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## Supplemental Information

### Genomic Pathology of SLE-Associated

#### Copy Number Variation at the *FCGR2C/3B/2B* Locus

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### Supplemental Inventory

#### Supplemental Figures and Tables

Figure S1

Figure S2

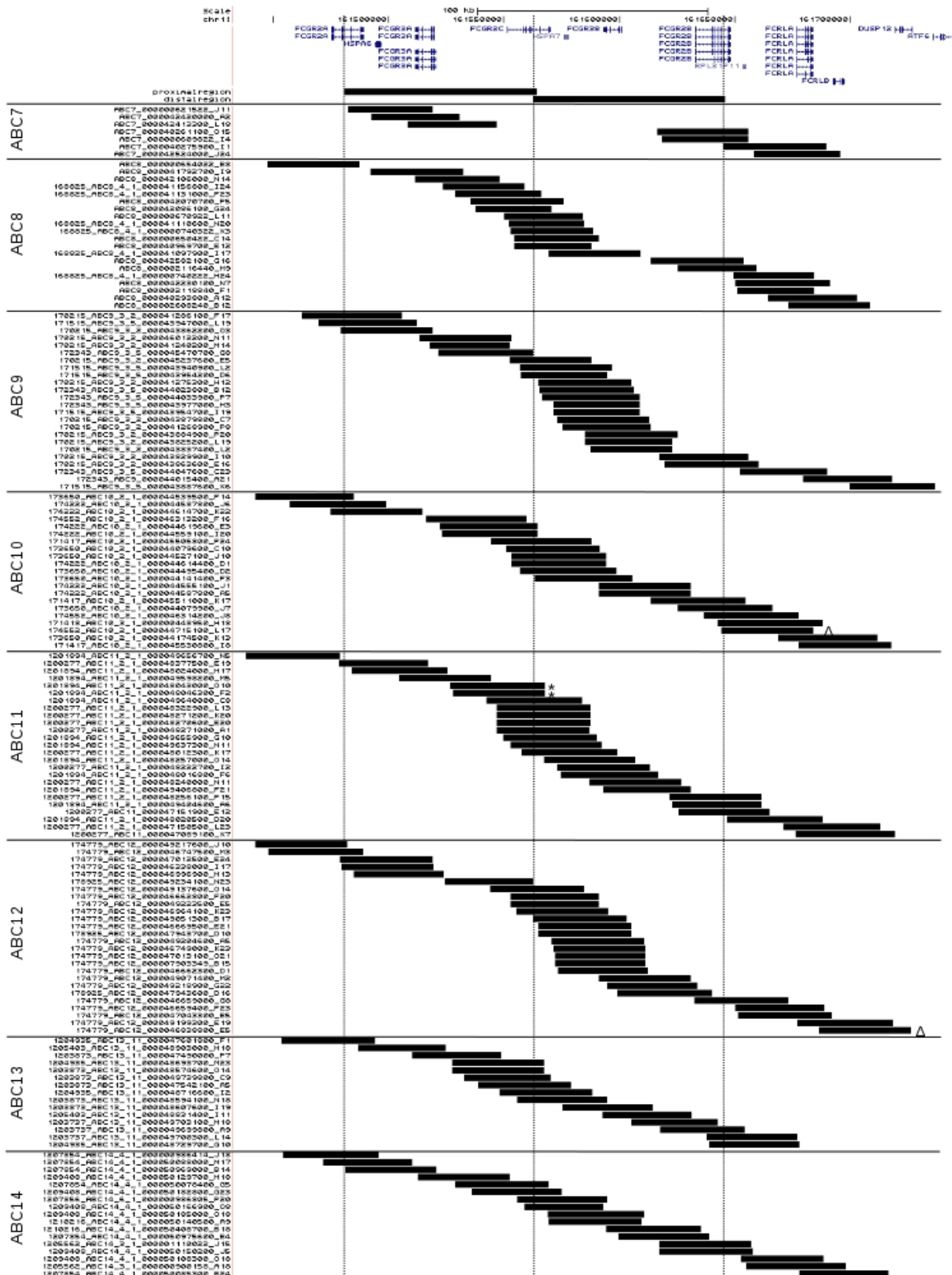
Figure S3

Figure S4

Table S1

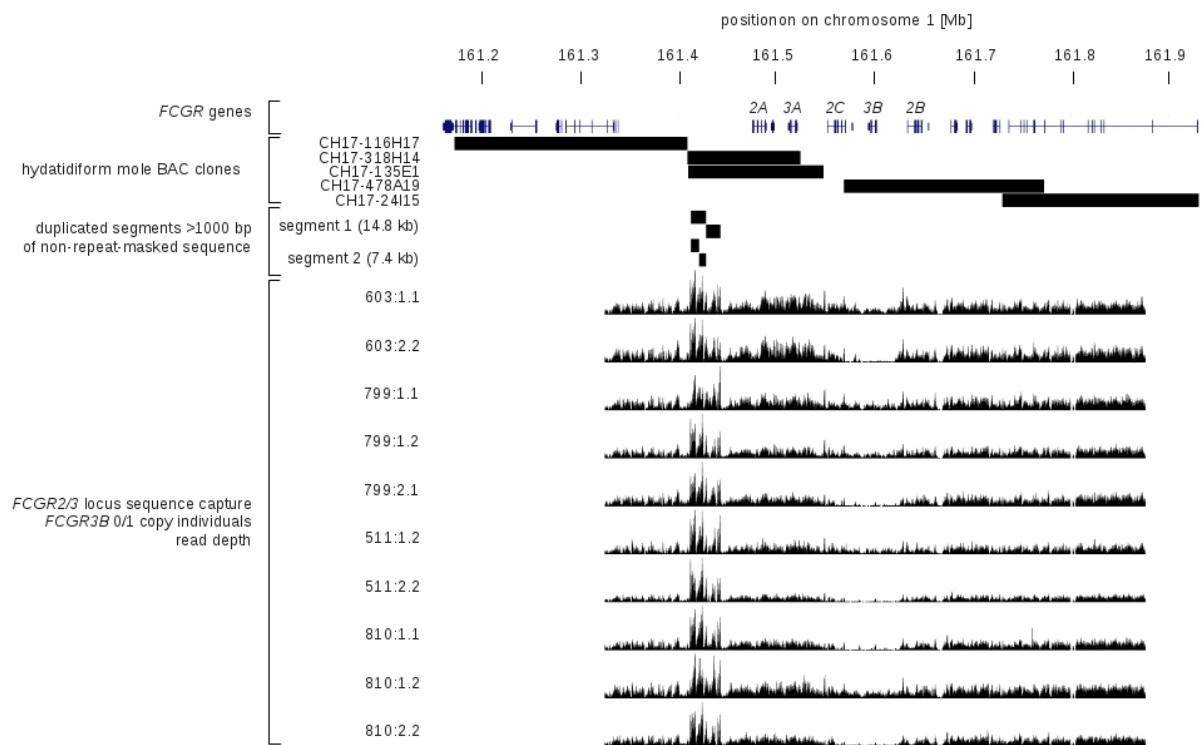
Table S2

Table S3



### Figure S1. Fosmid Insert Tiling across the *FCGR* Locus

UCSC genome browser screen shot of fosmid insert mapping to the GRCh37/hg19 assembly by end sequence pair (ESP) alignment. *FCGR* gene loci and extent of the proximal and distal regions of segmental sequence similarity are shown at the top. Vertical dashed lines indicate the borders of proximal and distal regions. Fosmids are grouped by individual. \* = *de novo* assembly and haplotype analysis of the fosmid clone showed that it was derived from a duplicated *FCGR3B* locus and contained a chimeric *FCGR2B-5'/FCGR2C-3'* gene. The ESP mapping to the “normal” copy reference genome shown here is therefore invalid.  $\Delta$  = the ESPs of the fosmid clone mapped to the *FCGR* locus but the assembled insert sequence mapped elsewhere in the genome.



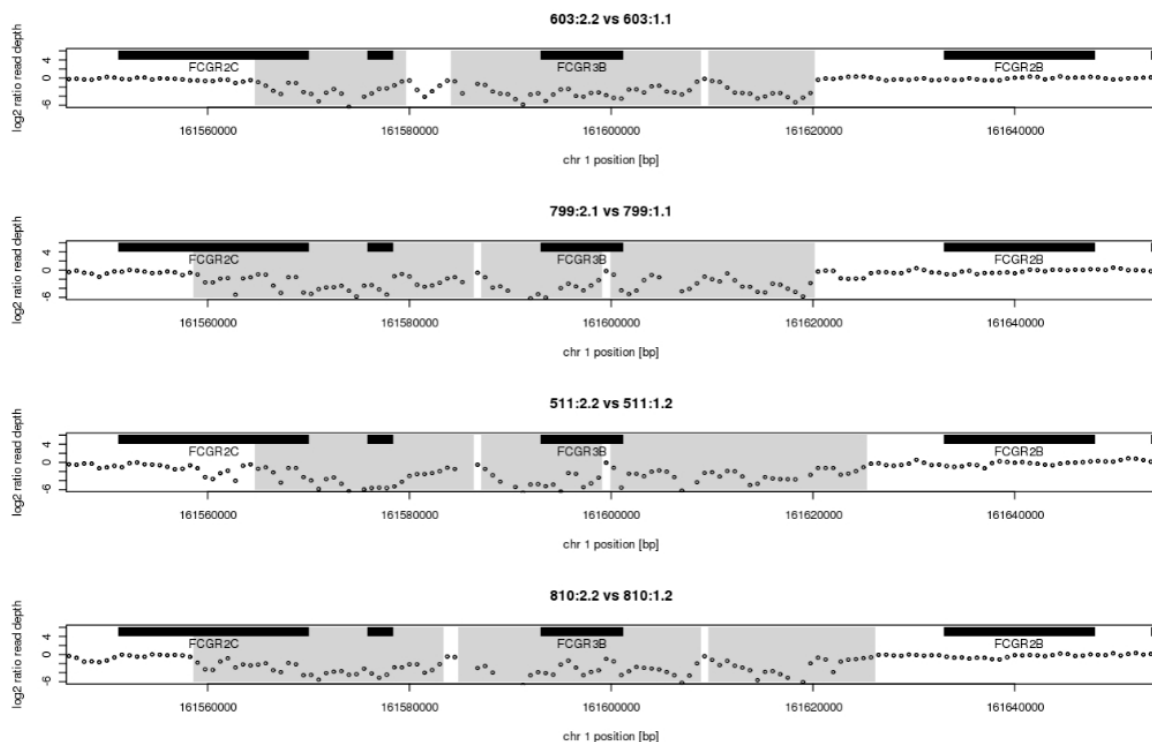
### Figure S2. Genomic Organization of the *FCGR2/3* Locus Confirmed by Sequencing of Hydatidiform Mole BAC Clones

Five hydatidiform mole BAC clones flanking as well as tiling across the *FCGR2/3* locus were sequenced to confirm the genomic organization in the GRCh37/hg19 reference assembly. Alignment of the assembled insert sequences to the reference genome confirmed the overall organization of the locus but showed that the length of clones CH17-318H14 and CH17-135E1 was discordant with the average expected insert size of the BAC clone library of ~200kb. However, this discrepancy was explained by the presence of a large tandem repeat region 14.8kb in length upstream of the *FCGR2A* gene (segment 1) which in turn is composed of a smaller tandem repeat segments of 7.4kb (segment 2). While the reference sequence contains two copies of the 14.8kb segment, sequence capture data obtained from the *FCGR2/3* locus in zero- (603:2.2, 799:2.1, 511:2.2, 810:1.1, 810:2.2) and one- (603:1.1, 799:1.1, 799:1.2, 511:1.2, 810:1.2) copy individuals to carry out read depth based CNV analysis (see Supplemental Figure 4) suggested that the segment is repeated approximately eight times. Taking this into account the corrected insert size of clones CH17-135E1 and CH17-318H14 was 226,509bp and 204,182bp instead of 137,709bp and 115,382bp, respectively, as initially suggested by the reference mapping.



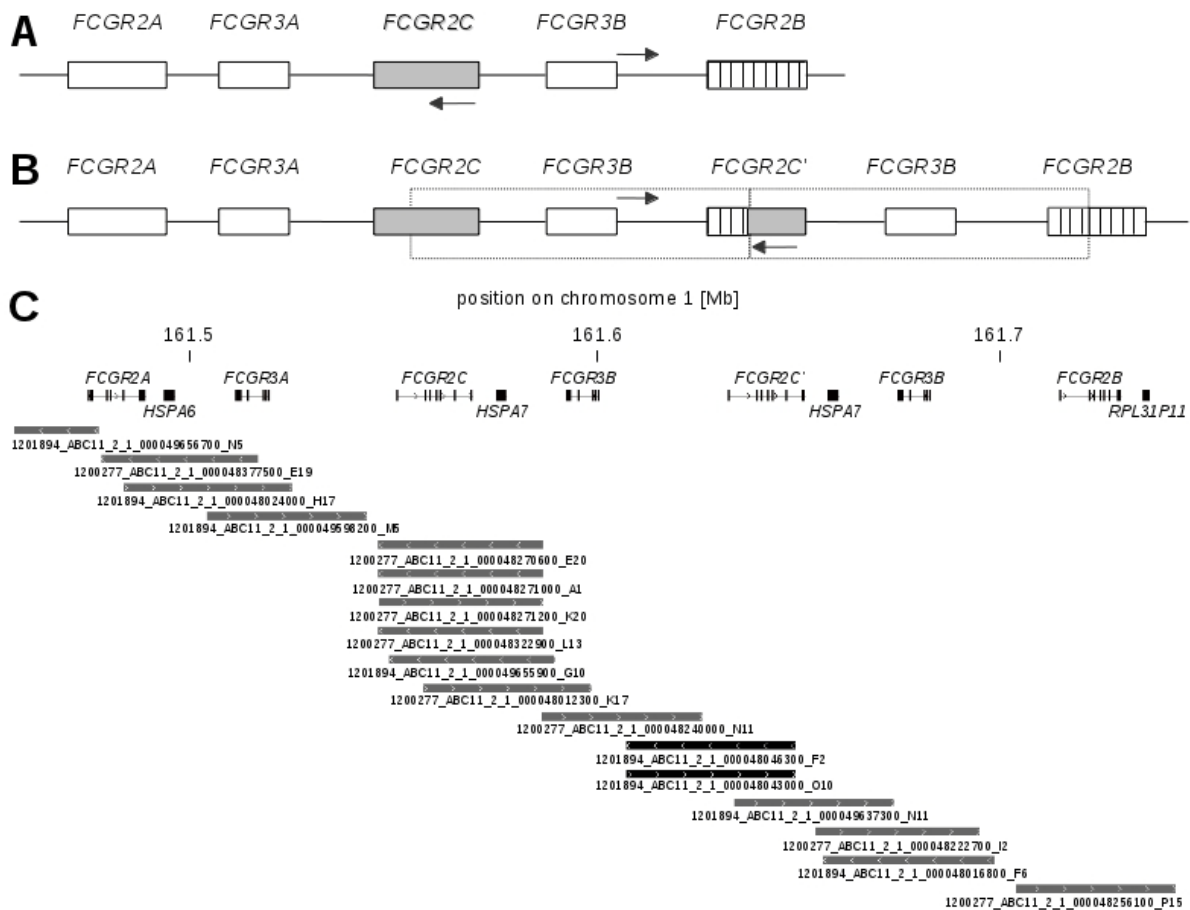
**Figure S3. Mapping of End Sequence Pairs of Hydatidiform Mole BAC Inserts Tiling Across the *FCGR2/3* Locus**

UCSC genome browser screen shot of BAC inserts mapped to the NCBI36/hg18 assembly by end sequence pair (ESP) alignment. The 3'-end (red arrow) of clone CH17-135E1 maps (incorrectly) to the reference sequence of the *FCGR2B* locus.



**Figure S4. CNV-seq Analysis to Detect Copy Number Variable Regions in *FCGR3B* Zero-Copy Individuals**

Dots show the  $\log_2$  ratio of read depth in 1.5kb windows between zero-copy offspring and one-copy parent. Horizontal black bars show the location of gene loci including *HSPA7* (not labeled). Windows with  $\log_2(\text{ratio})$  smaller  $-0.69$  or greater  $0.69$  ( $\sim 1.6$ -fold difference in read depth) at  $P < 0.05$  were considered copy-number variable. Grey areas show regions of four or more consecutive CNV windows.



**Figure S5. Organization of the *FCGR2/3* Locus Carrying a Duplication of *FCGR3B***

(A) Organization of the *FCGR2/3* locus in the reference assembly. Arrows show the (discordant) alignment of the end pair sequences of fosmid 1201894\_ABC11\_2\_1\_000048046300\_F2, derived from an individual with an *FCGR3B* duplication.

(B) Organization of the *FCGR2/3* locus with a duplication of *FCGR3B* reconstructed from sequencing of fosmid inserts from individual ABC11. Dotted boxes indicate the segmental duplication. Arrows show the (concordant) alignment of the end pair sequences of fosmid 1201894\_ABC11\_2\_1\_000048046300\_F2.

(C) Tiling of fosmid clones across the *FCGR3B* two-copy locus. The two fosmid clones, including 1201894\_ABC11\_2\_1\_000048046300\_F2, that cross the CNV breakpoint are shown in black.

**Table S1. List of Candidate PSVs Identified by Reference Sequence (hg19) Alignment and SNPs at Candidate PSV Positions Detected by Sequencing of Fosmid Clones from Eight Individuals**

proximal				distal				poly-morphic
chr	position	PSV "allele"	SNP	chr	position	PSV "allele"	SNP	
1	161480913	T	-	1	161562577	C	-	-
1	161480918	G	-	1	161562582	C	-	-
1	161480920	C	-	1	161562584	T	-	-
1	161481029	A	-	1	161562692	G	-	-
1	161481063	T	-	1	161562726	C	-	-
1	161481090	C	-	1	161562753	T	-	-
1	161481094	G	-	1	161562757	A	-	-
1	161481097	T	-	1	161562760	C	-	-
1	161481108	T	-	1	161562771	C	-	-
1	161481114	A	-	1	161562777	G	-	-
1	161481123	T	-	1	161562793	A	T	+
1	161481127	T	-	1	161562797	G	-	-
1	161481143	T	-	1	161562813	A	-	-
1	161481145	T	-	1	161562815	C	-	-
1	161481146	G	-	1	161562816	A	-	-
1	161481158	T	-	1	161562826	G	-	-
1	161481165	A	-	1	161562833	G	-	-
1	161481188	G	-	1	161562856	T	-	-
1	161481345	G	-	1	161563005	A	G	+
1	161481394	T	-	1	161563054	C	-	-
1	161481401	A	-	1	161563061	G	-	-
1	161481418	A	-	1	161563078	G	-	-
1	161481479	T	-	1	161563139	C	-	-
1	161481519	T	A/C	1	161563179	C	-	+
1	161481530	G	A	1	161563190	A	-	+
1	161481546	T	C	1	161563206	C	-	+
1	161481561	C	T	1	161563221	T	C	+
1	161481567	G	T	1	161563227	T	-	+
1	161481617	A	-	1	161563277	G	-	-
1	161481671	C	-	1	161563330	T	-	-
1	161481672	T	-	1	161563331	G	-	-
1	161481673	G	-	1	161563332	C	-	-
1	161481729	A	-	1	161563388	G	-	-
1	161481734	G	-	1	161563393	A	-	-
1	161481743	A	G	1	161563402	G	-	+
1	161481762	C	-	1	161563421	T	-	-
1	161481764	A	-	1	161563423	G	-	-
1	161481777	T	-	1	161563436	C	-	-
1	161481779	T	-	1	161563438	C	-	-
1	161481793	G	-	1	161563452	T	-	-
1	161481800	G	-	1	161563459	T	-	-
1	161481848	G	-	1	161563507	T	-	-
1	161481853	T	-	1	161563512	C	-	-
1	161481855	A	-	1	161563514	G	-	-
1	161481863	A	-	1	161563522	G	-	-
1	161481865	G	-	1	161563524	T	-	-
1	161481878	G	-	1	161563537	A	-	-
1	161482360	A	G	1	161564019	G	A	+

1	161482390	C	T	1	161564049	T	C	+
1	161482434	T	G	1	161564093	A	T/G	+
1	161482443	T	C	1	161564102	C	T	+
1	161482449	C	T	1	161564108	T	C	+
1	161482494	G	-	1	161564153	C	G	+
1	161482520	T	C	1	161564179	C	-	+
1	161482598	A	-	1	161564257	G	A	+
1	161482648	G	-	1	161564307	A	G	+
1	161482689	G	-	1	161564348	A	G	+
1	161482711	A	-	1	161564370	G	A	+
1	161482728	C	-	1	161564387	T	-	-
1	161482733	C	-	1	161564392	T	-	-
1	161482740	C	-	1	161564399	T	-	-
1	161482757	G	-	1	161564416	T	-	-
1	161482777	T	-	1	161564436	C	-	-
1	161482792	G	-	1	161564451	C	-	-
1	161482809	G	-	1	161564468	T	G	+
1	161482934	C	G	1	161564593	G	C	+
1	161482986	A	G	1	161564645	G	-	+
1	161483371	G	-	1	161565030	A	G	+
1	161483484	A	G	1	161565143	G	-	+
1	161483579	C	-	1	161565237	T	-	-
1	161483666	T	-	1	161565324	C	T	+
1	161483723	G	-	1	161565381	A	G	+
1	161483750	C	-	1	161565408	T	C	+
1	161483856	A	-	1	161565513	G	-	-
1	161483965	G	-	1	161565622	A	G	+
1	161484048	G	A	1	161565705	A	G	+
1	161484109	T	-	1	161565766	A	-	-
1	161484124	A	C	1	161565781	C	-	+
1	161484134	T	-	1	161565791	C	-	-
1	161484210	T	C	1	161565867	C	-	+
1	161484479	A	-	1	161566136	G	A	+
1	161484488	T	-	1	161566145	G	T	+
1	161484636	C	T	1	161566293	T	-	+
1	161484655	G	-	1	161566312	C	G	+
1	161484864	G	-	1	161566521	A	G	+
1	161484900	C	-	1	161566557	T	C	+
1	161485100	G	-	1	161566757	C	G	+
1	161485224	T	-	1	161566881	C	-	-
1	161485248	G	-	1	161566905	A	-	-
1	161485255	G	-	1	161566912	C	-	-
1	161485361	T	-	1	161567018	C	-	-
1	161485372	G	-	1	161567029	A	-	-
1	161485406	A	-	1	161567063	G	-	-
1	161485428	A	-	1	161567085	G	-	-
1	161485505	C	-	1	161567162	T	-	-
1	161485514	A	-	1	161567171	T	-	-
1	161485684	C	-	1	161567338	T	-	-
1	161485830	A	-	1	161567484	T	-	-
1	161485837	G	-	1	161567491	A	-	-
1	161485848	T	-	1	161567502	C	-	-
1	161485869	C	-	1	161567523	T	-	-
1	161486144	A	-	1	161567798	G	-	-
1	161486178	G	-	1	161567832	A	-	-
1	161486180	A	-	1	161567834	G	-	-



1	161486396	T	-	1	161568051	A	T	+
1	161486430	T	-	1	161568085	C	-	-
1	161486443	C	-	1	161568098	T	-	-
1	161486615	A	G	1	161568270	G	-	+
1	161487035	A	-	1	161568690	G	-	-
1	161487092	G	-	1	161568747	C	-	-
1	161487095	G	-	1	161568750	A	-	-
1	161487106	C	-	1	161568761	T	-	-
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1	161487145	T	-	1	161568800	A	-	-
1	161487262	A	-	1	161568917	G	-	-
1	161487293	A	-	1	161568948	G	-	-
1	161487373	G	-	1	161569028	A	G	+
1	161487456	A	-	1	161569111	G	-	-
1	161487474	A	-	1	161569129	G	-	-
1	161487487	C	-	1	161569142	T	-	-
1	161487493	T	-	1	161569148	A	T	+
1	161487764	G	-	1	161569419	C	G	+
1	161487805	T	-	1	161569460	C	-	-
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1	161488159	C	-	1	161569815	G	C	+
1	161488295	A	-	1	161569951	C	A	+
1	161488297	C	-	1	161569953	T	C	+
1	161488455	C	-	1	161570107	T	C	+
1	161488539	G	-	1	161570191	C	-	-
1	161488551	A	-	1	161570203	G	A	+
1	161488557	C	-	1	161570209	A	-	-
1	161488602	A	-	1	161570253	G	-	-
1	161488706	T	-	1	161570357	C	T	+
1	161488928	A	-	1	161570579	T	-	-
1	161488943	G	-	1	161570594	A	-	-
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1	161489012	A	-	1	161570663	T	A	+
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1	161489081	G	-	1	161570732	A	-	-
1	161489133	G	-	1	161570784	A	-	-
1	161489149	T	-	1	161570800	G	-	-
1	161489152	C	-	1	161570803	A	C	+
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1	161489472	G	-	1	161571123	A	-	-
1	161489485	G	-	1	161571136	T	-	-
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1	161489590	A	-	1	161571241	G	-	-
1	161489600	G	-	1	161571251	A	-	-
1	161489603	T	-	1	161571254	C	-	-
1	161489628	G	-	1	161571279	C	-	-
1	161489645	C	-	1	161571296	T	-	-
1	161489654	T	-	1	161571305	C	-	-
1	161489960	C	-	1	161571611	G	-	-
1	161489969	C	-	1	161571620	T	-	-
1	161490004	T	-	1	161571655	C	-	-
1	161490040	T	-	1	161571691	C	-	-
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1	161490291	C	-	1	161571942	T	-	-

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1	161490533	T	-	1	161572184	C	-	-
1	161490607	C	-	1	161572256	T	-	-
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1	161490896	T	C	1	161572545	C	-	+
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1	161491319	C	-	1	161572968	T	-	-
1	161491322	A	-	1	161572971	C	-	-
1	161491351	G	-	1	161573000	A	-	-
1	161491363	G	-	1	161573012	A	-	-
1	161491645	T	-	1	161573295	C	T	+
1	161491732	A	-	1	161573382	T	-	-
1	161491736	G	-	1	161573386	C	-	-
1	161491768	G	-	1	161573418	A	-	-
1	161491789	A	-	1	161573439	T	-	-
1	161491857	A	-	1	161573507	G	A	+
1	161491872	T	-	1	161573522	C	T	+
1	161491904	C	-	1	161573554	T	C	+
1	161492028	C	-	1	161573678	T	-	-
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1	161492050	G	-	1	161573700	C	-	-
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1	161492151	T	-	1	161573801	C	-	-
1	161492157	A	-	1	161573807	G	-	-
1	161492298	C	-	1	161573948	T	-	-
1	161492364	G	-	1	161574014	A	-	-
1	161492380	T	-	1	161574030	C	-	-
1	161492387	T	-	1	161574037	C	-	-
1	161492448	T	C	1	161574098	C	-	+
1	161492522	T	-	1	161574172	G	-	-
1	161492588	G	-	1	161574238	A	-	-
1	161492610	A	-	1	161574259	T	-	-
1	161492644	C	G	1	161574293	G	-	+
1	161492656	G	-	1	161574305	A	G	+
1	161492667	G	C	1	161574316	A	-	+
1	161492767	T	C	1	161574416	C	-	+
1	161492817	C	-	1	161574466	T	-	-
1	161492882	G	-	1	161574535	A	-	-
1	161492954	G	-	1	161574607	A	-	-
1	161492975	G	-	1	161574628	A	G	+
1	161492997	C	-	1	161574650	T	-	-
1	161493009	C	-	1	161574662	T	-	-
1	161493014	G	-	1	161574667	A	-	-
1	161493025	A	-	1	161574678	G	-	-
1	161493044	G	-	1	161574697	A	-	-
1	161493098	C	-	1	161574751	A	-	-
1	161493162	A	-	1	161574815	G	A	+
1	161493170	A	-	1	161574823	G	-	-

1	161493281	A	G	1	161574934	G	-	+
1	161493305	A	G	1	161574958	G	-	+
1	161493395	C	-	1	161575048	T	-	-
1	161493404	T	-	1	161575057	A	-	-
1	161493444	C	-	1	161575097	T	-	-
1	161493545	T	C	1	161575194	C	-	+
1	161493546	G	-	1	161575195	C	-	-
1	161493557	A	-	1	161575206	G	-	-
1	161493630	A	G	1	161575279	C	-	+
1	161493631	T	-	1	161575280	C	-	-
1	161493632	G	-	1	161575281	A	-	-
1	161493634	A	-	1	161575283	G	-	-
1	161493635	A	-	1	161575284	C	-	-
1	161493649	G	-	1	161575298	T	-	-
1	161493655	A	-	1	161575304	G	-	-
1	161493658	C	-	1	161575307	G	-	-
1	161493673	G	-	1	161575322	T	-	-
1	161493676	A	-	1	161575325	G	-	-
1	161493685	T	-	1	161575334	G	-	-
1	161493695	G	-	1	161575344	A	-	-
1	161493696	A	-	1	161575345	C	-	-
1	161493710	C	-	1	161575359	A	-	-
1	161493715	A	-	1	161575364	G	-	-
1	161493716	G	-	1	161575365	A	-	-
1	161493717	C	-	1	161575366	T	-	-
1	161493718	T	-	1	161575367	G	-	-
1	161493724	C	-	1	161575373	G	-	-
1	161493732	A	-	1	161575381	G	-	-
1	161493734	T	-	1	161575383	C	-	-
1	161493735	G	-	1	161575384	A	-	-
1	161493748	C	-	1	161575397	G	-	-
1	161493750	C	-	1	161575399	T	-	-
1	161493766	A	-	1	161575415	C	-	-
1	161493767	C	-	1	161575416	T	-	-
1	161493775	C	-	1	161575424	A	-	-
1	161493783	C	-	1	161575432	T	-	-
1	161493795	C	-	1	161575444	T	-	-
1	161493841	C	-	1	161575490	T	-	-
1	161493844	G	-	1	161575493	A	-	-
1	161493941	C	-	1	161575590	G	-	-
1	161493944	T	-	1	161575593	C	-	-
1	161493945	G	-	1	161575594	T	-	-
1	161493946	T	-	1	161575595	C	-	-
1	161494046	C	-	1	161575695	G	-	-
1	161494070	A	-	1	161575719	G	-	-
1	161494111	G	-	1	161575761	A	G	+
1	161494127	G	C	1	161575777	T	-	+
1	161494135	T	-	1	161575785	C	-	-
1	161494137	C	-	1	161575787	G	-	-
1	161494145	T	-	1	161575795	C	-	-
1	161494178	C	-	1	161575828	T	-	-
1	161494184	A	-	1	161575834	G	-	-
1	161494194	G	-	1	161575844	C	G	+
1	161494211	A	-	1	161575861	G	-	-
1	161494221	A	-	1	161575875	G	-	-
1	161494292	C	-	1	161575924	T	-	-

1	161494303	A	-	1	161575935	G	-	-
1	161494311	G	C	1	161575943	C	-	+
1	161494349	T	-	1	161575981	G	-	-
1	161494732	G	-	1	161576364	A	-	-
1	161494896	G	-	1	161576528	A	-	-
1	161494906	A	-	1	161576538	G	-	-
1	161494908	G	-	1	161576540	A	-	-
1	161494958	C	-	1	161576590	G	-	-
1	161494962	T	-	1	161576594	C	-	-
1	161494966	G	-	1	161576598	C	G	+
1	161494980	C	-	1	161576612	G	C	+
1	161494991	T	A	1	161576623	A	T	+
1	161495028	G	-	1	161576660	A	-	-
1	161495096	T	-	1	161576728	C	-	-
1	161495275	T	-	1	161576907	C	-	-
1	161495338	C	-	1	161576970	A	-	-
1	161495454	G	-	1	161577086	T	-	-
1	161495464	T	-	1	161577096	G	-	-
1	161495477	A	T	1	161577110	T	-	+
1	161495788	G	-	1	161577421	T	-	-
1	161495839	G	-	1	161577472	T	-	-
1	161495860	G	-	1	161577493	A	-	-
1	161495885	T	C	1	161577518	G	-	+
1	161496030	A	-	1	161577657	G	A	+
1	161496031	A	-	1	161577658	G	-	-
1	161496162	A	-	1	161577789	G	-	-
1	161496178	G	A	1	161577805	A	-	+
1	161496321	G	-	1	161577948	A	-	-
1	161496324	A	-	1	161577951	G	-	-
1	161496334	G	-	1	161577961	A	-	-
1	161496499	C	-	1	161578139	T	-	-
1	161496530	C	G	1	161578170	G	-	+
1	161496630	C	-	1	161578270	T	-	-
1	161496642	C	-	1	161578282	T	-	-
1	161496688	G	-	1	161578328	A	-	-
1	161496708	T	-	1	161578348	C	-	-
1	161496727	G	-	1	161578367	A	-	-
1	161496742	C	-	1	161578382	A	-	-
1	161496743	C	-	1	161578383	T	-	-
1	161496818	A	-	1	161578458	G	-	-
1	161496844	A	-	1	161578484	G	-	-
1	161496856	A	-	1	161578496	G	-	-
1	161496925	C	-	1	161578563	T	-	-
1	161497377	C	T	1	161579015	T	-	+
1	161497479	T	-	1	161579121	C	T	+
1	161497501	C	-	1	161579143	T	C	+
1	161497545	T	-	1	161579187	C	-	-
1	161497546	C	-	1	161579188	T	-	-
1	161497585	C	T	1	161579227	T	-	+
1	161497955	T	A/C	1	161579597	C	A	+
1	161497962	G	A	1	161579604	A	-	+
1	161497984	C	G	1	161579626	G	-	+
1	161498002	T	G	1	161579644	G	-	+
1	161498032	T	C	1	161579674	C	-	+
1	161498045	G	C	1	161579687	C	G	+
1	161498069	A	G	1	161579711	G	-	+

1	161498127	G	A	1	161579769	A	-	+
1	161498302	A	C	1	161579944	C	-	+
1	161498348	A	G	1	161579990	G	-	+
1	161498351	G	C	1	161579993	C	-	+
1	161498352	G	A	1	161579994	A	-	+
1	161498371	T	C	1	161580013	C	T	+
1	161498474	T	-	1	161580116	G	-	-
1	161498515	C	-	1	161580157	T	-	-
1	161498604	A	-	1	161580245	G	-	-
1	161498704	A	G	1	161580345	G	-	+
1	161498717	T	-	1	161580358	A	-	-
1	161498742	T	C	1	161580383	C	-	+
1	161498752	A	C	1	161580393	C	-	+
1	161498778	A	-	1	161580419	G	-	-
1	161498839	A	-	1	161580480	G	-	-
1	161498858	T	-	1	161580499	C	-	-
1	161498893	C	-	1	161580534	T	-	-
1	161499228	C	-	1	161580868	T	-	-
1	161499391	G	-	1	161581009	C	-	-
1	161499396	G	-	1	161581014	C	-	-
1	161499434	A	-	1	161581045	T	-	-
1	161499435	A	-	1	161581046	G	-	-
1	161499436	A	-	1	161581047	C	-	-
1	161499578	T	-	1	161581189	C	-	-
1	161499580	A	-	1	161581191	C	-	-
1	161499586	T	-	1	161581197	A	-	-
1	161499589	G	-	1	161581200	A	-	-
1	161499592	T	-	1	161581203	C	-	-
1	161499615	C	-	1	161581226	A	-	-
1	161499623	A	-	1	161581234	C	-	-
1	161499677	C	-	1	161581282	T	-	-
1	161499764	A	-	1	161581368	T	A	+
1	161499906	T	-	1	161581510	A	T	+
1	161499928	A	-	1	161581532	T	-	-
1	161499972	A	-	1	161581576	T	-	-
1	161500024	T	-	1	161581628	C	-	-
1	161500034	G	-	1	161581638	C	-	-
1	161500118	C	-	1	161581722	T	-	-
1	161500127	C	-	1	161581731	T	-	-
1	161500129	T	-	1	161581733	C	-	-
1	161500130	A	G	1	161581734	G	-	+
1	161500137	G	-	1	161581741	A	-	-
1	161500138	G	-	1	161581742	A	-	-
1	161500165	G	-	1	161581769	C	-	-
1	161500170	A	-	1	161581774	G	-	-
1	161500171	C	-	1	161581775	G	-	-
1	161500177	C	-	1	161581781	T	-	-
1	161500178	C	-	1	161581782	T	-	-
1	161500198	C	-	1	161581803	T	C	+
1	161500218	T	-	1	161581823	C	-	-
1	161500224	A	-	1	161581829	G	-	-
1	161500226	C	-	1	161581831	T	-	-
1	161500228	T	-	1	161581833	A	-	-
1	161500229	G	-	1	161581834	A	-	-
1	161500364	G	C	1	161581969	C	-	+
1	161500405	T	A	1	161582010	A	-	+

1	161500604	A	-	1	161582209	G	-	-
1	161500608	A	-	1	161582213	T	-	-
1	161500615	T	-	1	161582220	G	-	-
1	161500650	A	-	1	161582255	G	-	-
1	161500699	A	-	1	161582304	G	-	-
1	161500711	C	-	1	161582316	A	-	-
1	161500712	G	T	1	161582317	A	-	+
1	161500736	G	-	1	161582341	C	-	-
1	161500746	C	-	1	161582351	T	-	-
1	161500757	T	-	1	161582362	C	-	-
1	161500797	T	-	1	161582402	A	T	+
1	161500880	A	-	1	161582485	T	-	-
1	161500888	C	-	1	161582493	T	-	-
1	161500900	T	-	1	161582505	G	-	-
1	161500914	A	-	1	161582519	G	-	-
1	161500927	T	-	1	161582532	C	-	-
1	161500937	C	-	1	161582542	T	-	-
1	161500947	G	-	1	161582552	A	-	-
1	161500950	C	-	1	161582555	G	-	-
1	161500967	C	-	1	161582572	G	-	-
1	161500968	C	-	1	161582573	T	-	-
1	161500976	G	-	1	161582580	A	-	-
1	161500977	G	-	1	161582581	C	-	-
1	161501005	C	-	1	161582609	T	-	-
1	161501011	C	-	1	161582615	G	-	-
1	161501014	T	-	1	161582618	C	-	-
1	161501016	A	-	1	161582620	G	-	-
1	161501019	A	-	1	161582623	G	-	-
1	161501023	A	-	1	161582627	C	-	-
1	161501024	T	-	1	161582628	C	-	-
1	161501026	A	-	1	161582630	G	-	-
1	161501039	C	-	1	161582643	T	-	-
1	161501151	G	-	1	161582731	T	-	-
1	161503119	A	-	1	161583063	C	A	+
1	161503149	C	-	1	161583096	T	-	-
1	161503179	G	-	1	161583125	A	-	-
1	161503199	A	-	1	161583145	T	-	-
1	161503234	G	-	1	161583180	A	-	-
1	161503790	G	-	1	161583736	A	G	+
1	161503916	T	C	1	161583862	C	-	+
1	161503943	C	-	1	161583889	T	C	+
1	161504002	G	-	1	161583948	A	-	-
1	161504461	C	T	1	161584407	T	-	+
1	161504560	A	G	1	161584506	G	-	+
1	161504857	A	-	1	161584803	T	-	-
1	161505074	A	-	1	161585023	G	-	-
1	161505146	T	-	1	161585095	C	-	-
1	161505172	A	-	1	161585121	T	-	-
1	161505177	C	-	1	161585126	T	-	-
1	161505240	G	A	1	161585189	A	-	+
1	161505278	A	-	1	161585227	T	-	-
1	161505380	T	-	1	161585329	C	-	-
1	161505394	G	-	1	161585343	T	-	-
1	161505397	T	-	1	161585346	C	-	-
1	161505471	C	-	1	161585420	T	-	-
1	161505478	A	-	1	161585427	G	-	-

1	161505483	G	-	1	161585432	C	-	-
1	161505507	G	-	1	161585456	A	G	+
1	161505593	T	C	1	161585542	C	-	+
1	161505600	T	C	1	161585549	C	-	+
1	161505677	C	-	1	161585626	T	-	-
1	161505768	A	-	1	161585717	C	-	-
1	161505780	C	-	1	161585729	T	-	-
1	161505870	T	-	1	161587294	C	T	+
1	161505882	A	G	1	161587306	G	A	+
1	161505883	C	T	1	161587307	T	C	+
1	161506025	A	G	1	161587449	G	-	+
1	161506226	C	-	1	161587650	T	C	+
1	161506227	A	-	1	161587651	G	A	+
1	161506468	C	-	1	161587892	T	C	+
1	161506517	T	-	1	161587942	C	-	-
1	161506535	T	-	1	161587960	C	-	-
1	161506578	A	-	1	161588003	G	-	-
1	161506655	T	-	1	161588080	A	T	+
1	161506709	G	-	1	161588134	C	G	+
1	161506781	G	-	1	161588206	C	-	-
1	161506791	G	-	1	161588216	A	-	-
1	161506832	T	-	1	161588257	C	T	+
1	161506888	C	-	1	161588313	T	-	-
1	161506917	A	-	1	161588342	C	-	-
1	161506923	G	-	1	161588348	A	-	-
1	161506954	G	-	1	161588379	A	-	-
1	161506965	C	-	1	161588390	T	-	-
1	161507069	T	-	1	161588494	C	-	-
1	161507100	T	-	1	161588525	G	-	-
1	161507204	A	-	1	161588629	G	-	-
1	161507242	C	-	1	161588667	T	C	+
1	161507256	T	-	1	161588681	C	-	-
1	161507293	C	-	1	161588718	T	-	-
1	161507466	C	T	1	161588891	T	-	+
1	161507504	C	-	1	161588929	T	-	-
1	161507506	G	-	1	161588931	A	-	-
1	161507666	T	-	1	161589091	A	-	-
1	161507832	A	-	1	161589257	G	-	-
1	161507923	C	-	1	161589348	A	C	+
1	161507924	A	G	1	161589349	G	-	+
1	161508030	A	-	1	161589453	G	A	+
1	161508039	C	-	1	161589462	T	C	+
1	161508040	A	-	1	161589463	G	-	-
1	161508056	G	-	1	161589479	C	-	-
1	161508065	G	-	1	161589488	T	-	-
1	161508073	A	-	1	161589496	G	-	-
1	161508087	A	-	1	161589510	T	-	-
1	161508117	C	-	1	161589540	T	-	-
1	161508137	A	-	1	161589560	G	-	-
1	161508139	C	-	1	161589562	T	-	-
1	161508160	C	-	1	161589583	T	-	-
1	161508176	T	-	1	161589599	C	-	-
1	161508181	G	-	1	161589604	A	-	-
1	161508197	A	-	1	161589620	G	-	-
1	161508226	T	-	1	161589649	C	-	-
1	161508228	C	-	1	161589651	T	-	-

1	161508229	C	-	1	161589652	T	C	+
1	161508231	G	-	1	161589654	C	T	+
1	161508271	C	-	1	161589694	T	-	-
1	161508320	A	-	1	161589743	C	-	-
1	161508383	A	-	1	161589807	G	-	-
1	161508428	A	-	1	161589852	G	-	-
1	161508430	G	-	1	161589854	A	-	-
1	161508433	T	-	1	161589857	C	-	-
1	161508436	G	-	1	161589860	A	G	+
1	161508458	G	-	1	161589882	A	G	+
1	161508548	T	-	1	161589974	C	A	+
1	161508552	C	-	1	161589978	T	-	-
1	161508556	T	-	1	161589982	G	T	+
1	161508562	A	-	1	161590010	T	-	-
1	161508569	T	-	1	161590017	A	-	-
1	161508574	C	-	1	161590028	A	-	-
1	161508583	T	-	1	161590037	C	-	-
1	161508617	A	G	1	161590071	G	-	+
1	161508651	G	-	1	161590105	A	-	-
1	161508677	T	-	1	161590131	A	-	-
1	161508678	C	-	1	161590132	A	-	-
1	161508754	A	-	1	161590208	G	-	-
1	161508761	T	-	1	161590215	G	-	-
1	161508763	T	C	1	161590217	C	-	+
1	161508771	A	-	1	161590225	G	-	-
1	161508788	C	-	1	161590242	T	-	-
1	161508807	T	-	1	161590261	C	-	-
1	161508842	C	-	1	161590296	T	-	-
1	161508859	T	-	1	161590313	C	-	-
1	161508862	T	-	1	161590316	A	-	-
1	161508871	C	-	1	161590325	T	-	-
1	161508949	C	-	1	161590403	T	C	+
1	161508977	A	-	1	161590431	C	-	-
1	161509035	G	-	1	161590489	T	-	-
1	161509040	A	G	1	161590494	G	-	+
1	161509049	A	-	1	161590503	T	A	+
1	161509060	T	-	1	161590514	C	G	+
1	161509064	A	-	1	161590519	G	-	-
1	161509106	A	-	1	161590560	G	-	-
1	161509126	G	-	1	161590580	A	-	-
1	161509141	G	-	1	161590595	A	-	-
1	161509192	G	-	1	161590650	A	-	-
1	161509227	A	-	1	161590685	G	-	-
1	161509286	C	-	1	161590718	G	-	-
1	161509311	G	-	1	161590743	A	G	+
1	161509357	T	-	1	161590789	C	-	-
1	161509400	C	-	1	161590832	G	-	-
1	161509491	T	-	1	161590923	G	-	-
1	161509502	G	-	1	161590934	C	-	-
1	161509569	C	-	1	161591001	T	-	-
1	161509626	T	-	1	161591058	C	T	+
1	161509632	G	-	1	161591064	C	-	-
1	161509636	A	-	1	161591068	T	-	-
1	161509711	C	-	1	161591143	T	C	+
1	161509743	C	-	1	161591175	A	-	-
1	161509744	C	-	1	161591176	T	-	-



1	161509794	T	-	1	161591226	C	-	-
1	161509809	T	-	1	161591241	C	-	-
1	161509817	A	-	1	161591249	G	-	-
1	161509870	A	-	1	161591302	G	-	-
1	161509898	A	-	1	161591330	G	-	-
1	161509953	C	-	1	161591385	T	-	-
1	161509958	T	-	1	161591390	A	-	-
1	161510015	A	-	1	161591449	C	-	-
1	161510017	A	-	1	161591451	G	-	-
1	161510018	A	-	1	161591452	G	-	-
1	161510033	C	-	1	161591467	T	-	-
1	161510039	G	-	1	161591473	A	-	-
1	161510044	A	-	1	161591478	G	-	-
1	161510057	G	-	1	161591491	C	-	-
1	161510070	C	-	1	161591504	A	-	-
1	161510089	A	-	1	161591523	T	-	-
1	161510098	A	-	1	161591532	C	-	-
1	161510104	G	-	1	161591538	A	-	-
1	161510111	G	-	1	161591545	C	-	-
1	161510125	C	-	1	161591560	T	-	-
1	161510128	G	-	1	161591563	A	-	-
1	161510143	G	-	1	161591578	C	-	-
1	161510155	T	-	1	161591591	C	-	-
1	161510174	T	-	1	161591610	C	-	-
1	161510186	G	-	1	161591622	A	-	-
1	161510195	G	-	1	161591631	T	-	-
1	161510223	A	-	1	161591659	C	-	-
1	161510228	G	-	1	161591664	T	-	-
1	161510230	T	-	1	161591666	C	-	-
1	161510235	T	-	1	161591671	C	-	-
1	161510239	A	-	1	161591675	T	-	-
1	161510358	G	-	1	161591794	T	G	+
1	161510434	G	A	1	161591870	A	-	+
1	161510530	C	-	1	161591966	T	-	-
1	161510534	G	-	1	161591970	A	-	-
1	161510543	T	-	1	161591979	C	T	+
1	161510648	C	-	1	161592084	T	-	-
1	161510672	T	-	1	161592109	C	-	-
1	161510676	C	-	1	161592113	T	-	-
1	161510680	T	-	1	161592117	C	-	-
1	161510689	A	-	1	161592126	G	-	-
1	161510723	G	-	1	161592160	C	-	-
1	161510753	C	-	1	161592190	T	-	-
1	161510806	C	-	1	161592243	T	-	-
1	161510907	T	-	1	161592344	C	-	-
1	161511222	C	T	1	161592659	T	-	+
1	161511400	T	-	1	161592837	C	-	-
1	161511414	G	-	1	161592851	T	G	+
1	161511449	T	-	1	161592886	C	-	-
1	161511471	T	-	1	161592908	C	T	+
1	161511581	C	-	1	161593018	G	-	-
1	161511649	G	-	1	161593086	A	-	-
1	161511652	T	-	1	161593089	G	-	-
1	161511739	T	-	1	161593176	A	-	-
1	161511759	T	-	1	161593196	C	-	-
1	161511761	A	-	1	161593198	G	-	-

1	161511763	T	-	1	161593200	G	-	-
1	161511772	C	-	1	161593209	T	-	-
1	161511840	C	-	1	161593277	T	-	-
1	161511848	T	-	1	161593285	C	-	-
1	161511853	T	-	1	161593290	C	-	-
1	161511912	T	-	1	161593349	C	T	+
1	161511960	G	-	1	161593397	C	G	+
1	161512029	G	-	1	161593468	A	G	+
1	161512082	G	-	1	161593520	C	-	-
1	161512155	G	-	1	161593592	A	-	-
1	161512348	C	-	1	161593786	T	-	-
1	161512379	T	-	1	161593817	G	-	-
1	161512416	A	-	1	161593854	G	-	-
1	161512430	G	-	1	161593868	A	-	-
1	161512440	C	-	1	161593880	T	C	+
1	161512465	C	-	1	161593905	T	-	-
1	161512534	C	-	1	161593974	T	-	-
1	161512658	G	-	1	161594098	A	-	-
1	161512674	G	-	1	161594114	A	-	-
1	161512771	T	-	1	161594211	C	-	-
1	161512806	T	-	1	161594246	G	T	+
1	161512834	A	-	1	161594274	G	-	-
1	161512867	G	-	1	161594307	A	-	-
1	161512959	A	-	1	161594399	G	-	-
1	161513072	A	-	1	161594512	G	-	-
1	161513085	C	-	1	161594525	G	-	-
1	161513086	A	-	1	161594526	T	-	-
1	161513118	A	-	1	161594558	G	A	+
1	161513198	G	-	1	161594638	T	-	-
1	161513321	C	-	1	161594761	T	C	+
1	161513406	T	-	1	161594844	A	-	-
1	161513554	A	-	1	161594997	G	A	+
1	161513703	C	-	1	161595146	T	-	-
1	161513704	A	-	1	161595147	G	-	-
1	161513759	G	C	1	161595202	C	G	+
1	161513822	A	-	1	161595265	G	-	-
1	161513907	A	G	1	161595351	G	-	+
1	161514197	C	-	1	161595641	G	-	-
1	161514436	T	-	1	161595880	G	-	-
1	161514542	A	C	1	161595986	C	-	+
1	161514570	G	-	1	161596014	A	G	+
1	161514596	A	-	1	161596040	G	-	-
1	161514628	C	-	1	161596072	T	-	-
1	161514837	A	-	1	161596283	G	A	+
1	161515138	A	-	1	161596584	G	-	-
1	161515143	C	-	1	161596589	T	-	-
1	161515212	A	-	1	161596658	C	-	-
1	161515213	G	-	1	161596659	T	-	-
1	161515225	G	-	1	161596671	C	-	-
1	161515233	G	-	1	161596679	C	-	-
1	161515239	G	-	1	161596685	A	-	-
1	161515281	C	-	1	161596731	T	-	-
1	161515287	A	-	1	161596737	T	-	-
1	161515290	G	-	1	161596740	C	-	-
1	161515308	T	-	1	161596758	G	-	-
1	161515316	C	-	1	161596766	A	-	-

1	161515317	C	-	1	161596767	G	-	-
1	161515503	G	-	1	161596877	A	-	-
1	161515563	G	-	1	161596937	T	-	-
1	161515638	T	G	1	161597013	G	-	+
1	161515748	T	-	1	161597123	C	-	-
1	161515749	G	-	1	161597124	A	-	-
1	161515803	C	-	1	161597178	G	-	-
1	161515807	T	-	1	161597182	C	-	-
1	161515824	A	-	1	161597192	G	-	-
1	161515831	A	-	1	161597199	T	-	-
1	161515840	A	-	1	161597208	T	-	-
1	161515841	A	-	1	161597209	G	-	-
1	161515872	C	-	1	161597240	G	-	-
1	161515890	A	-	1	161597258	T	-	-
1	161515952	C	A	1	161597320	A	-	+
1	161516054	G	-	1	161597422	A	-	-
1	161516135	A	-	1	161597503	G	-	-
1	161516149	C	-	1	161597517	T	-	-
1	161516159	T	-	1	161597527	C	-	-
1	161516164	A	-	1	161597532	G	-	-
1	161516277	T	-	1	161597645	C	-	-
1	161516327	A	-	1	161597695	G	-	-
1	161516365	T	-	1	161597733	C	-	-
1	161516461	C	-	1	161597829	T	-	-
1	161516464	G	-	1	161597832	A	-	-
1	161516467	G	-	1	161597835	A	-	-
1	161516477	T	-	1	161597845	C	-	-
1	161516480	A	-	1	161597848	G	-	-
1	161516509	C	-	1	161597877	T	-	-
1	161516512	T	-	1	161597880	C	-	-
1	161516514	C	-	1	161597882	T	-	-
1	161516585	C	-	1	161597953	G	-	-
1	161516598	G	-	1	161597966	A	-	-
1	161516609	T	-	1	161597977	C	-	-
1	161516613	T	-	1	161597981	G	-	-
1	161516619	C	-	1	161597987	A	C	+
1	161516641	G	-	1	161598009	A	-	-
1	161516684	G	-	1	161598052	A	-	-
1	161516734	A	-	1	161598092	C	-	-
1	161516748	A	-	1	161598106	G	-	-
1	161516791	T	-	1	161598149	A	-	-
1	161516915	T	-	1	161598273	C	-	-
1	161517008	T	-	1	161598366	C	-	-
1	161517054	C	-	1	161598412	A	C	+
1	161517201	G	-	1	161598559	A	-	-
1	161517234	C	-	1	161598592	G	C	+
1	161517271	T	-	1	161598629	C	-	-
1	161517306	C	-	1	161598664	T	C	+
1	161517334	A	-	1	161598692	G	A	+
1	161517465	G	-	1	161598823	T	G	+
1	161517571	T	-	1	161598929	A	T	+
1	161517620	G	-	1	161598978	A	G	+
1	161517629	G	-	1	161598987	A	G	+
1	161517631	T	-	1	161598989	C	T	+
1	161517766	A	-	1	161599124	T	A	+
1	161517810	G	-	1	161599168	C	G	+

1	161517842	C	G	1	161599200	G	C	+
1	161517894	T	-	1	161599252	A	T	+
1	161518286	C	-	1	161599643	T	C	+
1	161518336	C	-	1	161599693	T	C	+
1	161518416	G	-	1	161599773	A	G	+
1	161518422	C	-	1	161599779	G	C	+
1	161518747	T	-	1	161600104	A	-	-
1	161519158	G	-	1	161600516	A	-	-
1	161519163	T	-	1	161600521	C	T	+
1	161519243	G	-	1	161600601	T	-	-
1	161519291	G	-	1	161600649	C	G	+
1	161519296	C	-	1	161600654	A	-	-
1	161519349	A	-	1	161600707	G	-	-
1	161519351	G	-	1	161600709	T	-	-
1	161519396	C	-	1	161600754	T	-	-
1	161519429	C	-	1	161600787	G	C	+
1	161519434	C	-	1	161600792	A	C	+
1	161519476	C	-	1	161600834	T	-	-
1	161519584	A	-	1	161600942	G	-	-
1	161519601	A	-	1	161600959	G	-	-
1	161519622	C	-	1	161600980	T	-	-
1	161519645	C	-	1	161601003	T	-	-
1	161519646	A	-	1	161601004	G	-	-
1	161519650	A	-	1	161601008	G	-	-
1	161519677	C	-	1	161601035	T	-	-
1	161519684	G	-	1	161601042	A	-	-
1	161519695	G	-	1	161601053	C	-	-
1	161519700	G	-	1	161601058	T	-	-
1	161519723	C	-	1	161601081	A	-	-
1	161519724	C	-	1	161601082	T	-	-
1	161519760	C	-	1	161601118	G	C	+
1	161519775	C	-	1	161601133	T	C	+
1	161519777	T	-	1	161601135	C	-	-
1	161519788	T	-	1	161601146	C	-	-
1	161519839	C	-	1	161601197	T	-	-
1	161519840	A	-	1	161601198	T	-	-
1	161519872	G	-	1	161601231	A	G	+
1	161519901	T	-	1	161601260	C	-	-
1	161519902	G	-	1	161601261	A	-	-
1	161519955	T	-	1	161601314	G	-	-
1	161519974	G	-	1	161601333	C	-	-
1	161519991	C	-	1	161601350	T	C	+
1	161520013	T	-	1	161601372	C	-	-
1	161520039	G	-	1	161601398	T	G	+
1	161520056	A	-	1	161601414	T	A	+
1	161520257	C	-	1	161601612	T	-	-
1	161520301	C	-	1	161601656	T	C	+
1	161520403	G	-	1	161601758	T	G	+
1	161520406	G	-	1	161601761	A	-	-
1	161520509	C	-	1	161601872	T	C	+
1	161520616	C	-	1	161601979	T	C	+
1	161520863	C	-	1	161602226	T	C	+
1	161520919	T	-	1	161602282	C	-	-
1	161520920	G	-	1	161602283	A	G	+
1	161520936	A	-	1	161602299	C	A/T	+
1	161521007	A	-	1	161602370	G	-	-

1	161521030	G	-	1	161602393	A	-	-
1	161521037	T	-	1	161602400	C	-	-
1	161521235	G	-	1	161602598	A	G	+
1	161521382	A	-	1	161602745	G	-	-
1	161521399	A	-	1	161602762	G	-	-
1	161521403	C	-	1	161602766	G	-	-
1	161521618	C	-	1	161602981	T	C	+
1	161521748	A	-	1	161603111	G	-	-
1	161521795	T	-	1	161603157	C	-	-
1	161521922	T	-	1	161603284	C	-	-
1	161522308	G	-	1	161603670	T	G	+
1	161522476	A	-	1	161603838	G	-	-
1	161522544	A	-	1	161603906	G	-	-
1	161522552	A	-	1	161603914	C	-	-
1	161522620	G	C	1	161603982	C	G	+
1	161522883	G	-	1	161604245	A	-	-
1	161523139	G	-	1	161604501	A	G	+
1	161523660	G	-	1	161605022	A	-	-
1	161523666	G	-	1	161605028	C	-	-
1	161523684	A	-	1	161605045	T	-	-
1	161523819	A	-	1	161605179	T	-	-
1	161523830	C	-	1	161605190	G	C	+
1	161523936	T	-	1	161605296	C	T	+
1	161524053	T	G	1	161605413	G	-	+
1	161524073	G	-	1	161605433	A	G	+
1	161524094	C	-	1	161605454	T	C	+
1	161524203	G	-	1	161605563	A	G	+
1	161524297	A	G	1	161605657	G	A	+
1	161524328	G	-	1	161605688	A	G	+
1	161524462	A	-	1	161605822	G	A	+
1	161524485	T	-	1	161605845	G	-	-
1	161524490	A	-	1	161605850	T	-	-
1	161524491	A	-	1	161605851	T	-	-
1	161524492	A	-	1	161605852	T	-	-
1	161524530	A	-	1	161605889	G	A	+
1	161524705	T	-	1	161606064	A	T	+
1	161524789	C	G	1	161606148	G	C	+
1	161524817	C	-	1	161606176	T	-	-
1	161524819	T	-	1	161606178	G	-	-
1	161524942	G	-	1	161606301	A	G	+
1	161525008	T	-	1	161606367	C	T	+
1	161525030	C	-	1	161606389	T	-	-
1	161525276	A	-	1	161606635	G	A	+
1	161525572	A	-	1	161606931	T	-	-
1	161525598	T	-	1	161606957	C	-	-
1	161525615	G	-	1	161606973	A	G	+
1	161525685	C	-	1	161607043	T	-	-
1	161525721	G	-	1	161607079	A	-	-
1	161525792	A	-	1	161607150	G	-	-
1	161525890	T	-	1	161607248	C	-	-
1	161526019	G	-	1	161607377	A	-	-
1	161526046	A	-	1	161607404	G	-	-
1	161526049	T	-	1	161607407	C	-	-
1	161526053	G	-	1	161607411	C	-	-
1	161526066	G	-	1	161607424	A	-	-
1	161526069	G	-	1	161607427	A	-	-

1	161526072	C	-	1	161607430	G	-	-
1	161526086	G	-	1	161607444	T	-	-
1	161526102	A	-	1	161607460	G	-	-
1	161526160	G	-	1	161607518	A	-	-
1	161526183	A	-	1	161607541	G	-	-
1	161526279	G	-	1	161607637	A	-	-
1	161526287	A	-	1	161607645	G	-	-
1	161526345	A	-	1	161607703	G	-	-
1	161526524	T	-	1	161607874	C	-	-
1	161526789	T	-	1	161608139	C	T	+
1	161526809	T	-	1	161608159	C	-	-
1	161526888	T	C	1	161608238	C	-	+
1	161527018	G	-	1	161608368	A	-	-
1	161527019	G	-	1	161608369	A	-	-
1	161527043	A	-	1	161608393	G	-	-
1	161527131	C	-	1	161608481	T	-	-
1	161527133	C	-	1	161608483	G	-	-
1	161527138	A	-	1	161608488	G	-	-
1	161527159	C	-	1	161608509	T	-	-
1	161527469	G	-	1	161608819	A	G	+
1	161527772	G	-	1	161609122	A	G	+
1	161527836	T	G	1	161609186	G	T	+
1	161527901	C	T	1	161609251	T	C	+
1	161528050	A	-	1	161609400	G	A	+
1	161528057	C	-	1	161609407	A	C	+
1	161528066	T	G	1	161609416	G	T	+
1	161528119	T	C	1	161609469	C	T	+
1	161528344	G	T	1	161609693	T	G	+
1	161528577	G	-	1	161609926	A	G	+
1	161529191	T	A	1	161610539	A	T	+
1	161529193	G	-	1	161610541	A	G	+
1	161529194	C	-	1	161610542	T	C	+
1	161529386	A	-	1	161610734	G	A	+
1	161529400	C	-	1	161610748	T	-	-
1	161529471	C	-	1	161610819	A	C	+
1	161529520	G	-	1	161610868	A	-	-
1	161529619	C	-	1	161610967	T	-	-
1	161529645	T	-	1	161610993	C	-	-
1	161529925	G	-	1	161611270	A	G	+
1	161530113	A	-	1	161611458	G	A	+
1	161530222	A	T	1	161611567	T	A	+
1	161530775	A	-	1	161612120	C	-	-
1	161530808	T	-	1	161612153	A	-	-
1	161530834	A	-	1	161612179	G	-	-
1	161530869	G	A	1	161612214	A	-	+
1	161531030	T	G	1	161612375	G	-	+
1	161531031	T	G	1	161612376	G	-	+
1	161531033	T	G	1	161612378	G	-	+
1	161531065	T	C	1	161612410	C	T	+
1	161531084	T	-	1	161612429	C	-	-
1	161531233	C	-	1	161612578	T	C	+
1	161531265	G	-	1	161612610	A	-	-
1	161531270	G	-	1	161612615	A	-	-
1	161531305	G	-	1	161612650	A	-	-
1	161531337	C	-	1	161612682	T	-	-
1	161531407	A	-	1	161612752	G	-	-

1	161531505	G	-	1	161612850	A	-	-
1	161531782	G	-	1	161613128	A	-	-
1	161532028	A	T	1	161613374	T	-	+
1	161532045	C	-	1	161613391	G	-	-
1	161532046	T	-	1	161613392	C	-	-
1	161532053	T	C	1	161613399	C	-	+
1	161532057	T	A	1	161613403	A	-	+
1	161532073	G	T	1	161613419	T	-	+
1	161532089	A	C	1	161613435	C	-	+
1	161532209	G	A	1	161613555	A	-	+
1	161532296	A	-	1	161613642	T	-	-
1	161532477	A	G	1	161613823	G	A	+
1	161532616	C	-	1	161613962	T	C	+
1	161532643	C	-	1	161613989	T	-	-
1	161532669	C	-	1	161614015	T	-	-
1	161532781	A	T	1	161614127	T	-	+
1	161533016	G	-	1	161614362	A	-	-
1	161533088	C	-	1	161614434	T	-	-
1	161533106	G	-	1	161614452	A	-	-
1	161533144	G	-	1	161614490	T	G	+
1	161533216	G	-	1	161614562	A	-	-
1	161533280	A	-	1	161614626	T	-	-
1	161533286	C	-	1	161614632	T	-	-
1	161533389	T	-	1	161614735	C	-	-
1	161533475	A	-	1	161614821	G	-	-
1	161533523	A	-	1	161614869	G	-	-
1	161533672	A	-	1	161615018	G	-	-
1	161533792	T	-	1	161615139	C	-	-
1	161533799	G	-	1	161615146	T	-	-
1	161533801	G	-	1	161615148	C	-	-
1	161533835	T	-	1	161615182	C	-	-
1	161533864	C	-	1	161615198	T	-	-
1	161533919	C	-	1	161615253	A	-	-
1	161533925	T	-	1	161615259	C	-	-
1	161533949	C	-	1	161615283	A	-	-
1	161533978	G	-	1	161615312	A	-	-
1	161533989	A	-	1	161615323	G	-	-
1	161534026	A	-	1	161615360	G	-	-
1	161534031	G	-	1	161615365	A	-	-
1	161534040	C	-	1	161615374	G	-	-
1	161534048	G	-	1	161615382	A	-	-
1	161534076	C	-	1	161615410	T	-	-
1	161534135	G	-	1	161615525	T	-	-
1	161534156	G	-	1	161615546	A	-	-
1	161534316	C	-	1	161615706	T	-	-
1	161534344	A	-	1	161615734	G	-	-
1	161534587	G	-	1	161615977	A	-	-
1	161534608	G	-	1	161615998	T	G	+
1	161534875	G	-	1	161616265	A	-	-
1	161534881	T	-	1	161616271	C	-	-
1	161534945	C	-	1	161616335	T	C	+
1	161535009	T	-	1	161616399	G	T	+
1	161535071	G	-	1	161616461	A	-	-
1	161535384	A	C	1	161616775	C	-	+
1	161535486	C	-	1	161616877	T	-	-
1	161535683	C	-	1	161617074	T	-	-

1	161535725	C	-	1	161617112	T	-	-
1	161535726	G	-	1	161617113	T	G	+
1	161535734	C	-	1	161617121	G	-	-
1	161535742	G	-	1	161617130	A	-	-
1	161535761	G	-	1	161617149	A	-	-
1	161535763	C	-	1	161617151	T	-	-
1	161535765	G	-	1	161617153	T	-	-
1	161535769	C	-	1	161617157	T	-	-
1	161535784	G	-	1	161617172	C	-	-
1	161535786	T	-	1	161617174	C	-	-
1	161535793	C	-	1	161617181	G	-	-
1	161535803	C	-	1	161617191	A	-	-
1	161535806	C	-	1	161617194	A	-	-
1	161535827	C	-	1	161617215	T	-	-
1	161535828	A	-	1	161617216	G	-	-
1	161535848	G	-	1	161617236	A	-	-
1	161535852	G	-	1	161617240	A	-	-
1	161535856	C	-	1	161617244	G	-	-
1	161535857	T	-	1	161617245	C	-	-
1	161535859	C	-	1	161617247	T	-	-
1	161535865	G	-	1	161617253	T	-	-
1	161535879	T	-	1	161617266	C	-	-
1	161535889	A	-	1	161617276	G	-	-
1	161535893	G	-	1	161617280	A	-	-
1	161535900	C	-	1	161617287	T	-	-
1	161535901	A	-	1	161617288	G	-	-
1	161535904	G	-	1	161617291	A	-	-
1	161535906	T	-	1	161617293	G	-	-
1	161535909	A	-	1	161617296	G	-	-
1	161535913	G	-	1	161617300	A	-	-
1	161535916	A	-	1	161617303	C	-	-
1	161535923	C	-	1	161617310	T	-	-
1	161535926	T	-	1	161617313	A	-	-
1	161535945	G	-	1	161617338	C	-	-
1	161535946	C	-	1	161617339	A	-	-
1	161535961	C	-	1	161617354	T	-	-
1	161535970	G	-	1	161617363	A	-	-
1	161535972	G	-	1	161617365	C	-	-
1	161535977	C	-	1	161617370	G	-	-
1	161535981	C	-	1	161617374	T	-	-
1	161536019	C	-	1	161617412	T	-	-
1	161536050	G	-	1	161617443	C	-	-
1	161536104	T	-	1	161617497	C	T	+
1	161536124	C	-	1	161617517	T	-	-
1	161536126	C	-	1	161617519	T	-	-
1	161536197	C	-	1	161617590	T	-	-
1	161536225	C	-	1	161617618	T	-	-
1	161536287	T	-	1	161617680	C	-	-
1	161536335	T	-	1	161617728	C	-	-
1	161536340	C	-	1	161617733	G	-	-
1	161536361	T	-	1	161617754	C	-	-
1	161536427	C	-	1	161617820	G	C	+
1	161536499	G	-	1	161617892	A	-	-
1	161536937	T	-	1	161618330	G	-	-
1	161536958	G	-	1	161618351	A	-	-
1	161537042	T	-	1	161618432	C	-	-



1	161537123	C	-	1	161618508	T	-	-
1	161537148	G	-	1	161618533	A	-	-
1	161537185	C	-	1	161618570	T	-	-
1	161537187	A	-	1	161618572	C	-	-
1	161537268	T	-	1	161618653	A	-	-
1	161537304	G	-	1	161618689	T	-	-
1	161537391	A	-	1	161618775	G	-	-
1	161537417	A	-	1	161618801	G	-	-
1	161537464	deletion	-	1	161618848	insertion	-	-
					-			
					161619296			
1	161537532	T	-	1	161619361	C	T	+
1	161537534	C	-	1	161619363	G	C	+
1	161537811	A	-	1	161619640	G	A	+
1	161537898	A	-	1	161619727	G	-	-
1	161537999	T	-	1	161619829	A	-	-
1	161538044	G	-	1	161619874	T	G	+
1	161538110	T	-	1	161619940	C	-	-
1	161538198	G	-	1	161620028	T	G	+
1	161538208	C	-	1	161620038	T	C	+
1	161538215	C	-	1	161620045	G	C	+
1	161538243	A	T	1	161620073	T	A	+
1	161538275	A	-	1	161620106	G	A	+
1	161538410	G	-	1	161620241	C	G	+
1	161538418	G	-	1	161620249	C	G	+
1	161538423	C	-	1	161620254	T	C	+
1	161538434	T	-	1	161620265	G	T	+
1	161538484	T	C	1	161620315	C	-	+
1	161538507	T	C	1	161620338	C	-	+
1	161538677	A	-	1	161620508	G	A	+
1	161539026	A	T	1	161620857	T	A	+
1	161539097	T	C	1	161620928	C	T	+
1	161539644	C	T	1	161621475	T	C	+
1	161539848	C	T	1	161621679	T	C	+
1	161540069	T	C	1	161621917	C	T	+
1	161540078	G	A	1	161621926	A	G	+
1	161540132	C	T	1	161621980	T	C	+
1	161540241	T	C	1	161622089	C	T	+
1	161540253	C	A	1	161622101	A	C	+
1	161540335	C	T	1	161622184	T	C	+
1	161540337	T	A	1	161622186	A	T	+
1	161540347	T	C	1	161622196	C	T	+
1	161540381	T	C	1	161622230	C	T	+
1	161540400	G	A	1	161622249	A	G	+
1	161540484	A	G	1	161622333	G	A	+
1	161540652	G	A	1	161622501	A	G	+
1	161540663	A	G	1	161622512	G	A	+
1	161540689	A	G	1	161622538	G	A	+
1	161540698	A	C	1	161622547	C	A	+
1	161540703	G	C	1	161622552	C	G	+
1	161540847	C	A	1	161622696	A	C	+
1	161540849	G	A	1	161622698	A	G	+
1	161540856	C	T	1	161622705	T	C	+
1	161540860	T	C	1	161622709	C	T	+
1	161540986	C	G	1	161622835	G	C	+
1	161541005	A	G	1	161622854	G	A	+

1	161541012	C	T	1	161622861	T	C	+
1	161541013	A	G	1	161622862	G	A	+
1	161541178	C	G	1	161623025	G	C	+
1	161541189	C	A	1	161623036	A	C	+
1	161541206	A	C	1	161623053	C	A	+
1	161541207	G	A	1	161623054	A	G	+
1	161541211	C	T	1	161623058	T	C	+
1	161541219	G	A	1	161623066	A	G	+
1	161541529	A	T	1	161623376	T	A	+
1	161541985	C	T	1	161623832	T	C	+
1	161542097	G	A	1	161623944	A	G	+
1	161542202	T	C	1	161624049	C	T	+
1	161542232	T	C	1	161624079	C	T	+
1	161542264	T	C	1	161624111	C	T	+
1	161542301	T	A	1	161624148	A	T	+
1	161542310	G	T	1	161624158	T	G	+
1	161542395	A	C	1	161624236	C	A	+
1	161542399	T	C	1	161624240	C	T	+
1	161542752	C	T	1	161624593	T	C	+
1	161542782	C	T	1	161624623	T	C	+
1	161543168	G	C	1	161625008	C	G	+
1	161544012	T	G	1	161625852	G	T	+
1	161544094	A	G	1	161625934	G	A	+
1	161544191	A	T	1	161626031	T	A	+
1	161544192	A	G	1	161626032	G	A	+
1	161544825	T	A	1	161626665	A	T	+
1	161546839	C	A	1	161628679	A	-	+
1	161548074	T	-	1	161629914	C	T	+
1	161548670	G	-	1	161630510	T	A/G	+
1	161549159	A	-	1	161630963	G	A	+
1	161549172	G	A	1	161630976	A	G	+
1	161549179	G	A	1	161630983	A	G	+
1	161549183	G	A	1	161630987	A	G	+
1	161549188	A	G	1	161630992	G	A	+
1	161549246	C	A	1	161631050	A	C	+
1	161549249	A	G	1	161631053	G	A	+
1	161549253	A	CG	1	161631057	G	A	+
1	161549257	A	CG	1	161631061	C	A	+
1	161549265	A	G	1	161631069	G	A	+
1	161549269	G	A	1	161631073	A	G	+
1	161549274	A	G	1	161631078	G	A	+
1	161549280	G	A	1	161631084	A	G	+
1	161549360	A	G	1	161631164	G	A	+
1	161549361	T	-	1	161631165	C	T	+
1	161549369	C	-	1	161631173	T	C	+
1	161550075	T	C	1	161631879	C	T	+
1	161551775	G	A	1	161633579	A	G	+
1	161552385	G	A	1	161634189	A	G	+
1	161553141	C	T	1	161634945	T	C	+
1	161555371	A	G	1	161637175	G	A	+
1	161555486	T	C	1	161637290	C	T	+
1	161556239	T	C	1	161638043	C	T	+
1	161556804	C	T	1	161638608	T	C	+
1	161557147	C	T	1	161638951	T	-	+
1	161557481	A	-	1	161639285	G	A	+
1	161557565	G	A	1	161639370	A	-	+

1	161557634	A	-	1	161639464	G	A	+
1	161558957	C	T	1	161640787	T	-	+
1	161559065	G	A	1	161640895	A	G	+
1	161559076	A	G	1	161640906	G	-	+
1	161559153	T	G	1	161640983	G	-	+
1	161559164	T	C	1	161640994	C	-	+
1	161559176	C	G	1	161641006	G	-	+
1	161559241	A	G	1	161641071	G	-	+
1	161559256	C	T	1	161641086	T	-	+
1	161559302	G	A	1	161641132	A	-	+
1	161559307	T	C	1	161641137	C	-	+
1	161559322	C	T	1	161641152	T	-	+
1	161559326	C	T	1	161641156	T	-	+
1	161559327	A	G	1	161641157	G	-	+
1	161559387	T	C	1	161641217	C	-	+
1	161559407	A	G	1	161641237	G	-	+
1	161559466	C	A	1	161641296	A	-	+
1	161559653	T	C	1	161641483	C	T	+
1	161559693	A	G	1	161641523	G	-	+
1	161559742	G	A	1	161641572	A	-	+
1	161559753	C	T	1	161641583	T	-	+
1	161559765	C	T	1	161641596	T	-	+
1	161559784	A	G	1	161641615	G	-	+
1	161559787	A	T	1	161641618	T	-	+
1	161559849	T	C	1	161641680	C	-	+
1	161560354	A	G	1	161642185	G	-	+
1	161560402	T	G	1	161642233	G	-	+
1	161560425	A	G	1	161642256	G	-	+
1	161560520	A	G	1	161642351	G	-	+
1	161560528	T	C	1	161642359	C	-	+
1	161560531	C	T	1	161642362	T	-	+
1	161560544	C	T	1	161642375	T	-	+
1	161560602	A	C	1	161642433	C	-	+
1	161560712	T	C	1	161642543	C	-	+
1	161560731	A	G	1	161642562	G	-	+
1	161560789	T	C	1	161642620	C	-	+
1	161560852	A	G	1	161642683	G	-	+
1	161560914	G	C	1	161642745	C	-	+
1	161560921	C	T	1	161642752	T	-	+
1	161561194	A	C	1	161643025	C	A	+
1	161561213	G	A	1	161643044	A	G	+
1	161561287	A	G	1	161643118	G	-	+
1	161561496	G	C	1	161643327	C	-	+
1	161561540	T	C	1	161643371	C	T	+
1	161561577	T	C	1	161643408	C	-	+
1	161561676	T	C	1	161643507	C	-	+
1	161561681	C	T	1	161643512	T	-	+
1	161561696	C	A	1	161643527	A	C	+
1	161561698	G	A	1	161643529	A	G	+
1	161561702	G	A	1	161643533	A	G	+
1	161561715	C	T	1	161643546	T	C	+
1	161561734	G	A	1	161643565	A	-	+
1	161562403	C	G	1	161644234	G	-	+
1	161562417	T	G	1	161644248	G	T	+
1	161562421	C	T	1	161644252	T	C	+
1	161562422	A	G	1	161644253	G	-	+

1	161562477	G	-	1	161644308	A	G	+
1	161562556	T	-	1	161644387	A	T	+
1	161562577	C	-	1	161644408	T	-	-
1	161562591	C	G	1	161644422	G	-	+
1	161562793	A	T	1	161644624	T	-	+
1	161562832	C	-	1	161644663	T	C	+
1	161562985	C	-	1	161644816	A	-	-
1	161563039	T	C	1	161644870	C	-	+
1	161563061	G	-	1	161644892	A	-	-
1	161563065	C	-	1	161644896	T	-	-
1	161563113	G	-	1	161644944	T	-	-
1	161563221	T	C	1	161645052	C	T	+
1	161563332	C	-	1	161645163	G	-	-
1	161563339	C	-	1	161645170	G	-	-
1	161563356	G	-	1	161645187	A	-	-
1	161563387	G	-	1	161645218	A	-	-
1	161563401	C	-	1	161645232	T	-	-
1	161563421	T	-	1	161645252	C	-	-
1	161563428	G	-	1	161645259	T	G	+
1	161563452	T	-	1	161645283	C	-	-
1	161563498	G	-	1	161645329	A	-	-
1	161563537	A	-	1	161645368	G	-	-
1	161563578	T	-	1	161645409	C	T	+
1	161563604	G	-	1	161645435	A	-	-
1	161563640	C	-	1	161645471	A	C	+
1	161563695	C	-	1	161645526	T	-	-
1	161563696	A	-	1	161645527	G	-	-
1	161563768	A	-	1	161645599	G	-	-
1	161563801	G	-	1	161645632	A	-	-
1	161563837	G	-	1	161645668	A	-	-
1	161563841	G	-	1	161645672	A	-	-
1	161563846	C	-	1	161645677	T	-	-
1	161563847	A	-	1	161645678	G	-	-
1	161563894	C	-	1	161645725	T	-	-
1	161563990	C	-	1	161645821	T	-	-
1	161563998	G	-	1	161645829	A	-	-
1	161564000	C	-	1	161645831	T	-	-

**Table S2. Hydatidiform Mole BAC Clones Sequenced by Sanger Sequencing**

clone ID	accession	version	length [bp]
CH17-116H17	AC243898	2	233,801
CH17-318H14	AC243440	1	107,857
CH17-135E1	AC243509	1	130,018
CH17-478A19	AC243424	2	203,902
CH17-24I15	AC243499	2	199,928

**Table S3. Summary of FcγRIIb Expression in Relation to *FCGR3B* Copy Number**

individual ID	<i>FCGR3B</i> copy number	frequency of 2B6+ cells [%]		2B6+ mean fluorescence	
		CD19+ cells	CD56+ cells	CD19+ cells	CD56+ cells
1	2	96.9	1.1	223.7	ND
2	2	99.5	2.1	233.4	ND
3	2	95.4	1.3	224.8	ND
4	2	99.1	3.5	198.3	ND
5	2	97.3	2.0	141.7	ND
6	2	97.5	3.6	169.2	ND
7	2	98.3	4.4	209.1	ND
8	2	98.6	2.2	234.3	ND
9	2	97.5	0.7	195.4	ND
10	2	96.1	2.3	259.9	ND
11	2	98.8	3.2	174.7	ND
12	2	99.0	1.3	230.0	ND
13	2	99.0	2.9	189.6	ND
14	2	97.5	2.9	221.1	ND
15	2	99.6	5.1	207.6	ND
16	1	98.1	73.2	231.9	25.0
17	1	99.1	82.9	262.9	31.8
18	1	99.1	62.4	266.3	25.7
19	1	98.9	82.5	256.1	27.8
20	1	99.1	53.1	166.3	14.4
799.1.1	1	99.3	69.6	175.3	14.5
799.1.2	1	99.8	60.5	220.0	20.7
810.1.2	1	98.7	45.4	110.2	16.5
511.1.1	1	99.8	70.8	323.5	44.7
511.1.2	1	100.0	65.8	321.9	33.4
603.1.1	1	96.9	75.9	224.6	24.5
799.2.1	0	99.6	74.4	202.7	29.1
810.1.1	0	99.0	84.5	177.8	23.4
810.2.2	0	98.3	60.1	135.3	26.0
511.2.2	0	98.9	62.5	579.9	119.9
603.2.2	0	98.9	87.0	259.8	37.6

Individuals numbered 1 – 20 are unrelated; the remaining 11 are related and are given a family designation followed by a unique identifier. ND = not detected.