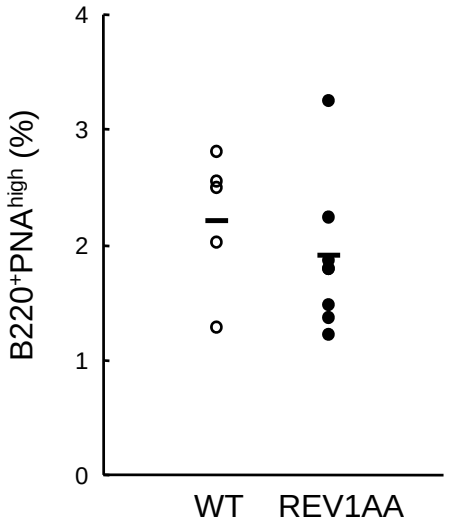
Supplemental Figure 1. Frequency of $B220^{+}PNA^{high}$ GC B cells in WT and REV1AA mice**.** Mice were immunized with NP-CGG in alum and 2 weeks later their splenocytes were stained with B220-PE and PNA-FITC. The results of 5 WT and 8 REV1AA mice are shown.



Supplemental Table I. *Mutation frequency in the J_H4 intronic region of WT and REV1AA mice*

WT mice							
J_H4 intron (509 bp)	WT1	WT2	WT3	WT4	Sum[b]		
Nunber of sequences	92	129	139	134	494		
Mutated sequences (%)	78 (84.8%)	86 (66.7%)	112 (80.6%)	96 (71.6%)	372(75.3%)		
Total length of mutated sequences	39702	43774	57008	48864	189348		
Total number of mutations[a]	325	312	670	579	1886		
Overall mutation freqency (%)	0.819	0.713	1.175	1.185	0.996		
Mutation frequency at C:G	0.375	0.347	0.481	0.606	0.46		
Mutation frequency at A:T	0.444	0.366	0.694	0.579	0.536		
% mutation at C:G : A:T	45.8:54.2	48.5:51.5	40.9:59.1	51.2:48.8	46.2:53.8		
REV1AA mice							
J_H4 intron (509 bp)	REV1AA1	REV1AA2	REV1AA3	REV1AA4	REV1AA5	Sum[b]	*p* value[c]
Number of sequences	114	98	113	119	126	570	
Mutated sequences (%)	74 (64.9%)	80 (81.6%)	84 (74.3%)	93 (78.2%)	69 (54.8%)	400	
Total length of mutated sequences	37666	40720	42756	47337	35121	203600	
Total number of mutations[a]	233	287	262	321	222	1325	
Overall mutation frequency (%)	0.618	0.705	0.613	0.678	0.632	0.651	0.0205
Mutation frequency at C:G (%)	0.335	0.323	0.252	0.299	0.243	0.291	0.0229
Mutation frequency at A:T (%)	0.283	0.382	0.361	0.379	0.389	0.360	0.0475
% mutation at C:G : A:T	54.2:45.8	45.8:54.2	41.2:58.8	44.1:55.9	38.5:61.5	44.7:55.3	

[a] Data are corrected for base composition.

[b] Combined data.

[c] Compared with WT mice (unpaired t-test).

Supplemental Table II. *Frequency of each type of nucleotide substitutions in individual WT and REV1AA mice*

	Transition		Transversion				Transition		Transversion			
	C>T	G>A	C>A	G>T	C>G	G>C	A>G	T>C	A>C	T>G	A>T	T>A
WT1[a]	0.0803	0.1060	0.0400	0.0292	0.0400	0.0791	0.1360	0.0630	0.0678	0.0426	0.0866	0.0486
WT2	0.1050	0.0837	0.0242	0.0388	0.0404	0.0553	0.1150	0.0662	0.0594	0.0184	0.0786	0.0276
WT3	0.1230	0.1710	0.0372	0.0393	0.0560	0.0488	0.1750	0.1070	0.1300	0.0481	0.1520	0.0819
WT4	0.1920	0.1210	0.0291	0.0348	0.1410	0.0880	0.1650	0.1140	0.0647	0.0395	0.1310	0.0643
WT5	0.1580	0.1500	0.0287	0.0451	0.0546	0.0800	0.1340	0.0745	0.0935	0.0445	0.1120	0.0510
WT6	0.1520	0.1270	0.0527	0.0310	0.0497	0.0873	0.1590	0.0692	0.0905	0.0239	0.0951	0.0452
WT7	0.1550	0.1390	0.0222	0.0431	0.0888	0.0711	0.1650	0.0909	0.0913	0.0487	0.1320	0.0892
WT8	0.1640	0.1010	0.0410	0.0335	0.0036	0.0569	0.1150	0.0792	0.0777	0.0442	0.0618	0.0511
WT9	0.1430	0.1220	0.0287	0.0372	0.0532	0.0559	0.1630	0.0578	0.0645	0.0409	0.0816	0.0502
WT10	0.1290	0.1290	0.0322	0.0399	0.0466	0.0962	0.1600	0.0832	0.0753	0.0440	0.1180	0.0604
WT11	0.1610	0.1580	0.0554	0.0506	0.0527	0.0801	0.1480	0.0994	0.0967	0.0335	0.1260	0.0586
WT12	0.2410	0.1870	0.0597	0.0419	0.0266	0.0687	0.1790	0.0874	0.0730	0.0662	0.1340	0.0707
WT Sum[b]	0.1530	0.1360	0.0385	0.0394	0.0591	0.0733	0.1530	0.0838	0.0842	0.0410	0.1120	0.0588
REV1AA1	0.0847	0.0714	0.0799	0.0427	0.0377	0.0109	0.0666	0.0385	0.0518	0.0256	0.0494	0.0512
REV1AA2	0.1260	0.0727	0.0437	0.0484	0.0130	0.0198	0.1210	0.0553	0.0501	0.0336	0.0729	0.0494
REV1AA3	0.0580	0.0566	0.0622	0.0482	0.0083	0.0189	0.0870	0.0678	0.0653	0.0226	0.0933	0.0246
REV1AA4	0.0748	0.0756	0.0636	0.0549	0.0037	0.0264	0.1280	0.0323	0.0746	0.0256	0.0883	0.0323
REV1AA5	0.0604	0.0689	0.0504	0.0281	0.0151	0.0204	0.1300	0.0595	0.0715	0.0275	0.0740	0.0275
REV1AA Sum[b]	0.0810	0.0693	0.0599	0.0453	0.0148	0.0211	0.1070	0.0501	0.0629	0.0269	0.0766	0.0368
% reduction[c]	47.1	49.0	**55.6**[d]	**15.0**[d]	75.0	71.2	30.1	40.2	25.3	34.4	31.6	37.4
p value[e]	0.0036	0.0003	0.0053	0.1633	0.0265	0.0000	0.0029	0.0031	0.0594	0.0242	0.0254	0.0227

[a] Data of WT1-WT4 are from this study and WT5-WT12 from a previous study (Ref. 24). Corrected for nucleotide composition.

[b] Conbined data.

[c] Compared with WT mice.

[d] The values in bold type indicate % increase as compared with WT mice.

[e] Unpaired t-test.