

# Assembly Report

## Experiment Details

ExperimentID:	9
Species:	Staphylococcus Aureus
Sequencing Coverage:	13
Number of Partitions:	10
Allowed Mismatch Count in (Base):	0
Length of Sliding Window:	31

## Reads Dataset Details

Total Reads Count:	128832
Total Dataset Size in (Base):	38773917
Valid Read Count:	128817
Rejected Read Count:	15
Maximum Read Length:	301
Minimum Read Length:	301

## Reference Genome Details

Length of Reference Genome (Base):	2821361
Number of K-mers:	2820700

Length of K-mer	422
-----------------	-----

## Assembly Details

Number of Contigs:	5356
Contig N50:	1451
Contig N90:	1251
Number of Scaffold	9
Scaffold N50:	449721
Scaffold N90:	171738
Mis-assembly Count:	0
TotalAssembly Size:	2826628

## Repeat Details

Total Reads Count(Non-Repeat) :	55502
Total Reads Count(Repeat):	912
Retetitive Read Count based on (Partitions Identifier):	912
Retetitive Read Count (Entire Read Frequency Identifier):	1
Retetitive Read Count (Contained Read Frequency Identifier):	0
Total Repetitive Sequences Count	4517

Total Unique Repetitive Sequences Count			509			
Total Repeat Size (Base)			62979			
Starting	Ending	Repetitive Sequences	Repeat Count	Length	Positions	
1	449721	AAGGTAAAGTA TAAATTTTAAA TAAATGGGG	2	31	Start Position	End Position
					91125	91155
					91582	91612
1	449721	AGAATTTTCGAA AAGAAATTCTA	3	22	Start Position	End Position
					115357	115378
					258555	258576
					336930	336951
1	449721	CATTCTTAGAT AAACATTTTAA ATATCAAGA	2	31	Start Position	End Position
					243301	243331
					248618	248648
1	449721	GATAGTAGATT GTTCGTATTAC GTAATTGAA	2	31	Start Position	End Position
					394032	394062
					395149	395179
1	449721	GGGAAAAAGT ATATACAATGG CTTATATAGA	3	31	Start Position	End Position
					289501	289531
					292638	292668
					293149	293179

1	449721	TAAATTGAGGG AAAGTGTGAAT AGTTAAAAA	2	31	Start Positio n	End Positio n
					393882	393912
					394999	395029
1	449721	TAGTCGCGCG TTGTCCTTTTC GTGACATGAA	2	31	Start Positio n	End Positio n
					393832	393862
					394949	394979
1	449721	TTGGATGAAAC CATTGCGTTGT TCTTCGTTT	2	31	Start Positio n	End Positio n
					74251	74281
					74425	74455
1	449721	TTTCATAGAAA GCATTTTGTTG TTCTTTGTTGA ATT	2	36	Start Positio n	End Positio n
					74127	74162
					74301	74336
448971	495751	AAAAGTAAACA CAAAGAAAAAT GGCTTGGCGA AGTGAAAACGT TTGAATCTGAC GAA	2	57	Start Positio n	End Positio n
					4948	5004
					5205	5261
448971	495751	AACACAAAGAA AAATGGCTTG GCGAAGTGAA AACGTTTGAAT CTGACGAAAC GAG	2	55	Start Positio n	End Positio n
					4955	5009
					5212	5266

448971	495751	AACGTCAAAT AAAAAGTAAAC ACAAAGAAAA TGGCTTGGCG AAGTGAA	2	50	Start Positio n	End Positio n
					4936	4985
					5193	5242
448971	495751	AAGTGAAAAC GTTTGAATCTG ACGAAACGAG AAAAGAGCGC AACGAGTTTAG TAGAG	2	57	Start Positio n	End Positio n
					4979	5035
					5236	5292
448971	495751	AATGGCTTGG CGAAGTGAAA ACGTTTGAATC TGACGAAACG AGAAAAGAG	2	50	Start Positio n	End Positio n
					4967	5016
					5224	5273
448971	495751	ACGAGAAAAG AGCGCAACGA GTTTAGTAGAG CTAAATGAGTA AGCGAGAGCC GAA	2	55	Start Positio n	End Positio n
					5005	5059
					5262	5316
448971	495751	AGTAGAGCTAA ATGAGTAAGC GAGAGCCGAA GGAGAGGAAA GAAGCAAGCG ATTGTC	2	57	Start Positio n	End Positio n
					5029	5085
					5286	5342
448971	495751	AGTTTAGTAGA GCTAAATGAGT AAGCGAGAGC CGAAGGAGAG GAAAGAAGCA AGC	2	55	Start Positio n	End Positio n
					5024	5078
					5281	5335

448971	495751	CGCAACGAGT TTAGTAGAGCT AAATGAGTAAG CGAGAGCCGA AGGAGAGG	2	50	Start Positio n	End Positio n
					5017	5066
					5274	5323
448971	495751	GCGAGAGCCG AAGGAGAGGA AAGAAGCAAG CGATTGTCACA AGTCAAGAA	2	50	Start Positio n	End Positio n
					5048	5097
					5305	5354
448971	495751	TCTGGTGA CTA TAGCAAGGAG GTCACACCTGT TCCCATGCCG AACACAGAAGT TA	2	55	Start Positio n	End Positio n
					4764	4818
					43155	43209
448971	495751	TGACGAAACG AGAAAAGAGC GCAACGAGTTT AGTAGAGCTAA ATGAGTAAGC GAGAG	2	57	Start Positio n	End Positio n
					4998	5054
					5255	5311
448971	495751	TGGCGAAGTG AAAACGTTTGA ATCTGACGAAA CGAGAAAAGA GCGCAACGAG TTT	2	55	Start Positio n	End Positio n
					4974	5028
					5231	5285
494901	1964351	AAAAAAGCTTG TTACAAGCGCA TTTTCGTTCAG TCAACTACTGC CAATATAACT	3	54	Start Positio n	End Positio n
					225280	225333
					316783	316836
					509228	509281

494901	1964351	AAAAGCTTGTT ACAAGCGCATT TTCGTTCAGTC AACTACTGCCA ATATAACTTTG TA	2	57	Start Positio n	End Positio n
					225282	225338
					509230	509286
494901	1964351	AAAGTCAGCTT ACAATAGTGTG CAAGTTGGG	2	31	Start Positio n	End Positio n
					365568	365598
					365682	365712
494901	1964351	AAATACAGATT GAGTATATGCA TATAAGATGAT TTTTAACATCA TTTTTGGATGA	2	55	Start Positio n	End Positio n
					121221 3	121226 7
					130096 8	130102 2
494901	1964351	AAATATGCTTT ACTTACCCAAC CAGATTTAC	2	31	Start Positio n	End Positio n
					470694	470724
					471201	471231
494901	1964351	AAATTCTCTGT GTTGGGGCCC ACACCCCAACT CGCATTGCCT GTAGAATTTCT TTTCG	2	58	Start Positio n	End Positio n
					273610	273667
					273668	273725

494901	1964351	AAATTTATTTTC GTCGTCCCAC CCCAACTTGCA TTGTCTGTAGA AATTGGGAATC CAA	3	57	Start Positio n	End Positio n
					225180	225236
					316637	316693
					880251	880307
494901	1964351	AACAGCAGTAA GATAATTTTCA ATTAGAAAATA TCTTACTGCTG TTCTCTATTTA TA	2	57	Start Positio n	End Positio n
					837694	837750
					131871 1	131876 7
494901	1964351	AACCTAGCTCT CGTTTAACTTT ATTTATTCC	3	31	Start Positio n	End Positio n
					616283	616313
					854125	854155
					121089 9	121092 9
494901	1964351	AACTTGCATTG TTTGTAGAATT TCTTTTCGAAA TTCTTTATGTT GGGGCCCCGC C	2	55	Start Positio n	End Positio n
					267920	267974
					267975	268029
494901	1964351	AACTTGGTGAA GATGGCGAAT ATAAATATGTT GCCAAAATAGA TAGTAAAACAT CTA	2	57	Start Positio n	End Positio n
					753875	753931
					755549	755605



494901	1964351	AAGAAACTATA GTATATGAAGT TTTAACTAGTG GTAATCAACCA TTCAC T	2	50	Start Positio n	End Positio n
					101131 8	101136 7
					146930 9	146935 8
494901	1964351	AAGTTCTTAGG CAATGTAAAA AGCTGATTT	2	31	Start Positio n	End Positio n
					853994	854024
					121076 8	121079 8
494901	1964351	AATAAGTTTT C ATCTACATCAA TCGTTACCG	2	31	Start Positio n	End Positio n
					999201	999231
					145669 9	145672 9
494901	1964351	AATCAGCTTTT TTGATATGTAT TTTATAATGTA CAGCTCGTTG AGCTGCT	3	50	Start Positio n	End Positio n
					616202	616251
					854044	854093
494901	1964351	AATCCCTAAAA AAACAGCAGTA AGATAATTTTC AATTAGAAAAT ATCTTACTGCT GT	2	57	Start Positio n	End Positio n
					837682	837738
					131869 9	131875 5

494901	1964351	AATGGCGGTC TCGACGGGAA TCGAACCCGC GATCTCCTGC GTGACAGGCA GGCGT	2	55	Start Positio n	End Positio n
					136998 2	137003 6
					140527 5	140532 9
494901	1964351	AATGTTTACAG TTTAATTAAAA CTGCATAAGAA CTTCTAGCTTT TCTCTT	4	50	Start Positio n	End Positio n
					129016	129065
					129149	129198
					129282	129331
					129415	129464
494901	1964351	AATTATACGAA GGGACCCAAC ACAGAAAATTC ATTTTATTGAA TTTTACA	2	50	Start Positio n	End Positio n
					121246 3	121251 2
					130121 8	130126 7
494901	1964351	AATTGAAAAAA GCTTGTTACAA GCGCATTTTCG TTCAGTCAACT ACTGCCAATAT AA	4	57	Start Positio n	End Positio n
					225275	225331
					316778	316834
					509223	509279
					880451	880507
494901	1964351	AATTTCTTTTC GAAATTCTCTG TGTTGGGGCC CACACCCCAA CTCGCATTGC CTGTAG	2	58	Start Positio n	End Positio n
					273598	273655
					273656	273713

494901	1964351	AATTTCTTTTC GAAATTCTCTG TGTTGGGGCC CCTGACTAGAA TTGAAAAAAGC TTGT	2	58	Start Positio n	End Positio n
					316737	316794
					880410	880467
494901	1964351	ACACAGAAAAT TCATTTTATTG AATTTTACATT TATGTGCAAG	2	43	Start Positio n	End Positio n
					121248 2	121252 4
					130123 7	130127 9
494901	1964351	ACCCCAACTC GCATTGCCTGT AGAATTTCTTT TCGAAATTCTC TGTGTTGGGG C	4	54	Start Positio n	End Positio n
					273575	273628
					273633	273686
					273691	273744
					880387	880440
494901	1964351	ACCCCAACTTG CATTGTCTGTA GAAATTGGGA ATCCAATTTCT CTTTGTTGGG GCCC	3	57	Start Positio n	End Positio n
					225199	225255
					316656	316712
					880270	880326
494901	1964351	ACCCTAGGAA AGCGAAGCCA TTCAATACGAA GTATTGTATAA ATAGAGAACA GCAGTA	3	58	Start Positio n	End Positio n
					854822	854879
					121264 4	121270 1
					130139 9	130145 6

494901	1964351	ACTCAGACTCA GACAGTGATTC AGATTTCAGACA GCGACTCAGA TTCAGAT	2	50	Start Positio n	End Positio n
					55318	55367
					59632	59681
494901	1964351	ACTCCTGAGG GAGCAGTGCC AGTCGAAGAC CGAGGCTGAG ACGGCACCCCT AGGAA	4	55	Start Positio n	End Positio n
					616475	616529
					854777	854831
					121259 9	121265 3
					130135 4	130140 8
494901	1964351	AGAATTTTCGAA AAGAAATTCTA	3	22	Start Positio n	End Positio n
					791753	791774
					128150 7	128152 8
494901	1964351	AGCCATTCAAT ACGAAGTATTG TATAAATAGAG AACAGCAGTAA GATATTTTCT	3	54	128168 0	128170 1
					Start Positio n	End Positio n
					854837	854890
					121265 9	121271 2
494901	1964351				130141 4	130146 7

494901	1964351	AGCTGTTCGC AGTTTAATCAA AACCACATAAA GCTTTTAACTT TACTCTT	4	50	Start Positio n	End Positio n
					128949	128998
					129082	129131
					129215	129264
					129348	129397
494901	1964351	AGCTTCTACTT TTGTACCATCA ATAAAAATTGA ATTAT	2	38	Start Positio n	End Positio n
					121199 4	121203 1
					130074 9	130078 6
494901	1964351	AGCTTTAATTA TAGATAAAAAC ATTCATGTC	2	31	Start Positio n	End Positio n
					95513	95543
					100337	100367
494901	1964351	AGCTTTCAATA ATGTGCAAGTT GGGGTAAGGG CCCCAACACA G	3	43	Start Positio n	End Positio n
					128157 8	128162 0
					128163 7	128167 9
					128175 1	128179 3

494901	1964351	AGGGAGCAGT GCCAGTCGAA GACCGAGGCT GAGACGGCAC CCTAGGAAAG CGAAGCC	3	57	Start Positio n	End Positio n
					854784	854840
					121260 6	121266 2
					130136 1	130141 7
494901	1964351	AGTGCTTGTTT TTCCTTATCTG TTAGATTTGGA TTTTGATCGAT TTCGTCAATTA	2	55	Start Positio n	End Positio n
					883313	883367
					883544	883598
494901	1964351	AGTTTTAACTA GTGGTAATCAA CCATTCACTTA TGAGTTACCT	2	43	Start Positio n	End Positio n
					101133 7	101137 9
					146932 8	146937 0
494901	1964351	ATAAATAGAGA ACAGCAGTAA GATATTTTCTA ATTGAAAATTA TCTTACT	3	50	Start Positio n	End Positio n
					854860	854909
					121268 2	121273 1
					130143 7	130148 6

494901	1964351	ATAATTTTCAA TTAGAAAATAT CTTACTGCTGT TCTCTATTTAT ACAATACTTCG TA	2	57	Start Positio n	End Positio n
					837706	837762
					131872 3	131877 9
494901	1964351	ATATAAATATG TTGCCAAAATA GATAGTAAAAC ATCTAAATTAT GTCATT	2	50	Start Positio n	End Positio n
					753894	753943
					755568	755617
494901	1964351	ATCATTACGGT ATGCATATCTT TTAAAACCTAT TCTTTTGTTAT TAGGAC	2	50	Start Positio n	End Positio n
					854418	854467
					121119 4	121124 3
494901	1964351	ATCCCGCGTC TATCTTGCCCTG TTTCAATCAC	2	31	Start Positio n	End Positio n
					999737	999767
					145744 4	145747 4
494901	1964351	ATCGAACCCG CGATCTCCTG CGTGACAGGC AGGCGTGTTA ACCGCTACACT ACGA	3	55	Start Positio n	End Positio n
					137000 1	137005 5
					140499 0	140504 4
					140529 4	140534 8

494901	1964351	ATCTTTAAGTG CTTGTTTTTCC TTATCTGTTAG ATTTGGATTTT GATCGATTTCG TC	2	57	Start Positio n	End Positio n
					883306	883362
					883537	883593
494901	1964351	ATGATATTTTC GCAAATTTAT TTCGTCGTCCC ACCCCAACTTG CATTGTCTGTA GA	2	57	Start Positio n	End Positio n
					225166	225222
					316623	316679
494901	1964351	ATGGTTAAAGA AAATCTCATTT AGTCACCGTCT TTTTAACGGG	2	43	Start Positio n	End Positio n
					447494	447536
					447863	447905
494901	1964351	ATGTCTCAAAG AACATGATGAA CAGTCATCACA TTCAT	2	38	Start Positio n	End Positio n
					854349	854386
					121112 5	121116 2
494901	1964351	ATTAATGGCGA GACTCCTGAG GGAGCAGTGC CAGTCGAAGA CCGAGGCTGA GACGGC	4	57	Start Positio n	End Positio n
					616463	616519
					854765	854821
					121258 7	121264 3
					130134 2	130139 8



494901	1964351	CACAAAAGTTA ACATATTTAAA AGAACTTGGT GAAGATGGCG AATATAAATAT GT	2	55	Start Positio n	End Positio n
					753851	753905
					755525	755579
494901	1964351	CACATCATTCG AATACTGTCAT GAAGTAATT	2	31	Start Positio n	End Positio n
					121216 3	121219 3
					130091 8	130094 8
494901	1964351	CACTGTCATAT TCATATAATAG TTCTGATAT	2	31	Start Positio n	End Positio n
					999151	999181
					145664 9	145667 9
494901	1964351	CAGAAGCTGG CCAATAGTCAG CTTCAATAAT GTGCAAGTTG GGGTAAGG	2	50	Start Positio n	End Positio n
					128161 8	128166 7
					128173 2	128178 1
494901	1964351	CAGATTGAGTA TATGCATATAA GATGATTTTTA ACATCATTTTT GGATGATAGG ATG	2	57	Start Positio n	End Positio n
					121221 8	121227 4
					130097 3	130102 9

494901	1964351	CAGTCGAAGA CCGAGGCTGA GACGGCACCC TAGGAAAGCG AAGCCATTCAA TACGAA	3	57	Start Positio n	End Positio n
					854796	854852
					121261 8	121267 4
					130137 3	130142 9
494901	1964351	CATATTTAAAA GAACTTGGTG AAGATGGCGA ATATAAATATG TTGCCAAA	2	50	Start Positio n	End Positio n
					753863	753912
					755537	755586
494901	1964351	CATCAAGTTCA ATACCTTCTTT AACTGAATGTT GAATAGCATTT GTCATT	2	50	Start Positio n	End Positio n
					100004 4	100009 3
					145798 7	145803 6
494901	1964351	CCAACTTGCAC ATTATTGTAAG CTGACTTTTCG TCAGCTTCTGT GTTGGGGCCC C	2	55	Start Positio n	End Positio n
					273407	273461
					273463	273517
494901	1964351	CCCCATGTTAA TTTATCGATAA TTTGTATAG	2	31	Start Positio n	End Positio n
					999051	999081
					145654 9	145657 9

494901	1964351	CCCTGACTAG AATTGAAAAA GCTTGTTACAA GCGCATTTCG TTCAGTCAACT A	3	55	Start Positio n	End Positio n
					316768	316822
					509213	509267
					880441	880495
494901	1964351	CCTACGACCG ATCGGTTAACA GCCGATAGCT CTACCACTGA GC	2	43	Start Positio n	End Positio n
					443837	443879
					136965 1	136969 3
494901	1964351	CGAAGTATTGT ATAAATAGAGA ACAGCAGTAA GATATTTTCTA ATTGAAAATTA	3	54	Start Positio n	End Positio n
					854849	854902
					121267 1	121272 4
					130142 6	130147 9
494901	1964351	CGGAAAAATAT TTAAAGTTAAA GATATGATACC AGGTGTGAAT GCGCCACCTA TG	2	55	Start Positio n	End Positio n
					753951	754005
					755625	755679
494901	1964351	CGGAAAGTCA GCTAACAATAT TGTGCAAGTT	2	31	Start Positio n	End Positio n
					235625	235655
					235737	235767

494901	1964351	CGGTATGCATA TCTTTTAAAAC CTATTCTTTTG TTATTAGGACA TATAAATTCAT	2	55	Start Positio n	End Positio n
					854425	854479
					121120 1	121125 5
494901	1964351	CTAAAAAACA GCAGTAAGATA ATTTTCAATTA GAAAATATCTT ACTGCTGTTCT CT	2	57	Start Positio n	End Positio n
					837687	837743
					131870 4	131876 0
494901	1964351	CTACAGACAAT GCAAGTTGGC GGGGCCCCAA	4	31	Start Positio n	End Positio n
					365636	365666
					583665	583695
					128152 6	128155 6
					128169 9	128172 9
494901	1964351	CTAGTTAATAG TCCGACATAG CCCTCTGGTA	2	31	Start Positio n	End Positio n
					999799	999829
					145750 6	145753 6
494901	1964351	CTCTCCTTATC TTAACTTGTGC CTCGTATTT	2	31	Start Positio n	End Positio n
					999251	999281
					145674 9	145677 9

494901	1964351	CTGCAATACTT TTGATGATTAT ATTTTTATT	2	31	Start Positio n	End Positio n
					134823 2	134826 2
					134909 9	134912 9
494901	1964351	CTGCTCCCTCA GGAGTCTCGC CATTAACTA CGTATTAACAT GTAATTTTACT	2	54	Start Positio n	End Positio n
					837932	837985
					131883 4	131888 7
494901	1964351	CTTCTAGCTTT TCTCTTTCGTT CAAAGAGAAG CAGCTGTTTCG CAGTTTAA	3	50	Start Positio n	End Positio n
					129049	129098
					129182	129231
					129315	129364
494901	1964351	CTTGCATTGTC TGTAGAAATTG GGAATCCAATT TCTCTTTGTTG GGGCCCATCC C	2	55	Start Positio n	End Positio n
					316663	316717
					880277	880331
494901	1964351	CTTGTTACAAG CGCATTTTCGT TCAGTCAACTA CTGCCAATATA ACTTTGTAGAG CA	2	57	Start Positio n	End Positio n
					225287	225343
					509235	509291

494901	1964351	GAAAATATCTT ACTGCTGTTCT CTATTTATACA ATACTTCGTAT TGAATGGCTTC GC	2	57	Start Positio n	End Positio n
					837720	837776
					131873 7	131879 3
494901	1964351	GAAGTATTTGA TTAATACGATC TTTAAGTGCTT GTTTTTCCTTA TCTGTTAGATT TG	2	57	Start Positio n	End Positio n
					883518	883574
					883749	883805
494901	1964351	GACAGAAATG ATATTTTCGCA AAATTTATTTC GTCGTCCCAC CCCAACTTGC	2	52	Start Positio n	End Positio n
					225159	225210
					110274 4	110279 5
494901	1964351	GACGGGAATC GAACCCGCGA TCTCCTGCGT GACAGGCAGG CGTGTTAACC	3	50	Start Positio n	End Positio n
					136999 4	137004 3
					140498 3	140503 2
					140528 7	140533 6
494901	1964351	GAGAAATTGG ATTCCCAATTT CTACAGACAAT GCAAGTTGGG GTGGGACG	2	50	Start Positio n	End Positio n
					109005	109054
					791868	791917

494901	1964351	GATATTTTCGC AAAATTTATTT CGTCGTCCCA CCCCAACTTG CATTGTCTGTA GAAA	2	57	Start Positio n	End Positio n
					225168	225224
					316625	316681
494901	1964351	GATCGAACCG CTGACCTCCT GCGTGCAAAG CAGGCGCTCT CCCAGCTGAG CTAAGCC	2	57	Start Positio n	End Positio n
					140567 5	140573 1
					140978 7	140984 3
494901	1964351	GATGTCTGAAT TCATCGAATTC GCTATCAGGTA TCGTTTCAACA ATTTCATTAAC AT	2	57	Start Positio n	End Positio n
					121228 7	121234 3
					130104 2	130109 8
494901	1964351	GATTCAATTAA CGCATCAGTAT TAGGATTCACT CTAAAACGATT AATAGT	2	50	Start Positio n	End Positio n
					121208 2	121213 1
					130083 7	130088 6
494901	1964351	GCATTGCCTGT AGAATTTCTTT TCGAAATTCTC TGTGTTGGGG CCCACACCCC AAC	2	56	Start Positio n	End Positio n
					273585	273640
					273643	273698

494901	1964351	GCCATAATCCC TACTGCTTCAT CAAGTTCAATA CCTTCTTTAAC TGAATGTTGAA TA	2	57	Start Positio n	End Positio n
					100002 5	100008 1
					145796 8	145802 4
494901	1964351	GCGAGACTCC TGAGGGAGCA GTGCCAGTCG AAGACCGAGG CTGAGACGGC ACCCT	4	55	Start Positio n	End Positio n
					616470	616524
					854772	854826
					121259 4	121264 8
					130134 9	130140 3
494901	1964351	GGAATACATGA GTAAAACTCAT GCATAAGAAAT ACTAATTTCTA AAGAAAAAG	2	53	Start Positio n	End Positio n
					316910	316962
					131167 7	131172 9
494901	1964351	GGACATAAATC CCTAAAAAAC AGCAGTAAGAT AATTTTCAATT AGAAAATATCT TA	2	57	Start Positio n	End Positio n
					837675	837731
					131869 2	131874 8



494901	1964351	GGAGACTAGC GGGATCGAAC CGCTGACCTC CTGCGTGCAA AGCAGGCGCT CTCCC	2	55	Start Positio n	End Positio n
					140566 3	140571 7
					140977 5	140982 9
494901	1964351	GGAGTGGGAC AGAAATGATAT TTTCGCAAAAT TTATTTGTCG TCCCACCCCA ACTT	2	57	Start Positio n	End Positio n
					225152	225208
					110273 7	110279 3
494901	1964351	GGCCCCAACA AAGAGAAATTG GATTCCCAATT TCTACAGACAA	2	43	Start Positio n	End Positio n
					108993	109035
					791856	791898
494901	1964351	GGCTGAGACG GCACCCTAGG AAAGCGAAGC CATTCAATACG AAGTATTGTAT AAATAG	3	58	Start Positio n	End Positio n
					854810	854867
					121263 2	121268 9
					130138 7	130144 4
494901	1964351	GGGCCACAAC AGAGAGAAATA GGATCACCAAT TCCA	2	36	Start Positio n	End Positio n
					579494	579529
					579663	579698

494901	1964351	GGGCCCACAC CCCAACTCGC ATTGCCTGTAG AATTTCTTTTC GAAATTCTCTG TGTTG	3	58	Start Positio n	End Positio n
					273567	273624
					273625	273682
					273683	273740
494901	1964351	GGGCCCCTGA CTAGAATTGAA AAAAGCTTGTT ACAAGCGCATT TTCG TTCAGTC AAC	3	57	Start Positio n	End Positio n
					316764	316820
					509209	509265
					880437	880493
494901	1964351	GTAAGATAATT TTCAATTAGAA AATATCTTACT GCTGTTCTCTA TTTATACAATA CT	2	57	Start Positio n	End Positio n
					837701	837757
					131871 8	131877 4
494901	1964351	GTAGTATTAAT GGCGAGACTC CTGAGGGAGC AGTGCCAGTC GAAGACCGAG GCTG	4	55	Start Positio n	End Positio n
					616458	616512
					854760	854814
					121258 2	121263 6
130133 7	130139 1					
494901	1964351	GTGACTCGGA TTCAGATAGCG ATTCAGATTC	2	31	Start Positio n	End Positio n
					300049	300079
					300301	300331

494901	1964351	TAAAAAGCCAG TGCCGAAGCA CTGACTCTTA	2	31	Start Positio n	End Positio n
					971306	971336
					143517 5	143520 5
494901	1964351	TAAAATTACAT GTTAATACGTA GTATTAATGGC GAGACTCCTG AGGGAGCAGT GC	3	55	Start Positio n	End Positio n
					616439	616493
					121256 3	121261 7
494901	1964351	TAAAGTTAAAG ATATGATACCA GGTGTGAATG CGCCACCTAT GCATCCTT	2	50	Start Positio n	End Positio n
					753963	754012
					755637	755686
494901	1964351	TAATGTGTACT TAAAAATAGGA ATACATGAGTA AAACTCATGCA TAAGAAATACT AA	2	57	Start Positio n	End Positio n
					273256	273312
					131165 8	131171 4
494901	1964351	TACCTTCTTTA ACTGAATGTTG AATAGCATTTG TCATTCCCTCA AGTATTTCATC AA	2	57	Start Positio n	End Positio n
					100005 6	100011 2
					145799 9	145805 5

494901	1964351	TACTTAAAAAT AGGAATACATG AGTAAAACTCA TGCATAAGAAA TACTAATTTCT	2	55	Start Positio n	End Positio n
					273263	273317
					131166 5	131171 9
494901	1964351	TAGAAAATATC TACTGCTGTT CTCTATTTATA CAATACTTCGT ATTGAATGGCT TC	2	57	Start Positio n	End Positio n
					837718	837774
					131873 5	131879 1
494901	1964351	TATCGTCACAT AATGCGCGTA AATACTTGGAA TTTATTTACA	2	43	Start Positio n	End Positio n
					101138 7	101142 9
					146937 8	146942 0
494901	1964351	TATGACCTTGT TGAAGTATTTG ATTAATACGAT CTTTAAGTGCT TGTTTTTCCTT AT	2	57	Start Positio n	End Positio n
					883506	883562
					883737	883793
494901	1964351	TATGAGTTACC TAAAGATTTAT CGTCACATAAT GCGCGTAAAT ACTTGGA	2	50	Start Positio n	End Positio n
					101136 8	101141 7
					146935 9	146940 8

494901	1964351	TATGATACCAG GTGTGAATGC GCCACCTATG CATCCTTGGTG TAGAAGTACCA CAGT	2	57	Start Positio n	End Positio n
					753975	754031
					755649	755705
494901	1964351	TATGGAGCGG AAGATAGGATT TACACCTATA	2	31	Start Positio n	End Positio n
					140412 5	140415 5
					140421 3	140424 3
494901	1964351	TATTCTGTCTGA ATTTTTCAAAC ATAGTCTTATC ATTTTCTTCTA ATCGCGTTAAA	2	55	Start Positio n	End Positio n
					971625	971679
					143549 4	143554 8
494901	1964351	TATTTTATAAT GTACAGCTCG TTGAGCTGCTA TTTTCCTTATA TTAAGTG	2	50	Start Positio n	End Positio n
					854063	854112
					121083 7	121088 6
494901	1964351	TCAAAACCACA TAAAGCTTTTA ACTTTACTCTT TGATTTAAAGA GTGATA	3	50	Start Positio n	End Positio n
					128966	129015
					129099	129148
					129232	129281

494901	1964351	TCAATTAGAAA ATATCTTACTG CTGTTCTCTAT TTATAACAATAC TTCGTATTGAA TGG	2	58	Start Positio n	End Positio n
					837713	837770
					131873 0	131878 7
494901	1964351	TCAGGTATCGT TTCAACAATTT CATTAACATAT CGCGAAATATC ATTTTG	2	50	Start Positio n	End Positio n
					121231 3	121236 2
					130106 8	130111 7
494901	1964351	TCATATTTATA GACAACTTGAC CTGCCATAATC CCTACTGCTTC ATCAAGTTCAA	2	55	Start Positio n	End Positio n
					100000 1	100005 5
					145794 4	145799 8
494901	1964351	TCCACAGGTA GGA CTCGAAC CTACGACCGA TCGGTTAACAG CCGATAGCT	2	50	Start Positio n	End Positio n
					443818	443867
					136963 2	136968 1
494901	1964351	TCCCTACTGCT TCATCAAGTTC AATACCTTCTT TAACTGAATGT TGAATAGCATT TG	2	57	Start Positio n	End Positio n
					100003 2	100008 8
					145797 5	145803 1

494901	1964351	TCGAATTTTTC AAACATAGTCT TATCATTTTCT TCTAATCGCGT TAAACGCCAAT	2	55	Start Positio n	End Positio n
					971632	971686
					143550 1	143555 5
494901	1964351	TCGCAAAATTT ATTCGTCGTC CCACCCCAAC TTGCATTGTCT GTAGAAATTGG G	3	55	Start Positio n	End Positio n
					225175	225229
					316632	316686
					880246	880300
494901	1964351	TCGTCCCACC CCAAC TTGCAT TGTCTGTAGAA ATTGGGAATCC AATTTCTCTTT GTT	3	57	Start Positio n	End Positio n
					225192	225248
					316649	316705
					880263	880319
494901	1964351	TCGTTCAAAGA GAAGCAGCTG TTCGCAGTTTA ATCAAAACCAC ATAAAGC	4	50	Start Positio n	End Positio n
					128933	128982
					129066	129115
					129199	129248
494901	1964351	TCTACGACCA GAAAATACAGA TTGAGTATATG CATATAAGATG ATTTTAAACAT C	2	55	Start Positio n	End Positio n
					121220 1	121225 5
					130095 6	130101 0

494901	1964351	TGACTAGAATT GAAAAAAGCTT GTTACAAGCG CATTTTCGTTC AGTCAACTACT GCC	4	57	Start Positio n	End Positio n
					225268	225324
					316771	316827
					509216	509272
					880444	880500
494901	1964351	TGAGAATATGT CATAACCTGCA TCCGTCTTATG ATTTCGTTCCG GCATTCTAGCA	2	55	Start Positio n	End Positio n
					999894	999948
					145760 1	145765 5
494901	1964351	TGATTTAAAGA GTGATAAATGT TTACAGTTTAA TTAAAACCTGCA TAAGAA	3	50	Start Positio n	End Positio n
					128999	129048
					129132	129181
					129265	129314
494901	1964351	TGGTAATCAAC CATTCACCTAT GAGTTACCTAA AGATTTATCGT CACATA	2	50	Start Positio n	End Positio n
					101134 9	101139 8
					146934 0	146938 9
494901	1964351	TGTAGAATTTTC TTTTCGAAATT CTCTGTGTTGG GGCCCCTGAC TAGAATTGAAA AAAG	2	58	Start Positio n	End Positio n
					316732	316789
					880405	880462



494901	1964351	TGTTGGGGCC CCTGACTAGAA TTGAAAAAAGC TTGTTACAAGC GCATTTTCGTT CAG	3	57	Start Positio n	End Positio n
					316759	316815
					509204	509260
					880432	880488
494901	1964351	TTAAAACTGCA TAAGAACTTCT AGCTTTTCTCT TTCGTTCAAAG AGAA	4	48	Start Positio n	End Positio n
					129032	129079
					129165	129212
					129298	129345
494901	1964351	TTAATACGTAG TATTAATGGCG AGACTCCTGA GGGAGCAGTG CCAGTCGAAG ACCGA	4	57	Start Positio n	End Positio n
					616451	616507
					854753	854809
					121257 5	121263 1
494901	1964351	TTACATGTTAA TACGTAGTATT AATGGCGAGA CTCCTGAGGG AGCAGTGCCA GTCGA	3	57	Start Positio n	End Positio n
					616444	616500
					121256 8	121262 4
					130132 3	130137 9

494901	1964351	TTATTTGATAG AAATCAGCTTT TTTGATATGTA TTTTATAATGT ACAGCT	3	50	Start Positio n	End Positio n
					616190	616239
					854032	854081
					121080 6	121085 5
494901	1964351	TTCAAGACCGA TCCCTTCAGCC GGA CT TGGG	2	31	Start Positio n	End Positio n
					140519 9	140522 9
					140541 3	140544 3
494901	1964351	TTCAATACCTT CTTTAACTGAA TGTTGAATAGC ATTTGTCATTC CCTCAAGTATT	2	55	Start Positio n	End Positio n
					100005 1	100010 5
					145799 4	145804 8
494901	1964351	TTCCTCCTCAT ATTTATAGACA ACTTGACCTGC CATAATCCCTA CTGCTT	2	50	Start Positio n	End Positio n
					999994	100004 3
					145793 7	145798 6
494901	1964351	TTGATTAATAC GATCTTTAAGT GCTTGTTTTTC CTTATCTGTTA GATTTGGATTT	2	55	Start Positio n	End Positio n
					883525	883579
					883756	883810

494901	1964351	TTGGGGCCCC GCCAACTTGC ACATTATTGTA AGCTGACTTTT CGTCAGCTTCT G	2	54	Start Positio n	End Positio n
					273396	273449
					273452	273505
494901	1964351	TTGTTGAAGTA TTTGATTAATA CGATCTTTAAG TGCTTGTTTTT CCTTATCTGTT	2	55	Start Positio n	End Positio n
					883513	883567
					883744	883798
494901	1964351	TTGTTTTTCCT TATCTGTTAGA TTTGATTTTG ATCGATTTTCGT CAATTAAAGCT TG	2	57	Start Positio n	End Positio n
					883318	883374
					883549	883605
494901	1964351	TTTAAAGAGCG TGAAGGTAAAT ATCAAGTAG	2	31	Start Positio n	End Positio n
					754063	754093
					755737	755767
494901	1964351	TTTATAATGAA AATAACTAATT GCAAAATAA	2	31	Start Positio n	End Positio n
					101128 4	101131 4
					146927 5	146930 5

494901	1964351	TTTATAGACAA CTTGACCTGC CATAATCCCTA CTGCTTCATCA AGTTCAATACC TTC	2	57	Start Positio n	End Positio n
					100000 6	100006 2
					145794 9	145800 5
494901	1964351	TTTATGTTGGG GCCCCGCCAA CTTGCATTGTT TGTAGAATTTC TTTTCGAAATT C	2	55	Start Positio n	End Positio n
					267901	267955
					267956	268010
494901	1964351	TTTCAGCTGAG AATATGTCATA ACCTGCATCC GTCTTATGATT TCGTTTCG	2	50	Start Positio n	End Positio n
					999887	999936
					145759 4	145764 3
494901	1964351	TTTCATTAACA TATCGCGAAAT ATCATTTTGAG GAATTCTAAC	2	43	Start Positio n	End Positio n
					121233 2	121237 4
					130108 7	130112 9
494901	1964351	TTTCGTCGTCC CACCCCAACTT GCATTGTCTGT AGAAATTGGG AATCCAATTTC T	3	55	Start Positio n	End Positio n
					225187	225241
					316644	316698
					880258	880312

494901	1964351	TTTTAACTTTA CTCTTTGATTT AAAGAGTGATA AATGTTTACAG TTT	3	47	Start Positio n	End Positio n
					128983	129029
					129116	129162
					129249	129295
494901	1964351	TTTTTCAAACA TAGTCTTATCA TTTTCTTCTAA TCGCGTTAAAC GCCAATCTTGT TC	2	57	Start Positio n	End Positio n
					971637	971693
					143550 6	143556 2
494901	1964351	TTTTTCGCATC TTCTTTAGCTT TCACTAAATCT TTGATGTCTTG CAATGC	2	50	Start Positio n	End Positio n
					883163	883212
					883394	883443
494901	1964351	TTTTTTGATAT GTATTTTATAA TGTACAGCTC GTTGAGCTGC TATTTTCCTTA TA	3	55	Start Positio n	End Positio n
					616209	616263
					854051	854105
					121082 5	121087 9
1963707	2073464	AAGAAACTATA GTATATGAAGT TTTAACTAGTG GTAATCAACCA TTCACT	2	50	Start Positio n	End Positio n
					503	552
					108776	108825

1963707	2073464	AGTTTTAACTA GTGGTAATCAA CCATTCACTTA TGAGTTACCT	2	43	Start Positio n	End Positio n
					522	564
					108795	108837
1963707	2073464	TATCGTCACAT AATGCGCGTA AATACTTGGAA TTTATTTTACA	2	43	Start Positio n	End Positio n
					572	614
					108845	108887
1963707	2073464	TATGAGTTACC TAAAGATTTAT CGTCACATAAT GCGCGTAAAT ACTTGGA	2	50	Start Positio n	End Positio n
					553	602
					108826	108875
1963707	2073464	TGGTAATCAAC CATTCACTTAT GAGTTACCTAA AGATTTATCGT CACATA	2	50	Start Positio n	End Positio n
					534	583
					108807	108856
1963707	2073464	TTTATAATGAA AATAACTAATT GCAAAATAA	2	31	Start Positio n	End Positio n
					469	499
					108743	108773
2072714	2244451	AAACCGCCTA CGCGCGCTTT ACGCCCAATAA TTCCGGATAAC GCTTGCCACC TACGT	2	57	Start Positio n	End Positio n
					54643	54699
					171045	171101

2072714	2244451	AAACTGCCCCG CCTGACACTGT CTCCCACCAC GATAAGTGGT GCGGGTTAG	2	50	Start Positio n	End Positio n
					50869	50918
					167356	167405
2072714	2244451	AAAGCCAACA CAGCTAGGGT AGTATCCCACC AGCGCCTCCA CGTAAGCTA	2	50	Start Positio n	End Positio n
					50919	50968
					167406	167455
2072714	2244451	AAAGGATGTCA AGATTTGGTAA GGTTCTTCGC GTTGCTTCGAA TTAAACCACAT G	2	55	Start Positio n	End Positio n
					54231	54285
					170633	170687
2072714	2244451	AACACTTAGCA CTCATCGTTTA CGGCGTGGAC TACCAGGGTAT CTAATCCTGTT T	2	55	Start Positio n	End Positio n
					54400	54454
					170802	170856
2072714	2244451	AACATCAGAGA AGCAAGCTTCT CGTCCGTTTCG CTCGACTTGCA TGTATTAGGCA CGC	2	57	Start Positio n	End Positio n
					55143	55199
					171545	171601
2072714	2244451	AACTAAGCTTA AGGGTTGCGC TCGTTGCGGG ACTTAACCCAA CATCTCACGAC ACGA	2	57	Start Positio n	End Positio n
					54105	54161
					170507	170563

2072714	2244451	AACTAGCTAAT GCAGCGCGGA TCCATCTATAA GTGACAGCAA GACCGTCTTTC AC	2	55	Start Positio n	End Positio n
					54981	55035
					171383	171437
2072714	2244451	AACTGAATACA ATATGTCACGT TATTCCGCATC TTCTGAAGAAG ATGTTCCGAAT AT	2	57	Start Positio n	End Positio n
					53624	53680
					170024	170080
2072714	2244451	AACTTAATCTA TGTTTCCACCA TTTTTATAA	2	31	Start Positio n	End Positio n
					53132	53162
					169619	169649
2072714	2244451	AAGTTTTCCAG TTTCCAATGAC CCTCCACGGT TGAGCCGTGG GCTTTCACATC AG	2	55	Start Positio n	End Positio n
					54581	54635
					170983	171037
2072714	2244451	AATAATTCCGG ATAACGCTTGC CACCTACGTAT TACCGCGGCT GCTGGCACGT AG	2	55	Start Positio n	End Positio n
					54669	54723
					171071	171125
2072714	2244451	AATCGTTACGC CTTTCGTGCG GGTCGGA ACT TACCCGACAA GGAATTTTCG	2	50	Start Positio n	End Positio n
					51131	51180
					167618	167667



2072714	2244451	AATGCGTTAGC TGCAGCACTAA GGGGCGGAAA CCCCCTAACA CTTAGCACTCA TCGT	2	57	Start Positio n	End Positio n
					54362	54418
					170764	170820
2072714	2244451	AATTCCTTTGA GTTTCAACCTT GCGGTCGTAC TCCCCAGGCG GAGTGCTTAAT GCGT	2	57	Start Positio n	End Positio n
					54312	54368
					170714	170770
2072714	2244451	ACATATCGATA ACATGACATAA CTCATGCTGG GTTTCCCCATT CGGAAAT	2	50	Start Positio n	End Positio n
					52982	53031
					169469	169518
2072714	2244451	ACATGCTCCAC CGCTTGTGCG GGTCCCCGTC AATTCCTTTGA GTTTCAACCTT GC	2	55	Start Positio n	End Positio n
					54281	54335
					170683	170737
2072714	2244451	ACATGGAATTC CACTTTCCTCT TCTGCACTCAA GTTTTCCAGTT TCCAATGACCC	2	55	Start Positio n	End Positio n
					54550	54604
					170952	171006
2072714	2244451	ACCAAATACTA AACGCCCTATT CAGACTCGCTT TCGCTACGGC TCCACAT	2	50	Start Positio n	End Positio n
					52432	52481
					168919	168968

2072714	2244451	ACCACTCCTCT TAACCTTCCAG CACCGGGCAG GCGTCAGCCC CTATACAT	2	50	Start Positio n	End Positio n
					51250	51299
					167737	167786
2072714	2244451	ACCCCCTAACA CTTAGCACTCA TCGTTTACGGC GTGGACTACC AGGGTATCTAA TCC	2	57	Start Positio n	End Positio n
					54393	54449
					170795	170851
2072714	2244451	ACCTATTAACC TCATCATCTTT GAGGGATCTT ATAACCGAAGT TGGGAAA	2	50	Start Positio n	End Positio n
					50281	50330
					166768	166817
2072714	2244451	ACCTGAACTTC AACCTGACCAA GGGTAGATCA CCTGGTTTCG GGTCTACG	2	50	Start Positio n	End Positio n
					52382	52431
					168869	168918
2072714	2244451	ACGATCCGAA GACCTTCATCA CTCACGCGGC GTTGCTCCGT CAGGCTTTCG CCCATT	2	57	Start Positio n	End Positio n
					54805	54861
					171207	171263
2072714	2244451	ACGCCTGTCG GCCTCAGCTTA GGACCCGACT AACCCAGAGC GGACGAGCC	2	50	Start Positio n	End Positio n
					51732	51781
					168219	168268

2072714	2244451	ACGCTTTCGCA CATCAGCGTC AGTTACAGACC AGAAAGTCGC CTTCGCCACT GGTGT	2	57	Start Positio n	End Positio n
					54462	54518
					170864	170920
2072714	2244451	ACGTCCTTCAT CGGCTTCTAGT GCCAAGGCAT CCACCGTGCG CCCTTAAT	2	50	Start Positio n	End Positio n
					53082	53131
					169569	169618
2072714	2244451	ACTAAGATGTT TCAGTTCTCCG GGTGTGCCTT CTGATATGCTA TGTATTC	2	50	Start Positio n	End Positio n
					52932	52981
					169419	169468
2072714	2244451	ACTACAGCCC CAGGATGCGA TGAGCCGACA TCGAGGTGCC AAACCTCCCC	2	50	Start Positio n	End Positio n
					50581	50630
					167068	167117
2072714	2244451	ACTGGTACAC CAGAGGTATG TCCATCCCGG TCCTCTCGTAC TAAGGACAG	2	50	Start Positio n	End Positio n
					50419	50468
					166906	166955
2072714	2244451	ACTTAAAAAAC CGCCTACGCG CGCTTTACGC CCAATAATTCC GGATAACGCTT GCCA	2	57	Start Positio n	End Positio n
					54636	54692
					171038	171094

2072714	2244451	ACTTAACCCAA CATCTCACGAC ACGAGCTGAC GACAACCATG CACCACCTGT CACTT	2	57	Start Positio n	End Positio n
					54136	54192
					170538	170594
2072714	2244451	ACTTACACATA TGTTCTTCCCT AATAACAGAGT TTTACGATCCG AAGACCTTCAT	2	55	Start Positio n	End Positio n
					54769	54823
					171171	171225
2072714	2244451	ACTTTCCTCTT CTGCACTCAA GTTTTCCAGTT TCCAATGACCC TCCACGGTTG AGCC	2	57	Start Positio n	End Positio n
					54562	54618
					170964	171020
2072714	2244451	AGACAGTGCC CAAATCGTTAC GCCTTTCGTG CGGGTCGGAA CTTACCCGA	2	50	Start Positio n	End Positio n
					51119	51168
					167606	167655
2072714	2244451	AGATGTGCAC AGTTACTTACA CATATGTTCTT CCCTAATAACA GAGTTTTACGA TCC	2	57	Start Positio n	End Positio n
					54755	54811
					171157	171213
2072714	2244451	AGCCAACATC CTAGTTGTCTG GGCAACGCCA CATCCTTTTCC ACTTAACA	2	50	Start Positio n	End Positio n
					52032	52081
					168519	168568

2072714	2244451	AGCGCCTCCA CGTAAGCTAG CGCTCACGTTT CAAAGGCTCC TACCTATCC	2	50	Start Positio n	End Positio n
					50950	50999
					167437	167486
2072714	2244451	AGCTCCACAT GTCACCATGCT TCCACCTCGAA CCTATTAACCT CATCATC	2	50	Start Positio n	End Positio n
					50250	50299
					166737	166786
2072714	2244451	AGGCACGCCA TCACCCATTAA CGGGCTCTGA CTACTTGTAAG CACACGGT	2	50	Start Positio n	End Positio n
					52532	52581
					169019	169068
2072714	2244451	AGGGTATCTAA TCCTGTTTGAT CCCCACGCTTT CGCACATCAG CGTCAGTTACA GAC	2	57	Start Positio n	End Positio n
					54436	54492
					170838	170894
2072714	2244451	AGGTAGGTTAT CCACGTGTTAC TCACCCGTCC GCCGCTAACA TCAGAGAAGC AAGCT	2	57	Start Positio n	End Positio n
					55105	55161
					171507	171563
2072714	2244451	AGTGCTTAATG CGTTAGCTGC AGCACTAAGG GGCGGAAACC CCCTAACACTT AGCAC	2	57	Start Positio n	End Positio n
					54355	54411
					170757	170813

2072714	2244451	AGTGTCTTACA ACCCCAACAA GCAAGCTTGTT GGTTTGGGCT CTTCCCGT	2	50	Start Positio n	End Positio n
					52832	52881
					169319	169368
2072714	2244451	AGTTGTCAAAG GATGTCAAGAT TTGGTAAGGTT CTTCGCGTTG CTTCGAATTAA ACC	2	57	Start Positio n	End Positio n
					54224	54280
					170626	170682
2072714	2244451	ATAAAAATTAT GATGTTTGATT AGCTCATAAAT ACTAAATAATG TTTGTAACCTA TA	2	57	Start Positio n	End Positio n
					55236	55292
					171638	171694
2072714	2244451	ATAAACATTCA AAACTGAATAC AATATGTCACG TTATTCCGCAT CTTCTGAAGAA GA	2	57	Start Positio n	End Positio n
					53612	53668
					170012	170068
2072714	2244451	ATCAAACCTCT CATAAAAATTA TGATGTTTGAT TAGCTCATAAA TACTAAATAAT GT	2	57	Start Positio n	End Positio n
					55224	55280
					171626	171682
2072714	2244451	ATCAGACTTAA AAAACCGCCTA CGCGCGCTTT ACGCCCAATAA TTCCGGATAAC G	2	55	Start Positio n	End Positio n
					54631	54685
					171033	171087

2072714	2244451	ATCAGCGTCA GTTACAGACCA GAAAGTCGCC TTCGCCACTG GTGTTCTCCA TATCT	2	57	Start Positio n	End Positio n
					54474	54530
					170876	170932
2072714	2244451	ATCATGCTTCA ACGCCCTTAG AACGCTCTCCT ACCATTGTCCA AAGGACA	2	50	Start Positio n	End Positio n
					51882	51931
					168369	168418
2072714	2244451	ATCCACAGCTT CGGTAATATGT TTAGCCCCGG TACATTTTCGG CGCAGTG	2	50	Start Positio n	End Positio n
					51932	51981
					168419	168468
2072714	2244451	ATCCCCACCTT CCTCCGGTTT GTCACCGGCA GTCAACTTAGA GTGCCCAACTT AATG	2	57	Start Positio n	End Positio n
					54043	54099
					170445	170501
2072714	2244451	ATCCGGTATTA GCTCCGGTTT CCCGAAGTTAT CCCAGTCTTAT AGGTAGGTTAT CCA	2	57	Start Positio n	End Positio n
					55062	55118
					171464	171520
2072714	2244451	ATGAGCCGAC ATCGAGGTGC CAAACCTCCC CGTCGATGTG AACTCTTGGG	2	50	Start Positio n	End Positio n
					50600	50649
					167087	167136

2072714	2244451	ATGGCAACTAA GCTTAAGGGTT GCGCTCGTTG CGGGACTTAA CCCAACATCTC AC	2	55	Start Positio n	End Positio n
					54100	54154
					170502	170556
2072714	2244451	ATGTCAAGATT TGGTAAGGTTC TTCGCGTTGCT TCGAATTAAAC CACATGCTCCA CC	2	57	Start Positio n	End Positio n
					54236	54292
					170638	170694
2072714	2244451	ATGTTAAATAA ACATTCAAAC TGAATACAATA TGTCACGTTAT TCCGCATCTTC TG	2	57	Start Positio n	End Positio n
					53605	53661
					170005	170061
2072714	2244451	ATTACCGCGG CTGCTGGCAC GTAGTTAGCC GTGGCTTTCTG ATTAGGTACCG TCA	2	55	Start Positio n	End Positio n
					54700	54754
					171102	171156
2072714	2244451	ATTAGCTCCG GTTTCCCGAA GTTATCCCAGT CTTATAGGTAG GTTATCCACGT GT	2	55	Start Positio n	End Positio n
					55069	55123
					171471	171525
2072714	2244451	ATTCCCTACTG CTGCCTCCCG TAGGAGTCTG GACCGTGTCT CAGTTCCAGT GTGG	2	55	Start Positio n	End Positio n
					54869	54923
					171271	171325



2072714	2244451	CAAACTAGAT AGTAAGTAAAA GTGATTTTGCT TCGCAAAACAT TTATTT	2	50	Start Positio n	End Positio n
					50169	50218
					166656	166705
2072714	2244451	CAAAGGCTCC TACCTATCCTG TACAAGCTGTG CCGAATTTCAA TATCAGG	2	50	Start Positio n	End Positio n
					50981	51030
					167468	167517
2072714	2244451	CAAGCTCCCTT ATGCCTTTACA CTCTATGAATG ATTTCCAACCA TTCTGA	2	50	Start Positio n	End Positio n
					50769	50818
					167256	167305
2072714	2244451	CAAGGAATTC GCTACCTTAG GACCGTTATAG TTACGGCCGC CGTTTACT	2	50	Start Positio n	End Positio n
					51169	51218
					167656	167705
2072714	2244451	CACAGTTACTT ACACATATGTT CTTCCCTAATA ACAGAGTTTTA CGATCCGAAG ACC	2	57	Start Positio n	End Positio n
					54762	54818
					171164	171220
2072714	2244451	CACATATGTTC TTCCCTAATAA CAGAGTTTTAC GATCCGAAGA CCTTCATCACT CAC	2	57	Start Positio n	End Positio n
					54774	54830
					171176	171232

2072714	2244451	CACCTTACGGT TTAGCAGAGA CCTGTGTTTT GATAAACAGTC GCTTGGG	2	50	Start Positio n	End Positio n
					51300	51349
					167787	167836
2072714	2244451	CACTCAAGAG AGACAACATTT TCGACTACAG GATTATTACCT TCTTTGAT	2	50	Start Positio n	End Positio n
					52732	52781
					169219	169268
2072714	2244451	CACTCACGCG GCGTTGCTCC GTCAGGCTTTC GCCCATTCGCG GAAGATTCCCT ACTGC	2	57	Start Positio n	End Positio n
					54824	54880
					171226	171282
2072714	2244451	CAGAAAGTCG CCTTCGCCACT GGTGTTCTC CATATCTCTGC GCATTTACCG CTAC	2	57	Start Positio n	End Positio n
					54493	54549
					170895	170951
2072714	2244451	CAGCACCGGG CAGGCGTCAG CCCCTATACAT CACCTTACGGT TTAGCAGA	2	50	Start Positio n	End Positio n
					51269	51318
					167756	167805
2072714	2244451	CAGCCTTAAC GAGTACCGGA TTTGCCTAATA CTCAGCCTTAC TGCTTAGA	2	50	Start Positio n	End Positio n
					51582	51631
					168069	168118

2072714	2244451	CAGCGCGGAT CCATCTATAAG TGACAGCAAG ACCGTCTTTCA CTTTTGAACCA TGCG	2	57	Start Positio n	End Positio n
					54993	55049
					171395	171451
2072714	2244451	CATATCTCTGC GCATTTACCG CTACACATGGA ATTCCACTTTC CTCTTCTGCAC TC	2	57	Start Positio n	End Positio n
					54524	54580
					170926	170982
2072714	2244451	CATCGTTGCCT TGGTAAGCCG TTACCTTACCA ACTAGCTAATG CAGCGCGGAT CC	2	55	Start Positio n	End Positio n
					54950	55004
					171352	171406
2072714	2244451	CATTTACCCGC TACACATGGAA TTCCACTTTCC TCTTCTGCACT CAAGTTTTCCA GT	2	57	Start Positio n	End Positio n
					54536	54592
					170938	170994
2072714	2244451	CCAAACCTCC CCGTCGATGT GAACTCTTGG GGGAGATAAG CCTGTTATCC	2	50	Start Positio n	End Positio n
					50619	50668
					167106	167155
2072714	2244451	CCAACATCTCA CGACACGAGC TGACGACAAC CATGCACCAC CTGTCACTTTG TCCCC	2	57	Start Positio n	End Positio n
					54143	54199
					170545	170601

2072714	2244451	CCAGGATCAA ACTCTCCATAA AAATTATGATG TTTGATTAGCT CATAAATACTA A	2	55	Start Positio n	End Positio n
					55219	55273
					171621	171675
2072714	2244451	CCCAGCTCGC GTACCGCTTTA ATGGGCGAAC AGCCCAACCC TTGGGACCG	2	50	Start Positio n	End Positio n
					50531	50580
					167018	167067
2072714	2244451	CCCCGTCAATT CCTTTGAGTTT CAACCTTGCG GTCGTA CTCC CCAGGCGGAG TGCTT	2	57	Start Positio n	End Positio n
					54305	54361
					170707	170763
2072714	2244451	CCCGTAGGAG TCTGGACCGT GTCTCAGTTCC AGTGTGGCCG ATCACCTCTC AGGTC	2	57	Start Positio n	End Positio n
					54886	54942
					171288	171344
2072714	2244451	CCCTCTCAGG TCGGCTATGC ATCGTTGCCTT GGTAAGCCGT TACCTTACCAA CTA	2	55	Start Positio n	End Positio n
					54931	54985
					171333	171387
2072714	2244451	CCCTTGGGAC CGACTACAGC CCCAGGATGC GATGAGCCGA CATCGAGGTG	2	50	Start Positio n	End Positio n
					50569	50618
					167056	167105

2072714	2244451	CCGATCACCC TCTCAGGTCG GCTATGCATC GTTGCCTTGGT AAGCCGTTAC CTTACC	2	57	Start Positio n	End Positio n
					54924	54980
					171326	171382
2072714	2244451	CCGCATCTTCT GAAGAAGATG TTCCGAATATA TCCTTAGAAAG GAGGTGATCC AG	2	55	Start Positio n	End Positio n
					53650	53704
					170050	170104
2072714	2244451	CCGCTACACAT GGAATTCCACT TTCCTCTTCTG CACTCAAGTTT TCCAGTTTCCA AT	2	57	Start Positio n	End Positio n
					54543	54599
					170945	171001
2072714	2244451	CCGGGGTAGC TTTTATCCGTT GAGCGATGGC CCTTCCATGC GGAACCACC	2	50	Start Positio n	End Positio n
					50669	50718
					167156	167205
2072714	2244451	CCGTCCGCCG CTAACATCAGA GAAGCAAGCT TCTCGTCCGTT CGCTCGACTT GCA	2	55	Start Positio n	End Positio n
					55131	55185
					171533	171587
2072714	2244451	CCGTCTTTCGA CCCTGCTCGA CTTGTAGGTCT CGCAGTCAAG CTCCCTTA	2	50	Start Positio n	End Positio n
					50731	50780
					167218	167267

2072714	2244451	CCTACGTATTA CCGCGGCTGC TGGCACGTAG TTAGCCGTGG CTTTCTGATTA GGTAC	2	57	Start Positio n	End Positio n
					54693	54749
					171095	171151
2072714	2244451	CCTATTCACTG CGGCTCTTCT GGGCGTTAAC CCTAAAGAGC ACCCCTTCT	2	50	Start Positio n	End Positio n
					51350	51399
					167837	167886
2072714	2244451	CCTCTCGTACT AAGGACAGCT CCTCTCAAATT TCCTACGCCC ACGACGGA	2	50	Start Positio n	End Positio n
					50450	50499
					166937	166986
2072714	2244451	CCTTACCAACT AGCTAATGCA GCGCGGATCC ATCTATAAGTG ACAGCAAGAC CGTCT	2	57	Start Positio n	End Positio n
					54974	55030
					171376	171432
2072714	2244451	CCTTCCATGC GGAACCACCG GATCACTAAGT CCGTCTTTCGA CCCTGCTC	2	50	Start Positio n	End Positio n
					50700	50749
					167187	167236
2072714	2244451	CCTTCCTCCG GTTTGTCAACG GCAGTCAACTT AGAGTGCCCA ACTTAATGATG GC	2	55	Start Positio n	End Positio n
					54050	54104
					170452	170506

2072714	2244451	CGACGTTCTG AACCCAGCTC GCGTACCGCT TTAATGGGCG AACAGCCCAA	2	50	Start Positio n	End Positio n
					50519	50568
					167006	167055
2072714	2244451	CGATCGATTAG TATTCGTCAGC TCCACATGTCA CCATGCTTCCA CCTCGA	2	50	Start Positio n	End Positio n
					50231	50280
					166718	166767
2072714	2244451	CGCACATCAG CGTCAGTTACA GACCAGAAAG TCGCCTTCGC CACTGGTGTTC CTC	2	55	Start Positio n	End Positio n
					54469	54523
					170871	170925
2072714	2244451	CGCCAGCGTT CATCCTGAGC CAGGATCAAA CTCTCCATAAA AATTATGATGT TTG	2	55	Start Positio n	End Positio n
					55200	55254
					171602	171656
2072714	2244451	CGCCGCTAAC ATCAGAGAAG CAAGCTTCTCG TCCGTTGCTC GACTTGATGT ATTA	2	57	Start Positio n	End Positio n
					55136	55192
					171538	171594
2072714	2244451	CGCGCTTTAC GCCCAATAATT CCGGATAACG CTTGCCACCTA CGTATTACCGC GGCT	2	57	Start Positio n	End Positio n
					54655	54711
					171057	171113

2072714	2244451	CGCGGCTGCT GGCACGTAGT TAGCCGTGGC TTTCTGATTAG GTACCGTCAA GATGTG	2	57	Start Positio n	End Positio n
					54705	54761
					171107	171163
2072714	2244451	CGCTACTCACA CCGGCATTCT CACTTCTAAGC GCTCCACATGT CCTTACG	2	50	Start Positio n	End Positio n
					51832	51881
					168319	168368
2072714	2244451	CGGCAGTCAA CTTAGAGTGC CCAACTTAATG ATGGCAACTAA GCTTAAGGGTT GC	2	55	Start Positio n	End Positio n
					54069	54123
					170471	170525
2072714	2244451	CGGGTCCCCG TCAATTCCTTT GAGTTTCAACC TTGCGGTCGT ACTCCCCAGG CGG	2	55	Start Positio n	End Positio n
					54300	54354
					170702	170756
2072714	2244451	CGGGTCGGAA CTTACCCGACA AGGAATTTTCGC TACCTTAGGAC CGTTATA	2	50	Start Positio n	End Positio n
					51150	51199
					167637	167686
2072714	2244451	CGGTACTION TCACTATCGGT CACTAGAGAG TATTTAGCCTT AGGAGATG	2	50	Start Positio n	End Positio n
					52632	52681
					169119	169168



2072714	2244451	CGTAGCTTCG CAGAAGCTAA CCACTCCTCTT AACCTTCCAGC ACCGGGCA	2	50	Start Positio n	End Positio n
					51231	51280
					167718	167767
2072714	2244451	CGTAGTTAGC CGTGGCTTTCT GATTAGGTACC GTCAAGATGT GCACAGTTACT TA	2	55	Start Positio n	End Positio n
					54719	54773
					171121	171175
2072714	2244451	CGTCAAGATGT GCACAGTTACT TACACATATGT TCTTCCCTAAT AACAGAGTTTT	2	55	Start Positio n	End Positio n
					54750	54804
					171152	171206
2072714	2244451	CGTCAGGCTTT CGCCCATTGC GGAAGATTCC CTACTGCTGC CTCCCGTAGG AGTCTG	2	57	Start Positio n	End Positio n
					54843	54899
					171245	171301
2072714	2244451	CGTGCAATCC AATCGCACGC TTCGCCTATCC TACTGCGTCC CCCCATCGA	2	50	Start Positio n	End Positio n
					51632	51681
					168119	168168
2072714	2244451	CGTGTTACTCA CCCGTCCGCC GCTAACATCAG AGAAGCAAGC TTCTCGTCCGT TC	2	55	Start Positio n	End Positio n
					55119	55173
					171521	171575

2072714	2244451	CGTTACCTTAC CAACTAGCTAA TGCAGCGCGG ATCCATCTATA AGTGACAGCA AG	2	55	Start Positio n	End Positio n
					54969	55023
					171371	171425
2072714	2244451	CGTTATTCCGC ATCTTCTGAAG AAGATGTTCCG AATATATCCTT AGAAAGGAGG TGA	2	57	Start Positio n	End Positio n
					53643	53699
					170043	170099
2072714	2244451	CGTTCGCTCG ACTTGCATGTA TTAGGCACGC CGCCAGCGTT CATCCTGAGC CAGG	2	55	Start Positio n	End Positio n
					55169	55223
					171571	171625
2072714	2244451	CGTTGCTTCGA ATTAAACCACA TGCTCCACCG CTTGTGCGGG TCCCCGTCAAT TCCT	2	57	Start Positio n	End Positio n
					54262	54318
					170664	170720
2072714	2244451	CTAAGGAGCTT AACTTCTGTGT TCGGCATGGG AACAGGTGTG ACCTCCTT	2	50	Start Positio n	End Positio n
					50081	50130
					166568	166617
2072714	2244451	CTAATCCTGTT TGATCCCCAC GCTTTCGCACA TCAGCGTCAG TTACAGACCAG AAAG	2	57	Start Positio n	End Positio n
					54443	54499
					170845	170901

2072714	2244451	CTACAGTAAAG CTCCACGGGG TCTTTCCGTCC TGTCGCGGGT AACCTGCA	2	50	Start Positio n	End Positio n
					51031	51080
					167518	167567
2072714	2244451	CTACCAGGGT ATCTAATCCTG TTTGATCCCCA CGCTTTCGCA CATCAGCGTC AGT	2	55	Start Positio n	End Positio n
					54431	54485
					170833	170887
2072714	2244451	CTACCATCGAC GCTAAGGAGC TTAACTTCTGT GTTCGGCATG GGAACAGG	2	50	Start Positio n	End Positio n
					50069	50118
					166556	166605
2072714	2244451	CTACCTTAGGA CCGTTATAGTT ACGGCCGCCG TTTACTGGGG CTTCGATT	2	50	Start Positio n	End Positio n
					51181	51230
					167668	167717
2072714	2244451	CTACGCGCGC TTTACGCCCAA TAATTCCGGAT AACGCTTGCC ACCTACGTATT AC	2	55	Start Positio n	End Positio n
					54650	54704
					171052	171106
2072714	2244451	CTACTGCTGC CTCCCGTAGG AGTCTGGACC GTGTCTCAGTT CCAGTGTGGC CGATCA	2	57	Start Positio n	End Positio n
					54874	54930
					171276	171332

2072714	2244451	CTATGCCGTTG GCACGACAAC TGGTACACCA GAGGTATGTC CATCCCGGT	2	50	Start Positio n	End Positio n
					50400	50449
					166887	166936
2072714	2244451	CTCACGACAC GAGCTGACGA CAACCATGCA CCACCTGTCA CTTTGTCCCC GAAG	2	55	Start Positio n	End Positio n
					54150	54204
					170552	170606
2072714	2244451	CTCCACCGCTT GTGCGGGTCC CCGTCAATTCC TTTGAGTTTCA ACCTTGCGGT CGTA	2	57	Start Positio n	End Positio n
					54286	54342
					170688	170744
2072714	2244451	CTCCCCAGGC GGAGTGCTTA ATGCGTTAGCT GCAGCACTAA GGGGCGGAAA CCCCCT	2	57	Start Positio n	End Positio n
					54343	54399
					170745	170801
2072714	2244451	CTCCGGTTTCC CGAAGTTATCC CAGTCTTATAG GTAGGTTATCC ACGTGTTACTC AC	2	57	Start Positio n	End Positio n
					55074	55130
					171476	171532
2072714	2244451	CTCCGGTTTGT CACCGGCAGT CAACTTAGAGT GCCCAACTTAA TGATGGCAACT AAG	2	57	Start Positio n	End Positio n
					54055	54111
					170457	170513

2072714	2244451	CTCCTCTCAAA TTTCCTACGCC CACGACGGAT AGGGACCGAA CTGTCTCA	2	50	Start Positio n	End Positio n
					50469	50518
					166956	167005
2072714	2244451	CTCTACCTCCA ATAATCATCAC TTGAGGCTAG CCCTAAAGCTA TTTCGGA	2	50	Start Positio n	End Positio n
					52232	52281
					168719	168768
2072714	2244451	CTCTATCTCTA GAGTTGTCAAA GGATGTCAAG ATTTGGTAAGG TTCTTCGCGTT GCT	2	57	Start Positio n	End Positio n
					54212	54268
					170614	170670
2072714	2244451	CTCTGGATCAA AGCTTACTTAC AGCTCCCCAA AGCATATCGTC GTTAGTA	2	50	Start Positio n	End Positio n
					53032	53081
					169519	169568
2072714	2244451	CTGCCCTTTGT ATTGTCCATTG TAGCACGTGT GTAGCCCAAAT CATAAGGGGC ATGA	2	57	Start Positio n	End Positio n
					53974	54030
					170374	170430
2072714	2244451	CTGCGCATTTT ACCGCTACAC ATGGAATTCCA CTTTCCTCTTC TGCACTCAAGT T	2	55	Start Positio n	End Positio n
					54531	54585
					170933	170987

2072714	2244451	CTGGTGTTCTCCT CCATATCTCTG CGCATTTCACCG GCTACACATG GAATTCCACTT TCC	2	57	Start Positio n	End Positio n
					54512	54568
					170914	170970
2072714	2244451	CTTAAGGGTTG CGCTCGTTGC GGGACTTAAC CCAACATCTCA CGACACGAGC TGACG	2	57	Start Positio n	End Positio n
					54112	54168
					170514	170570
2072714	2244451	CTTAATGATGG CAACTAAGCTT AAGGGTTGCG CTCGTTGCGG GACTTAACCCA ACAT	2	57	Start Positio n	End Positio n
					54093	54149
					170495	170551
2072714	2244451	CTTATAGGTAG GTTATCCACGT GTTACTCACCC GTCCGCCGCT AACATCAGAGA A	2	55	Start Positio n	End Positio n
					55100	55154
					171502	171556
2072714	2244451	CTTCCACCTCG AACCTATTAAC CTCATCATCTT TGAGGGATCTT ATAACC	2	50	Start Positio n	End Positio n
					50269	50318
					166756	166805
2072714	2244451	CTTCGCAAAAC ATTTATTTTGA TTAAGTCTTCG ATCGATTAGTA TTCGTC	2	50	Start Positio n	End Positio n
					50200	50249
					166687	166736

2072714	2244451	CTTGCCACCTA CGTATTACCGC GGCTGCTGGC ACGTAGTTAGC CGTGGCTTTCT GAT	2	57	Start Positio n	End Positio n
					54686	54742
					171088	171144
2072714	2244451	CTTGCGGTCG TACTCCCCAG GCGGAGTGCT TAATGCGTTAG CTGCAGCACT AAGG	2	55	Start Positio n	End Positio n
					54331	54385
					170733	170787
2072714	2244451	CTTTCACATCA GACTTAAAAA CCGCCTACGC GCGCTTTACG CCCAATAATTC CGGA	2	57	Start Positio n	End Positio n
					54624	54680
					171026	171082
2072714	2244451	CTTTCGCCCAT TGCGGAAGAT TCCCTACTGCT GCCTCCCGTA GGAGTCTGGA CCG	2	55	Start Positio n	End Positio n
					54850	54904
					171252	171306
2072714	2244451	GAAGACCTTCA TCACTCACGC GGCGTTGCTC CGTCAGGCTTT CGCCCATTGC GGAAG	2	57	Start Positio n	End Positio n
					54812	54868
					171214	171270
2072714	2244451	GAAGTTATCCC AGTCTTATAGG TAGGTTATCCA CGTGTTACTCA CCCGTCCGCC GCT	2	57	Start Positio n	End Positio n
					55086	55142
					171488	171544

2072714	2244451	GAAGTTGGGA AATCTCATCTT GAGGGGGGCT TCATGCTTAGA TGCTTTCA	2	50	Start Positio n	End Positio n
					50319	50368
					166806	166855
2072714	2244451	GAATTCCACTT TCCTCTTCTGC ACTCAAGTTTT CCAGTTTCCAA TGACCCTCCA CGG	2	57	Start Positio n	End Positio n
					54555	54611
					170957	171013
2072714	2244451	GACCCTCCAC GGTTGAGCCG TGGGCTTTCAC ATCAGACTTAA AAAACCGCCTA CG	2	55	Start Positio n	End Positio n
					54600	54654
					171002	171056
2072714	2244451	GACCGTGTCT CAGTTCCAGT GTGGCCGATC ACCCTCTCAG GTCGGCTATG CATCG	2	55	Start Positio n	End Positio n
					54900	54954
					171302	171356
2072714	2244451	GACCTGTGTTT TTGATAAACAG TCGCTTGGGC CTATTCACTGC GGCTCTT	2	50	Start Positio n	End Positio n
					51319	51368
					167806	167855
2072714	2244451	GACTTGTAGGT CTCGCAGTCA AGCTCCCTTAT GCCTTTACACT CTATGAA	2	50	Start Positio n	End Positio n
					50750	50799
					167237	167286



2072714	2244451	GAGAAGCAAG CTTCTCGTCCG TTCGCTCGACT TGCATGTATTA GGCACGCCGC CA	2	55	Start Positio n	End Positio n
					55150	55204
					171552	171606
2072714	2244451	GAGGTATGTC CATCCCGGTC CTCTCGTACTA AGGACAGCTC CTCTCAAAT	2	50	Start Positio n	End Positio n
					50431	50480
					166918	166967
2072714	2244451	GAGTCTGGAC CGTGTCTCAGT TCCAGTGTGG CCGATCACCC TCTCAGGTCG GCTATG	2	57	Start Positio n	End Positio n
					54893	54949
					171295	171351
2072714	2244451	GAGTTTGTCTG AATTCGGTAAC CCGAGAGGGG CCCCTCGTCC AAACAGTG	2	50	Start Positio n	End Positio n
					52182	52231
					168669	168718
2072714	2244451	GATAAGTGGT GCGGGTTAGA AAGCCAACAC AGCTAGGGTA GTATCCCACC	2	50	Start Positio n	End Positio n
					50900	50949
					167387	167436
2072714	2244451	GATCCATCTAT AAGTGACAGC AAGACCGTCTT TCACTTTTGAA CCATGCGGTT CA	2	55	Start Positio n	End Positio n
					55000	55054
					171402	171456

2072714	2244451	GATCCCCACG CTTTCGCACAT CAGCGTCAGT TACAGACCAG AAAGTCGCCTT CGCCA	2	57	Start Positio n	End Positio n
					54455	54511
					170857	170913
2072714	2244451	GATTTGGTAAG GTTCTTCGCGT TGCTTCGAATT AAACCACATGC TCCACCGCTT GTG	2	57	Start Positio n	End Positio n
					54243	54299
					170645	170701
2072714	2244451	GCAAGCTTCTC GTCCGTTTCGC TCGACTTG CAT GTATTAGGCAC GCCGCCAGCG TTCA	2	57	Start Positio n	End Positio n
					55155	55211
					171557	171613
2072714	2244451	GCACTTATCCC GTCCACACATA GCTACCCAGC TATGCCGTTG GCACGACA	2	50	Start Positio n	End Positio n
					50369	50418
					166856	166905
2072714	2244451	GCAGCACTAA GGGGCGGAAA CCCCCTAACA CTTAGCACTCA TCGTTTACGGC GTGGA	2	57	Start Positio n	End Positio n
					54374	54430
					170776	170832
2072714	2244451	GCCCATTGCG GAAGATTCCCT ACTGCTGCCT CCCGTAGGAG TCTGGACCGT GTCTCA	2	57	Start Positio n	End Positio n
					54855	54911
					171257	171313

2072714	2244451	GCCTGGCAAC GTTCTACTCTA GCGGAACGTA AGTTCGACTAC CATCGACG	2	50	Start Positio n	End Positio n
					50031	50080
					166518	166567
2072714	2244451	GCGCCTCCGT TACCTTTTAGG AGGCGACCGC CCCAGTCAAA CTGCCCCGCC	2	50	Start Positio n	End Positio n
					50831	50880
					167318	167367
2072714	2244451	GCGCTCACGT TTCAAAGGCTC CTACCTATCCT GTACAAGCTGT GCCGAAT	2	50	Start Positio n	End Positio n
					50969	51018
					167456	167505
2072714	2244451	GCGGAAGATT CCCTACTGCT GCCTCCCGTA GGAGTCTGGA CCGTGTCTCA GTTCCAG	2	57	Start Positio n	End Positio n
					54862	54918
					171264	171320
2072714	2244451	GCGGCGTTGC TCCGTCAGGC TTTCGCCCATT GCGGAAGATT CCCTACTGCT GCCT	2	55	Start Positio n	End Positio n
					54831	54885
					171233	171287
2072714	2244451	GCGGGACTTA ACCCAACATCT CACGACACGA GCTGACGACA ACCATGCACC ACCT	2	55	Start Positio n	End Positio n
					54131	54185
					170533	170587

2072714	2244451	GCGTGGACTA CCAGGGTATC TAATCCTGTTT GATCCCCACG CTTTCGCACAT CAGCG	2	57	Start Positio n	End Positio n
					54424	54480
					170826	170882
2072714	2244451	GCGTTCATCCT GAGCCAGGAT CAAACCTCTCCA TAAAAATTATG ATGTTTGATTA GCT	2	57	Start Positio n	End Positio n
					55205	55261
					171607	171663
2072714	2244451	GCTAATGCAG CGCGGATCCA TCTATAAGTGA CAGCAAGACC GTCTTTCACCTT TTGAA	2	57	Start Positio n	End Positio n
					54986	55042
					171388	171444
2072714	2244451	GCTAGGGTAG TATCCCACCAG CGCCTCCACG TAAGCTAGCG CTCACGTTT	2	50	Start Positio n	End Positio n
					50931	50980
					167418	167467
2072714	2244451	GCTCGACTTG CATGTATTAGG CACGCCGCCA GCGTTCATCCT GAGCCAGGAT CAAAC	2	57	Start Positio n	End Positio n
					55174	55230
					171576	171632
2072714	2244451	GCTCGTTGCG GGACTTAACC CAACATCTCAC GACACGAGCT GACGACAACC ATGCAC	2	57	Start Positio n	End Positio n
					54124	54180
					170526	170582

2072714	2244451	GCTGGCACGT AGTTAGCCGT GGCTTTCTGAT TAGGTACCGT CAAGATGTGC ACAGTT	2	57	Start Positio n	End Positio n
					54712	54768
					171114	171170
2072714	2244451	GCTTGTGCGG GTCCCCGTCA ATTCCTTTGAG TTTCAACCTTG CGGTCGTACT CCCCA	2	57	Start Positio n	End Positio n
					54293	54349
					170695	170751
2072714	2244451	GGACCTTATCA CCCATGTTCTG ACTCCCAAGTT AAATTAATTGG CATTCG	2	50	Start Positio n	End Positio n
					52132	52181
					168619	168668
2072714	2244451	GGAGATAAGC CTGTTATCCCC GGGGTAGCTT TTATCCGTTGA GCGATGGC	2	50	Start Positio n	End Positio n
					50650	50699
					167137	167186
2072714	2244451	GGAGGCGACC GCCCCAGTCA AACTGCCCCG CTGACACTGTC TCCCACCAC	2	50	Start Positio n	End Positio n
					50850	50899
					167337	167386
2072714	2244451	GGATCACTAA GTCCGTCTTTC GACCCTGCTC GACTTGTAGGT CTCGCAGT	2	50	Start Positio n	End Positio n
					50719	50768
					167206	167255

2072714	2244451	GGCACGCCGC CAGCGTTCATC CTGAGCCAGG ATCAAACCTCTC CATAAAAATTA TGAT	2	57	Start Position	End Position
					55193	55249
					171595	171651
2072714	2244451	GGCGGAAACC CCCTAACACTT AGCACTCATC GTTTACGGCG TGGACTACCA GGGTAT	2	57	Start Position	End Position
					54386	54442
					170788	170844
2072714	2244451	GGCGGAGTGC TTAATGCGTTA GCTGCAGCAC TAAGGGGCGG AAACCCCCTAA CAC	2	55	Start Position	End Position
					54350	54404
					170752	170806
2072714	2244451	GGCGTCAGCC CCTATACATCA CCTTACGGTTT AGCAGAGACC TGTGTTTT	2	50	Start Position	End Position
					51281	51330
					167768	167817
2072714	2244451	GGCTATGCAT CGTTGCCTTG GTAAGCCGTTA CCTTACCAACT AGCTAATGCA GCGCG	2	57	Start Position	End Position
					54943	54999
					171345	171401
2072714	2244451	GGGAACCTTT GAGCGCCTCC GTTACCTTTTA GGAGGCGACC GCCCCAGTC	2	50	Start Position	End Position
					50819	50868
					167306	167355

2072714	2244451	GGGGCTTCGA TTCGTAGCTTC GCAGAAGCTA ACCACTCCTCT TAACCTTC	2	50	Start Positio n	End Positio n
					51219	51268
					167706	167755
2072714	2244451	GGGTAACCTG CATCTTCACAG GTACTATGATT TCACCGAGTCT CTCGTTG	2	50	Start Positio n	End Positio n
					51069	51118
					167556	167605
2072714	2244451	GGTAAGCCGT TACCTTACCAA CTAGCTAATGC AGCGCGGATC CATCTATAAGT GACA	2	57	Start Positio n	End Positio n
					54962	55018
					171364	171420
2072714	2244451	GGTCGTA CTC CCCAGGCGGA GTGCTTAATGC GTTAGCTGCA GCACTAAGGG GCGGAA	2	57	Start Positio n	End Positio n
					54336	54392
					170738	170794
2072714	2244451	GGTCTTTCCGT CCTGTCGCGG GTAACCTGCAT CTTCACAGGTA CTATGAT	2	50	Start Positio n	End Positio n
					51050	51099
					167537	167586
2072714	2244451	GTAAGTAAAAG TGATTTTGCTT CGCAAAACATT TATTTTGATTA AGTCTT	2	50	Start Positio n	End Positio n
					50181	50230
					166668	166717

2072714	2244451	GTCAACTTAGA GTGCCCAACTT AATGATGGCAA CTAAGCTTAAG GGTTGCGCTC GTT	2	57	Start Positio n	End Positio n
					54074	54130
					170476	170532
2072714	2244451	GTCCTCCCAG ATTCCGACGG AATTTACGTG	2	31	Start Positio n	End Positio n
					52682	52712
					169169	169199
2072714	2244451	GTCGATGTGA ACTCTTGGGG GAGATAAGCC TGTTATCCCCG GGGTAGCTT	2	50	Start Positio n	End Positio n
					50631	50680
					167118	167167
2072714	2244451	GTCGGTTTGC GGTACGGGCA CCTATTTTCTA TCTAGAGGCTT TTCTCGGC	2	50	Start Positio n	End Positio n
					51482	51531
					167969	168018
2072714	2244451	GTGGGCTTTC ACATCAGACTT AAAAAACCGC CTACGCGCGC TTTACGCCCAA TAA	2	55	Start Positio n	End Positio n
					54619	54673
					171021	171075
2072714	2244451	GTTACGGCCG CCGTTTACTGG GGCTTCGATTC GTAGCTTCGC AGAAGCTA	2	50	Start Positio n	End Positio n
					51200	51249
					167687	167736



2072714	2244451	GTTCCAGTGT GGCCGATCAC CCTCTCAGGT CGGCTATGCA TCGTTGCCTTG GTAAGC	2	57	Start Positio n	End Positio n
					54912	54968
					171314	171370
2072714	2244451	GTTTCGATTGGA ATTTCTCCGCT ACCCTCAGT	2	31	Start Positio n	End Positio n
					52301	52331
					168788	168818
2072714	2244451	GTTCTTCCCTA ATAACAGAGTT TTACGATCCGA AGACCTTCATC ACTCACGCGG C	2	55	Start Positio n	End Positio n
					54781	54835
					171183	171237
2072714	2244451	GTTGCGCTCG TTGCGGGACT TAACCCAACAT CTCACGACAC GAGCTGACGA CAAC	2	55	Start Positio n	End Positio n
					54119	54173
					170521	170575
2072714	2244451	GTTGCTCCGT CAGGCTTTCG CCCATTGCGG AAGATTCCCTA CTGCTGCCTC CCGTAG	2	57	Start Positio n	End Positio n
					54836	54892
					171238	171294
2072714	2244451	GTTTTACGATC CGAAGACCTT CATCACTCACG CGGCGTTGCT CCGTCAGGCT TTC	2	55	Start Positio n	End Positio n
					54800	54854
					171202	171256

2072714	2244451	TAACAGAGTTT TACGATCCGAA GACCTTCATCA CTCACGCGGC GTTGCTCCGT CAGG	2	57	Start Positio n	End Positio n
					54793	54849
					171195	171251
2072714	2244451	TAACGCTTGCC ACCTACGTATT ACCGCGGCTG CTGGCACGTA GTTAGCCGTG GCT	2	55	Start Positio n	End Positio n
					54681	54735
					171083	171137
2072714	2244451	TAAGGGGCGG AAACCCCCTAA CACTTAGCACT CATCGTTTACG GCGTGGACTA CC	2	55	Start Positio n	End Positio n
					54381	54435
					170783	170837
2072714	2244451	TAAGGTTCTTC GCGTTGCTTC GAATTAAACCA CATGCTCCAC CGCTTGTGCG GGT	2	55	Start Positio n	End Positio n
					54250	54304
					170652	170706
2072714	2244451	TAATGGGCGA ACAGCCCAAC CCTTGGGACC GACTACAGCC CCAGGATGCG	2	50	Start Positio n	End Positio n
					50550	50599
					167037	167086
2072714	2244451	TACAATATGTC ACGTTATTCCG CATCTTCTGAA GAAGATGTTCC GAATATATCCT	2	55	Start Positio n	End Positio n
					53631	53685
					170031	170085

2072714	2244451	TACAGACCAG AAAGTCGCCTT CGCCACTGGT GTTCTCCATA TCTCTGCGCAT TTCA	2	57	Start Positio n	End Positio n
					54486	54542
					170888	170944
2072714	2244451	TACGCCCAATA ATTCCGGATAA CGCTTGCCAC CTACGTATTAC CGCGGCTGCT GGCA	2	57	Start Positio n	End Positio n
					54662	54718
					171064	171120
2072714	2244451	TACTCACCCGT CCGCCGCTAA CATCAGAGAA GCAAGCTTCTC GTCCGTTCGC TCGAC	2	57	Start Positio n	End Positio n
					55124	55180
					171526	171582
2072714	2244451	TAGAGTGCCC AACTTAATGAT GGCAACTAAG CTTAAGGGTTG CGCTCGTTGC GGG	2	55	Start Positio n	End Positio n
					54081	54135
					170483	170537
2072714	2244451	TAGCGGAACG TAAGTTCGACT ACCATCGACG CTAAGGAGCTT AACTTCTG	2	50	Start Positio n	End Positio n
					50050	50099
					166537	166586
2072714	2244451	TAGCTGCAGC ACTAAGGGGC GGAAACCCCC TAACACTTAGC ACTCATCGTTT ACG	2	55	Start Positio n	End Positio n
					54369	54423
					170771	170825

2072714	2244451	TAGGGACCGA ACTGTCTCACG ACGTTCTGAAC CCAGCTCGCG TACCGCTT	2	50	Start Positio n	End Positio n
					50500	50549
					166987	167036
2072714	2244451	TAGGTACCGT CAAGATGTGC ACAGTTACTTA CACATATGTTC TTCCCTAATAA CAGA	2	57	Start Positio n	End Positio n
					54743	54799
					171145	171201
2072714	2244451	TATATTTTGGG ACCTTAGCTG GTGGTCTGGG CTGTTTCCCTT TCGAACAC	2	50	Start Positio n	End Positio n
					52082	52131
					168569	168618
2072714	2244451	TATGTCACGTT ATTCCGCATCT TCTGAAGAAGA TGTTCCGAATA TATCCTTAGAA AG	2	57	Start Positio n	End Positio n
					53636	53692
					170036	170092
2072714	2244451	TCACTCGACTA GTGAGCTATTA CGCACTCTTTA AATGATGGCT GCTTCTA	2	50	Start Positio n	End Positio n
					51982	52031
					168469	168518
2072714	2244451	TCAGGTCCGC TATGCATCGTT GCCTTGGTAA GCCGTTACCTT ACCAACTAGCT AATG	2	57	Start Positio n	End Positio n
					54936	54992
					171338	171394

2072714	2244451	TCAGTTACAGA CCAGAAAGTC GCCTTCGCCA CTGGTGTTCT CCATATCTCTG CG	2	55	Start Positio n	End Positio n
					54481	54535
					170883	170937
2072714	2244451	TCATCCGCTCA CTTTTCAACGT AAGTCGGTTC GGTCCTCCATT CAGTGTT	2	50	Start Positio n	End Positio n
					52332	52381
					168819	168868
2072714	2244451	TCATCGTTTAC GGCGTGGACT ACCAGGGTAT CTAATCCTGTT TGATCCCCAC GCTTT	2	57	Start Positio n	End Positio n
					54412	54468
					170814	170870
2072714	2244451	TCATCTTTCCA GATGATTCGTC TAATGTCGTCC TTTGTA ACTCC GTATAG	2	50	Start Positio n	End Positio n
					52782	52831
					169269	169318
2072714	2244451	TCATGCTTAGA TGCTTTCAGCA CTTATCCCGTC CACACATAGCT ACCCAG	2	50	Start Positio n	End Positio n
					50350	50399
					166837	166886
2072714	2244451	TCCACACATAG CTACCCAGCTA TGCCGTTGGC ACGACAACTG GTACACCA	2	50	Start Positio n	End Positio n
					50381	50430
					166868	166917

2072714	2244451	TCCACGGTTG AGCCGTGGGC TTTCACATCAG ACTTAAAAAAC CGCCTACGCG CGCTT	2	57	Start Positio n	End Positio n
					54605	54661
					171007	171063
2072714	2244451	TCCCAGTCTTA TAGGTAGGTTA TCCACGTGTTA CTCACCCGTC CGCCGCTAAC ATCA	2	57	Start Positio n	End Positio n
					55093	55149
					171495	171551
2072714	2244451	TCCCTAATAAC AGAGTTTTACG ATCCGAAGAC CTTCATCACTC ACGCGGCGTT GCTC	2	57	Start Positio n	End Positio n
					54786	54842
					171188	171244
2072714	2244451	TCCTCCATATC TCTGCGCATTT CACCGCTACA CATGGAATTCC ACTTTCCTCTT C	2	55	Start Positio n	End Positio n
					54519	54573
					170921	170975
2072714	2244451	TCCTGAGCCA GGATCAAATC TCCATAAAAAT TATGATGTTTG ATTAGCTCATA AAT	2	57	Start Positio n	End Positio n
					55212	55268
					171614	171670
2072714	2244451	TCGAATTAAAC CACATGCTCCA CCGCTTGTGC GGGTCCCCGT CAATTCCTTTG AG	2	55	Start Positio n	End Positio n
					54269	54323
					170671	170725

2072714	2244451	TCGCCTTCGC CACTGGTGTTCTCCATATCTCTGCGCATTTCACCGCTACACATG	2	55	Start Position	End Position
					54500	54554
					170902	170956
2072714	2244451	TCTAGAGTTGTCAAAGGATGTCAAGATTTGGTAAGGTTCTTCGCGTTGCTTCGA	2	55	Start Position	End Position
					54219	54273
					170621	170675
2072714	2244451	TCTCATCTTGAGGGGGGCTTCATGCTTAGATGCTTTCAGCACTTATCCCG	2	50	Start Position	End Position
					50331	50380
					166818	166867
2072714	2244451	TCTCCATAAAATTATGATGTTTGATTAGCTCATAAATACTAAATAATGTTTGTA	2	55	Start Position	End Position
					55231	55285
					171633	171687
2072714	2244451	TCTCGTCCGTTGCTCGACTTGCATGTATTAGGCACGCCGCCAGCGTTCATCCTGAG	2	57	Start Position	End Position
					55162	55218
					171564	171620
2072714	2244451	TCTTCACAGGTACTATGATTTCACCGAGTCTCTCGTTGAGACAGTGCCCA	2	50	Start Position	End Position
					51081	51130
					167568	167617

2072714	2244451	TCTTCTGAAGA AGATGTTCCGA ATATATCCTTA GAAAGGAGGT GATCCAGCCG CACC	2	57	Start Positio n	End Positio n
					53655	53711
					170055	170111
2072714	2244451	TCTTCTGCACT CAAGTTTTCCA GTTTCCAATGA CCCTCCACGG TTGAGCCGTG GG	2	55	Start Positio n	End Positio n
					54569	54623
					170971	171025
2072714	2244451	TGACACTGTCT CCCACCACGA TAAGTGGTGC GGGTTAGAAA GCCAACACA	2	50	Start Positio n	End Positio n
					50881	50930
					167368	167417
2072714	2244451	TGACGTCATCC CCACCTTCCTC CGGTTTGTCAC CGGCAGTCAA CTTAGAGTGC CCAA	2	57	Start Positio n	End Positio n
					54036	54092
					170438	170494
2072714	2244451	TGATAAACAGT CGCTTGGGCC TATTCAGTGG GCTCTTCTGG GCGTTAAC	2	50	Start Positio n	End Positio n
					51331	51380
					167818	167867
2072714	2244451	TGATTAAGTCT TCGATCGATTA GTATTCGTCAG CTCCACATGTC ACCATG	2	50	Start Positio n	End Positio n
					50219	50268
					166706	166755



2072714	2244451	TGATTTCCAAC CATTCTGAGG GAACCTTTGAG CGCCTCCGTT ACCTTTTA	2	50	Start Positio n	End Positio n
					50800	50849
					167287	167336
2072714	2244451	TGCACTCAAGT TTTCCAGTTTC CAATGACCCTC CACGGTTGAG CCGTGGGCTT TCAC	2	57	Start Positio n	End Positio n
					54574	54630
					170976	171032
2072714	2244451	TGCCCAACTTA ATGATGGCAA CTAAGCTTAAG GGTTGCGCTC GTTGCGGGAC TTAAC	2	57	Start Positio n	End Positio n
					54086	54142
					170488	170544
2072714	2244451	TGCCTCCCGT AGGAGTCTGG ACCGTGTCTCA GTTCCAGTGT GGCCGATCAC CCTC	2	55	Start Positio n	End Positio n
					54881	54935
					171283	171337
2072714	2244451	TGCCTTTACAC TCTATGAATGA TTTCCAACCAT TCTGAGGGAA CCTTTGA	2	50	Start Positio n	End Positio n
					50781	50830
					167268	167317
2072714	2244451	TGGCTTTCTGA TTAGGTACCGT CAAGATGTGC ACAGTTACTTA CACATATGTTC T	2	55	Start Positio n	End Positio n
					54731	54785
					171133	171187

2072714	2244451	TGTACAAGCTG TGCCGAATTTTC AATATCAGGCT ACAGTAAAGCT CCACGG	2	50	Start Positio n	End Positio n
					51000	51049
					167487	167536
2072714	2244451	TGTATTAGGCA CGCCGCCAGC GTTTCATCCTGA GCCAGGATCA AACTCTCCATA AAAA	2	57	Start Positio n	End Positio n
					55186	55242
					171588	171644
2072714	2244451	TGTCTCAGTTC CAGTGTGGCC GATCACCTCT CAGGTCGGCT ATGCATCGTTG CCTT	2	57	Start Positio n	End Positio n
					54905	54961
					171307	171363
2072714	2244451	TGTGGCCGAT CACCTCTCA GGTCGGCTAT GCATCGTTGC CTTGGTAAGC CGTTA	2	55	Start Positio n	End Positio n
					54919	54973
					171321	171375
2072714	2244451	TGTTTCGGCAT GGGAACAGGT GTGACCTCCTT GCTATAGTCAC CAGACATA	2	50	Start Positio n	End Positio n
					50100	50149
					166587	166636
2072714	2244451	TGTTTGATCCC CACGCTTTTCG CACATCAGCG TCAGTTACAGA CCAGAAAGTC GCC	2	55	Start Positio n	End Positio n
					54450	54504
					170852	170906

2072714	2244451	TTAAAACGATT ATAGGTGGTA CAGGAATATCA ACCTGTTATCC ATCGCCT	2	50	Start Positio n	End Positio n
					51682	51731
					168169	168218
2072714	2244451	TTAAACCACAT GCTCCACCGC TTGTGCGGGT CCCCGTCAATT CCTTTGAGTTT CAAC	2	57	Start Positio n	End Positio n
					54274	54330
					170676	170732
2072714	2244451	TTAACGAGAGT TCGCTCGCTC ACCTTAGAATT CTCATCTTGAC TACCTGT	2	50	Start Positio n	End Positio n
					51432	51481
					167919	167968
2072714	2244451	TTACGGCGTG GACTACCAGG GTATCTAATCC TGTTTGATCCC CACGCTTTCG CAC	2	55	Start Positio n	End Positio n
					54419	54473
					170821	170875
2072714	2244451	TTRACTGCTTAA CCTTGCATCAA ATCGTAACTCG CCGGTTCATTC TACAAA	2	50	Start Positio n	End Positio n
					52482	52531
					168969	169018
2072714	2244451	TTAGCACTCAT CGTTTACGGC GTGGACTACC AGGGTATCTAA TCCTGTTTGAT CCCC	2	57	Start Positio n	End Positio n
					54405	54461
					170807	170863

2072714	2244451	TTAGCCGTGG CTTTCTGATTA GGTACCGTCA AGATGTGCAC AGTTACTTACA CATAT	2	57	Start Positio n	End Positio n
					54724	54780
					171126	171182
2072714	2244451	TTATCCACGTG TTACTCACCCG TCCGCCGCTA ACATCAGAGAA GCAAGCTTCTC GTC	2	57	Start Positio n	End Positio n
					55112	55168
					171514	171570
2072714	2244451	TTATCCGTTGA GCGATGGCCC TTCCATGCGG AACCACCGGA TCACTAAGT	2	50	Start Positio n	End Positio n
					50681	50730
					167168	167217
2072714	2244451	TTATGATGTTT GATTAGCTCAT AAATACTAAAT AATGTTTGTA CTTATAGTTAC GT	2	57	Start Positio n	End Positio n
					55243	55299
					171645	171701
2072714	2244451	TTCAAACTGA ATACAATATGT CACGTTATTCC GCATCTTCTGA AGAAGATGTTC	2	55	Start Positio n	End Positio n
					53619	53673
					170019	170073
2072714	2244451	TTCAATATCAG GCTACAGTAAA GCTCCACGGG GTCTTTCCGTC CTGTCGC	2	50	Start Positio n	End Positio n
					51019	51068
					167506	167555



2072714	2244451	TTCCGGATAAC GCTTGCCACC TACGTATTACC GCGGCTGCTG GCACGTAGTTA GCCG	2	57	Start Positio n	End Positio n
					54674	54730
					171076	171132
2072714	2244451	TTCCTACGCCC ACGACGGATA GGGACCGAAC TGTCTCACGAC GTTCTGAA	2	50	Start Positio n	End Positio n
					50481	50530
					166968	167017
2072714	2244451	TTCCTCTGGAA ACCTTAGTCAA TCGGTGGACG GGATTCTCACC CGTCTTT	2	50	Start Positio n	End Positio n
					51782	51831
					168269	168318
2072714	2244451	TTCGCCACTG GTGTTCCTCCA TATCTCTGCGC ATTTACCCGCT ACACATGGAAT TCC	2	57	Start Positio n	End Positio n
					54505	54561
					170907	170963
2072714	2244451	TTCGCTCGCC GCTACTAAGG GAATCGAATTT TCTTTCTCTTC CTCCGGGT	2	50	Start Positio n	End Positio n
					52882	52931
					169369	169418
2072714	2244451	TTCTGATTAGG TACCGTCAAGA TGTGCACAGTT ACTTACACATA TGTTCTTCCCT AA	2	57	Start Positio n	End Positio n
					54736	54792
					171138	171194

2072714	2244451	TTCTTCGCGTT GCTTCGAATTA AACCACATGCT CCACCGCTTG TGCGGGTCCC CGTC	2	57	Start Positio n	End Positio n
					54255	54311
					170657	170713
2072714	2244451	TTGAGCCGTG GGCTTTCACAT CAGACTTAAAA AACCGCCTAC GCGCGCTTTA CGCCC	2	57	Start Positio n	End Positio n
					54612	54668
					171014	171070
2072714	2244451	TTGAGTTTCAA CCTTGCGGTC GTACTCCCCA GGCGGAGTGC TTAATGCGTTA GCT	2	55	Start Positio n	End Positio n
					54319	54373
					170721	170775
2072714	2244451	TTGCATGTATT AGGCACGCCG CCAGCGTTCAT CCTGAGCCAG GATCAAACCTCT CC	2	55	Start Positio n	End Positio n
					55181	55235
					171583	171637
2072714	2244451	TTGCCTTG GTA AGCCGTTACCT TACCAACTAGC TAATGCAGCG CGGATCCATCT ATA	2	57	Start Positio n	End Positio n
					54955	55011
					171357	171413
2072714	2244451	TTGTCACCGG CAGTCAACTTA GAGTGCCCAA CTTAATGATGG CAACTAAGCTT AAGG	2	57	Start Positio n	End Positio n
					54062	54118
					170464	170520

2072714	2244451	TTTCAACCTTG CGGTCGTACT CCCCAGGCGG AGTGCTTAATG CGTTAGCTGC AGCAC	2	57	Start Positio n	End Positio n
					54324	54380
					170726	170782
2072714	2244451	TTTCGCTGCCC TTTGTATTGTC CATTGTAGCAC GTGTGTAGCC CAAATCATAAG G	2	55	Start Positio n	End Positio n
					53969	54023
					170369	170423
2072714	2244451	TTTGAATGTTA AATAAACATTC AAAACTGAATA CAATATGTCAC GTTATTCCGCA	2	55	Start Positio n	End Positio n
					53600	53654
					170000	170054
2072714	2244451	TTTGAGGGATC TTATAACCGAA GTTGGGAAAT CTCATCTTGAG GGGGGCT	2	50	Start Positio n	End Positio n
					50300	50349
					166787	166836
2265051	2350001	ATATCGTCCGA CAATTAACGTT TTGAGAATTGA GGTGAACGAC GAGCTGCTTTA A	2	55	Start Positio n	End Positio n
					28625	28679
					34263	34317
2265051	2350001	CCCCAACTTG CATTGTCTGTA GAATTTCTTT	2	31	Start Positio n	End Positio n
					70618	70648
					70732	70762



2349690	2573040	ACCGGTGGTC TAACTACATCT CCTGTTTCTGG ATTCTTAATTC	4	43	Start Positio n	End Positio n
					220917	220959
					221301	221343
					222069	222111
					222837	222879
2349690	2573040	ACTACATCTCC TGTTTCTGGAT TCTTAATTCCT GGTTTACCTG GAACTTCC	4	51	Start Positio n	End Positio n
					220929	220979
					221313	221363
					222081	222131
					222849	222899
2349690	2573040	AGTCTCCTTTT ACAGGTCCATA TTTTGTTACGC TATCGACCGG TGGTCTAACT	6	53	Start Positio n	End Positio n
					220879	220931
					221263	221315
					221647	221699
					222031	222083
					222415	222467
					222799	222851
2349690	2573040	ATATTTTGTTA CGCTATCGAC CGGTGGTCTA ACTACATCTCC TGTTTCTG	4	50	Start Positio n	End Positio n
					220898	220947
					221282	221331
					222050	222099
					222818	222867

2349690	2573040	ATCGGATCTTT TGTGATTTCTT CTTTCGATTCA CCTTTACTAAT AATTT	5	49	Start Positio n	End Positio n
					221067	221115
					221451	221499
					221835	221883
					222219	222267
					222987	223035
2349690	2573040	ATTGTCTTCTC ACCTTTTTGTC CTTCTCTTGTT ACTTTTTCTGT CCCTGGTGCT AAAT	7	58	Start Positio n	End Positio n
					220767	220824
					221151	221208
					221535	221592
					221919	221976
					222303	222360
					222687	222744
2349690	2573040	ATTTTTTAGTG TTGGCGTCGTT ATTGTCTTCTC ACCTTTTTGTC CTTCTCTTGT	6	54	Start Positio n	End Positio n
					220745	220798
					221129	221182
					221513	221566
					221897	221950
					222281	222334
2349690	2573040	ATTTTTTAGTG TTGGCGTCGTT ATTGTCTTCTC ACCTTTTTGTC CTTCTCTTGT	6	54	223049	223102

2349690	2573040	CGTCTCCTGTT TCTGGATTCTT AATTCCTGGTT TACCTGGA ACTTCC	2	47	Start Position	End Position
					221701	221747
					223237	223283
2349690	2573040	CTCACCTTTTT GTCCTTCTCTT GTTACTTTTTTC TGTCCTGGT GCTAAATCAG GA	6	55	Start Position	End Position
					220775	220829
					221159	221213
					221543	221597
					221927	221981
					222695	222749
					223079	223133
2349690	2573040	CTCCAGTTAAT GGATTTTTTAG TGTTGGCGTC GTTATTGTCTT CTCACCT	6	50	Start Position	End Position
					220732	220781
					221116	221165
					221500	221549
					221884	221933
					222268	222317
					223036	223085
2349690	2573040	CTCGAATGGA ATCTCTTCTTT TTCTACAATCG AGTCTCCTTTT ACAGGTCC	4	51	Start Position	End Position
					221231	221281
					221999	222049
					222767	222817
					223151	223201

2349690	2573040	CTCTTTCTCTC CTGTTGGTAAC TTCGGATCAAA TTCGTCTCGAT GACCTGGTG	5	53	Start Positio n	End Positio n
					220979	221031
					221363	221415
					221747	221799
					222131	222183
					222899	222951
2349690	2573040	CTGCTCCCTCA GGAGTCTCGC CATTAATACTA CGTATTAACAT GTAATTTTACT	2	54	Start Positio n	End Positio n
					28378	28431
					75387	75440
2349690	2573040	CTGGATTCTTA ATTCCTGGTTT ACCTGGAAC TT CCTCTTTCTCT CCTGTTGGT	6	53	Start Positio n	End Positio n
					220945	220997
					221329	221381
					221713	221765
					222097	222149
					222865	222917
2349690	2573040	CTTGTTACTTT TTCTGTCCCTG GTGCTAAATCA GGATTAAATTT ACGTTCTTTC	6	54	Start Positio n	End Positio n
					220794	220847
					221178	221231
					221562	221615
					221946	221999
					222714	222767
2349690	2573040	CTTGTTACTTT TTCTGTCCCTG GTGCTAAATCA GGATTAAATTT ACGTTCTTTC	6	54	223098	223151

2349690	2573040	GGTAACTTCG GATCAAATTCG TCTCGATGACC TGGTGTTATCG TTTCTGGTCC	6	53	Start Positio n	End Positio n
					220995	221047
					221379	221431
					221763	221815
					222147	222199
					222531	222583
					222915	222967
2349690	2573040	GTCGTTATTGT CTTCTCACCTT TTTGTCTTCT CTTGTTACTTT TTCTGTCCCTG GT	7	57	Start Positio n	End Positio n
					220761	220817
					221145	221201
					221529	221585
					221913	221969
					222297	222353
					222681	222737
223065	223121					
2349690	2573040	GTGATTTCTTC TTTCGATTCAC CTTTACTAATA ATTTCTCCAGT TAATGGA	6	51	Start Positio n	End Positio n
					220695	220745
					221079	221129
					221463	221513
					221847	221897
					222231	222281
					222999	223049



2349690	2573040	TCCTTCTCTTG TACTTTTTCT GTCCCTGGTG CTAAATCAGGA TTAAATTTACG TTCT	6	58	Start Positio n	End Positio n
					220787	220844
					221171	221228
					221555	221612
					221939	221996
					222707	222764
					223091	223148
2349690	2573040	TCGTCTCGATG ACCTGGTGTTA TCGTTTCTGGT CCGTATTCTGT TAATTC	6	50	Start Positio n	End Positio n
					221013	221062
					221397	221446
					221781	221830
					222165	222214
					222549	222598
					222933	222982
2349690	2573040	TCTTTTTCTAC AATCGAGTCTC CTTTTACAGGT CCATATTTTGT TACGCTA	7	51	Start Positio n	End Positio n
					220863	220913
					221247	221297
					221631	221681
					222015	222065
					222399	222449
					222783	222833
					223167	223217

2349690	2573040	TTAACTTAAGT TATTAGAGCCT CTTATGCAG	5	31	Start Positio n	End Positio n
					49056	49086
					49116	49146
					49176	49206
					49236	49266
					49356	49386
2349690	2573040	TTGTCTTCTCA CCTTTTTGTCC TTCTCTTGTTA CTTTTTCTGTC CCTGGTGCTA AATC	7	58	Start Positio n	End Positio n
					220768	220825
					221152	221209
					221536	221593
					221920	221977
					222304	222361
					222688	222745
					223072	223129
2349690	2573040	TTTACCTGGAA CTTCCTCTTTC TCTCCTGTTGG TAACTTCGGAT CAAATT	6	50	Start Positio n	End Positio n
					220964	221013
					221348	221397
					221732	221781
					222116	222165
					222884	222933
2349690	2573040	TTTACCTGGAA CTTCCTCTTTC TCTCCTGTTGG TAACTTCGGAT CAAATT	6	50	223268	223317



2349690	2573040	TTTAGTGTTGG CGTCGTTATTG TCTTCTCACCT TTTTGTCCTTC TCTTGTTACTT TT	6	57	Start Positio n	End Positio n
					220749	220805
					221133	221189
					221517	221573
					221901	221957
					222285	222341
					223053	223109
2572358	2820990	AATCAATTACT TTTGATTGTGG TAAGGAGTT	2	31	Start Positio n	End Positio n
					238414	238444
					239400	239430
2572358	2820990	AATCTTTAGGT TATAGAACACC ATTGGAAGTAT TTATGAGTTTC ATCGAA	2	50	Start Positio n	End Positio n
					238645	238694
					239631	239680
2572358	2820990	ACCATTTGGAA GTATTTATGAG TTTCATCGAAG ATGATAAACTT GTCCAGC	2	50	Start Positio n	End Positio n
					238664	238713
					239650	239699
2572358	2820990	AGTTTCATCGA AGATGATAAAC TTGTCCAGCTT AATTTGACAA	2	43	Start Positio n	End Positio n
					238683	238725
					239669	239711

2572358	2820990	ATTGTCTTCTC ACCTTTTTGTC CTTCTCTTGTT ACTTTTTCTGT CCCTGGTGCT AAAT	3	58	Start Positio n	End Positio n
					19	76
					403	460
					787	844
2572358	2820990	CTATATTTTTT GCTGATCCAG GCACGCCATC ACAGCGAGGT TT	2	43	Start Positio n	End Positio n
					238483	238525
					239469	239511
2572358	2820990	CTCACCTTTTT GTCCTTCTCTT GTTACTTTTTTC TGTCCTGGT GCTAAATCAG GA	2	55	Start Positio n	End Positio n
					27	81
					411	465
2572358	2820990	CTCGAATGGA ATCTCTTCTTT TTCTACAATCG AGTCTCCTTTT ACAGGTCC	2	51	Start Positio n	End Positio n
					99	149
					483	533
2572358	2820990	CTGATCCAGG CACGCCATCA CAGCGAGGTT TAAATGAACAT TCTAACGGA	2	50	Start Positio n	End Positio n
					238495	238544
					239481	239530
2572358	2820990	CTGGATTCTTA ATTCCTGGTTT ACCTGGAACCT CCTCTTTCTCT CCTGTTGGT	2	53	Start Positio n	End Positio n
					197	249
					581	633

2572358	2820990	CTTGTTACTTT TTCTGTCCCTG GTGCTAAATCA GGATTAAATTT ACGTTCTTTC	2	54	Start Positio n	End Positio n
					46	99
					430	483
2572358	2820990	GATGATAAACT TGTCCAGCTTA ATTTGACAATC TAAAGATTTAT AAAAAA	2	50	Start Positio n	End Positio n
					238695	238744
					239681	239730
2572358	2820990	GTCGTTATTGT CTTCTCACCTT TTTGTCTTCT CTTGTTACTTT TTCTGTCCCTG GT	3	57	Start Positio n	End Positio n
					13	69
					397	453
					781	837
2572358	2820990	TAGATAAAGAA CTAGATTTCAA TTTAGTAAC	2	31	Start Positio n	End Positio n
					238564	238594
					239550	239580
2572358	2820990	TCCTTCTCTTG TACTTTTTCT GTCCCTGGTG CTAAATCAGGA TTAAATTTACG TTCT	2	58	Start Positio n	End Positio n
					39	96
					423	480
2572358	2820990	TCTTTTTCTAC AATCGAGTCTC CTTTTACAGGT CCATATTTTGT TACGCTA	2	51	Start Positio n	End Positio n
					115	165
					499	549

2572358	2820990	TGTAAGTGTCA CGATATATCTA TATTTTTTGCT GATCCAGGCA CGCCATC	2	50	Start Positio n	End Positio n
					238464	238513
					239450	239499
2572358	2820990	TTGTCTTCTCA CCTTTTTGTCC TTCTCTTGTTA CTTTTTCTGTC CCTGGTGCTA AATC	3	58	Start Positio n	End Positio n
					20	77
					404	461
					788	845
2572358	2820990	TTTACCTGGAA CTTCCTCTTTC TCTCCTGTTGG TAACTTCGGAT CAAATT	2	50	Start Positio n	End Positio n
					216	265
					600	649
2572358	2820990	TTTAGTGTTGG CGTCGTTATTG TCTTCTCACCT TTTTGTCCTTC TCTTGTTACTT TT	2	57	Start Positio n	End Positio n
					1	57
					385	441

SRGD Performance Metrics

Initial Reads Count:	128832
Reads Count after Removing Duplication:	56414
Reads Count after Overlapping:	28660
Initial Dataset Size in (Base):	38773917
Dataset Sizet after Removing Duplication:	16980614

Dataset Size after Overlapping:	10010609
---------------------------------	----------

Overlapping Metrics

Repeat Identification Time:	00h:06m:12s:000ms
Overlapping Time:	00h:55m:07s:000ms
Total Assembly Time:	10h:19m:00s:000ms

Overlapping Length	O(N) <sup>2</sup> Time Complexity	Hit Index Count	Overlapping Matched Count	RI
299	831744	449	17	1
295	3080472004	1614468	1	0
288	3080361001	1610552	9	0
281	3079362064	1610733	8	0
280	3078474256	1610972	54	0
272	3072484900	1606638	28	0
271	3069381604	1607681	4	0
264	3068938404	1600762	6	0
257	3068273664	1609515	1	0
251	3068162881	1671255	27626	0