATG	CGACA	CGACT	CGACC	CGACG	CGAGA	CGAGT	CGAGC	CGAG
GT	CGTAA	CGTAT	CGTAC	CGTAG	CGTTA	CGTTT	CGTTC	CGTTG	CGTCA	CGTCT	CGTCC	CGTCG	CGTGA	CGTGT	CGTGC	CGTG
GC	CGCAA	CGCAT	CGCAC	CGCAG	CGCTA	CGCTT	CGCTC	CGCTG	CGCCA	CGCCT	CGCCC	CGCCG	CGCGA	CGCGT	CGCGC	CGCG
GG	CGGAA	CGGAT	CGGAC	CGGAG	CGGTA	CGGTT	CGGTC	CGGTG	CGGCA	CGGCT	CGGCC	CGGCG	CGGGA	CGGGT	CGGGC	CGGG
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AC	GACAA	GACAT	GACAC	GACAG	GACTA	GACTT	GACTC	GACTG	GACCA	GACCT	GACCC	GACCG	GACGA	GACGT	GACGC	GACG
AG	GAGAA	GAGAT	GAGAC	GAGAG	GAGTA	GAGTT	GAGTC	GAGTG	GAGCA	GAGCT	GAGCC	GAGCG	GAGGA	GAGGT	GAGGC	GAGG
TA	GTAAA	GTAAT	GTAAC	GTAAG	GTATA	GTATT	GTATC	GTATG	GTACA	GTACT	GTACC	GTACG	GTAGA	GTAGT	GTAGC	GTAG
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TC	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC	GTCTG	GTCCA	GTCCT	GTCCC	GTCCG	GTCGA	GTCGT	GTCGC	GTCG
TG	GTGAA	GTGAT	GTGAC	GTGAG	GTGTA	GTGTT	GTGTC	GTGTG	GTGCA	GTGCT	GTGCC	GTGCG	GTGGA	GTGGT	GTGGC	GTGG
CA	GCAAA	GCAAT	GCAAC	GCAAG	GCATA	GCATT	GCATC	GCATG	GCACA	GCACT	GCACC	GCACG	GCAGA	GCAGT	GCAGC	GCAG
CT	GCTAA	GCTAT	GCTAC	GCTAG	GCTTA	GCTTT	GCTTC	GCTTG	GCTCA	GCTCT	GCTCC	GCTCG	GCTGA	GCTGT	GCTGC	GCTG
CC	GCCAA	GCCAT	GCCAC	GCCAG	GCCTA	GCCTT	GCCTC	GCCTG	GCCCA	GCCCT	GCCCC	GCCCG	GCCGA	GCCGT	GCCGC	GCCG
CG	GCGAA	GCGAT	GCGAC	GCGAG	GCGTA	GCGTT	GCGTC	GCGTG	GCGCA	GCGCT	GCGCC	GCGCG	GCGGA	GCGGT	GCGGC	GCGG
GA	GGAAA	GGAAT	GGAAC	GGAAG	GGATA	GGATT	GGATC	GGATG	GGACA	GGACT	GGACC	GGACG	GGAGA	GGAGT	GGAGC	GGAG
GT	GGTAA	GGTAT	GGTAC	GGTAG	GGTTA	GGTTT	GGTTC	GGTTG	GGTCA	GGTCT	GGTCC	GGTCG	GGTGA	GGTGT	GGTGC	GGTG
							GGCTC	GGCTG	GGCCA	GGCCT	GGCCC		GGCGA	GGCGT	GGCGC	GGCG
GGC	GGCAA	GGCAT	GGCAC	GGCAG	GGCTA	GGCTT		(1(1()(1	(η(η(Δ			GGCCG				

After filtering: read2: quality

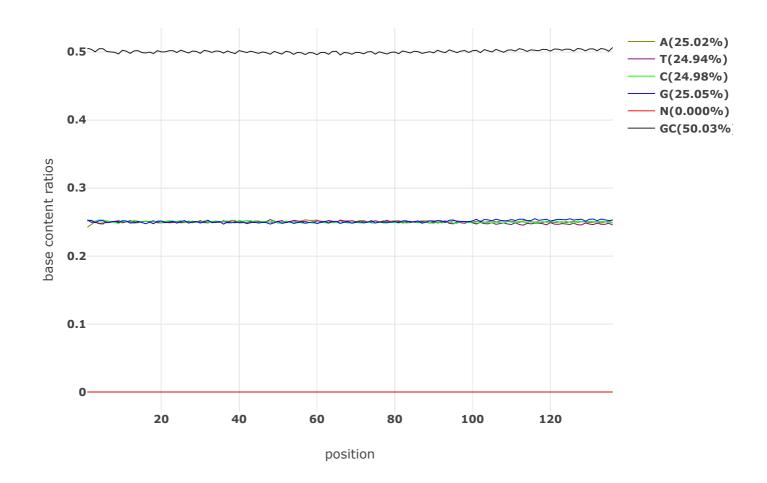
Value of each position will be shown on mouse over.





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 o	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
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AGT	AGTAA	AGTAT	AGTAC	AGTAG	AGTTA	AGTTT	AGTTC	AGTTG	AGTCA	AGTCT	AGTCC	AGTCG	AGTGA	AGTGT	AGTGC	AGTGG
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TAA	TAAAA	TAAAT	TAAAC	TAAAG	TAATA	TAATT	TAATC	TAATG	TAACA	TAACT	TAACC	TAACG	TAAGA	TAAGT	TAAGC	TAAGG
		TATAT	TATAC	TATAG	TATTA	TATTT	TATTC	TATTG	TATCA	TATCT	TATCC	TATCG	TATGA	TATGT	TATGC	TATGG
TAC	TACAA TAGAA	TACAT	TACAC TAGAC	TACAG TAGAG	TACTA TAGTA	TACTT	TACTC TAGTC	TACTG TAGTG	TACCA TAGCA	TACCT TAGCT	TACCC	TACCG TAGCG	TACGA TAGGA	TACGT	TACGC TAGGC	TACGG TAGGG
TTA	TTAAA	TTAAT	TTAGAC	TTAAG	TTATA	TTATT	TTATC	TTATG	TTACA	TTACT	TTACC	TTACG	TTAGA	TTAGT	TTAGC	TTAGG
TTT	TTTAAA	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
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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
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CCA	CCAAA	CCAAT	CCAAC	CCAAG	CCATA	CCATT	CCATC	CCATG	CCACA	CCACT	CCACC	CCACG	CCAGA	CCAGT	CCAGC	CCAGG
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GTC	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC	GTCTG	GTCCA	GTCCT	GTCCC	GTCCG	GTCGA	GTCGT	GTCGC	GTCGG
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