

Appendix for  
**Histone methyltransferase DOT1L controls state-specific identity during B cell  
differentiation**

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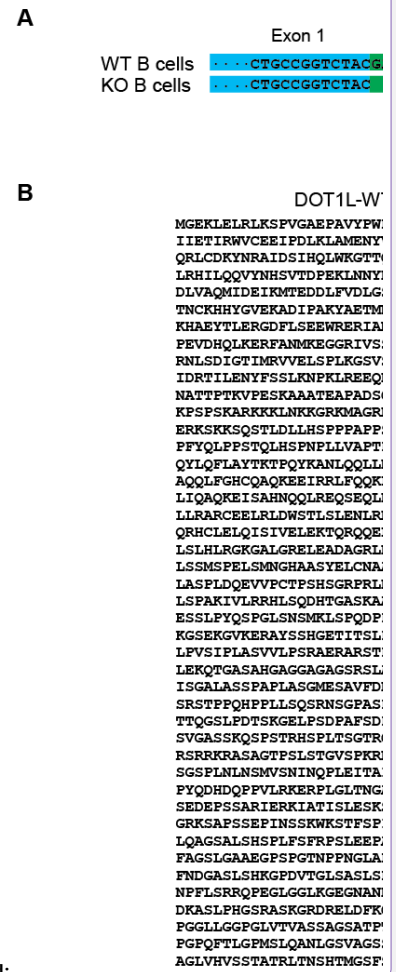
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Appendix Figure S1



**Appendix Figure S1:** Deletion of exon 2 of *Dot1L* renders *Dot1L* mRNA out of frame  
 A. Nucleotide alignment of exon 1, 2 and 3 of *Dot1L* cDNA from WT and KO (Δ exon 2) B cells after sanger sequencing confirming the deletion of exon 2 only in KO B cells.  
 B. Sequence analysis showing the comparison of the predicted WT and KO (Δ exon 2) DOT1L amino acids sequence. Deletion of exon2 in the *Dot1L* locus renders the mRNA out of frame and generates multiple translational stop codons indicated as red \*.

Figure S1



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**Appendix Table S1: Expression of genes involved in class switch recombination**

**Naïve B cells**

Symbol	Ensemble_id	log <sub>2</sub> FC (KO/WT)	log <sub>2</sub> CPM	FDR	Class
CTNBL1	ENSMUSG00000027649	0.661849364	4.844862022	0.189896181	A
EEF1A1	ENSMUSG00000037742	-0.174526281	13.16458476	0.764831378	A
HSP90AA1	ENSMUSG00000021270	-0.530959468	11.4179635	0.299894055	A
PSME3	ENSMUSG00000078652	-0.400599605	7.714615982	0.451841033	A
PTBP2	ENSMUSG00000028134	-0.890118169	5.593583267	0.060313941	A
RPA1	ENSMUSG00000000751	-0.326733222	7.362567372	0.547324522	A
RPA2	ENSMUSG00000028884	0.2608199	4.808214698	0.644726864	A
RPA3	ENSMUSG00000012483	-0.397669234	3.669005634	0.473559965	A
SUPT5	ENSMUSG00000003435	0.764849393	7.59261189	0.115216802	A
SUPT6	ENSMUSG00000002052	-0.091982611	7.773279241	0.88441725	A
TRIM28	ENSMUSG00000005566	0.631414171	7.395883757	0.206965223	A
AICDA	ENSMUSG00000040627	-1.61042881	1.850138724	0.001242527	B
APEX1	ENSMUSG000000035960	0.120220523	5.111705157	0.845601487	C
APEX2	ENSMUSG00000025269	0.047067076	3.763216722	0.949601854	C
UNG	ENSMUSG00000029591	0.681089396	2.353264122	0.217622869	C
XRCC1	ENSMUSG000000051768	1.146594878	4.541622034	0.011550465	C
APLF	ENSMUSG000000030051	-0.070137337	3.737886699	0.919411043	D
ATM	ENSMUSG000000034218	-1.205121639	7.483761354	0.006413404	D
ATR	ENSMUSG000000032409	-0.992839783	7.01376052	0.03039051	D
DCLRE1C	ENSMUSG000000026648	-0.650030604	6.003666243	0.19446862	D
LIG4	ENSMUSG000000049717	-0.63617797	4.01840124	0.220205066	D
MRE11A	ENSMUSG000000031928	-0.374788374	6.116788349	0.487077043	D
NBN	ENSMUSG000000028224	-0.045430665	5.141282934	0.947781725	D
NHEJ1	ENSMUSG000000026162	0.287475475	2.360830853	0.635039048	D
PARP1	ENSMUSG000000026496	0.571416079	8.427280071	0.259640764	D
RAD50	ENSMUSG000000020380	-0.456552873	6.415821884	0.384185034	D
RBBP8	ENSMUSG000000041238	-0.522310826	5.561061803	0.313786464	D
REV1	ENSMUSG000000026082	-0.699093739	6.264200353	0.156925509	D
RNF168	ENSMUSG000000014074	-0.372092987	5.193855258	0.493881344	D
RNF8	ENSMUSG000000090083	0.524741284	1.99050762	0.369231933	D
TRP53BP1	ENSMUSG000000043909	-0.206619763	6.77524595	0.717948751	D
XRCC4	ENSMUSG000000021615	-0.712466082	4.099075643	0.158256773	D
XRCC5	ENSMUSG000000026187	-0.39396788	5.633866498	0.464884287	D
XRCC6	ENSMUSG000000022471	-0.273083246	5.306721424	0.625669741	D
PAXIP1	ENSMUSG000000002221	0.021043119	5.552817787	0.977335657	E
SUPT16	ENSMUSG000000035726	-0.399475881	7.765231816	0.453277416	E
EXO1	ENSMUSG000000039748	-0.455101475	2.55712726	0.426552421	F
MLH1	ENSMUSG000000032498	-0.323144879	5.585486464	0.555716473	F
MLH3	ENSMUSG000000021245	-0.30484102	5.052779783	0.582435728	F
MSH2	ENSMUSG000000024151	-0.425656654	6.32387961	0.421159665	F

MSH6	ENSMUSG00000005370	-0.509792695	6.574525741	0.324118383	F
PMS2	ENSMUSG00000079109	-0.456257072	5.386377497	0.3872161	F

**Activated B cells (LPS + IL-4)-Day 02**

Symbol	Ensemble_id	log <sub>2</sub> FC (KO/WT)	log <sub>2</sub> CPM	FDR	Class
CTNBL1	ENSMUSG00000027649	0.677913243	5.215708768	0.118811505	A
EEF1A1	ENSMUSG00000037742	0.118076202	13.19986242	0.837414095	A
HSP90AA1	ENSMUSG00000021270	-0.614728021	10.96346561	0.158174295	A
PSME3	ENSMUSG00000078652	-0.656685702	9.142011854	0.125631513	A
PTBP2	ENSMUSG00000028134	-1.072236538	4.726680452	0.005587082	A
RPA1	ENSMUSG00000000751	-0.085469936	8.339982325	0.886323864	A
RPA2	ENSMUSG00000028884	0.231653731	6.131983366	0.663396493	A
RPA3	ENSMUSG00000012483	-0.326843123	5.29015353	0.515892032	A
SUPT5	ENSMUSG00000003435	0.211307831	7.136742005	0.692269073	A
SUPT6	ENSMUSG00000002052	-0.077610994	7.862986093	0.896741849	A
TRIM28	ENSMUSG00000005566	0.346109402	7.919127797	0.4784557	A
AICDA	ENSMUSG00000040627	0.954584455	6.814722885	0.014082198	B
APEX1	ENSMUSG00000035960	-0.692828122	7.150801072	0.101896663	C
APEX2	ENSMUSG00000025269	0.134840896	4.216411079	0.822621993	C
UNG	ENSMUSG00000029591	-0.050257175	4.345680507	0.937764186	C
XRCC1	ENSMUSG00000051768	0.904021461	4.555980706	0.025863784	C
APLF	ENSMUSG00000030051	-0.439055278	3.792558324	0.371955021	D
ATM	ENSMUSG00000034218	-0.749218082	8.452664049	0.069587542	D
ATR	ENSMUSG00000032409	-0.786769379	7.158037227	0.054677362	D
DCLRE1C	ENSMUSG00000026648	-0.094081745	5.251548568	0.877564055	D
LIG4	ENSMUSG00000049717	0.197928752	4.325799261	0.723861417	D
MRE11A	ENSMUSG00000031928	-0.445323835	6.915668205	0.338852861	D
NBN	ENSMUSG00000028224	-0.905979559	6.305135196	0.021994601	D
NHEJ1	ENSMUSG00000026162	0.108537751	1.621487162	0.908962133	D
PARP1	ENSMUSG00000026496	0.254821015	8.123321404	0.623231792	D
RAD50	ENSMUSG00000020380	-0.479517371	7.257454883	0.297591834	D
RBBP8	ENSMUSG00000041238	-0.496598397	6.525845417	0.279897202	D
REV1	ENSMUSG00000026082	-0.354185572	5.980878063	0.470095156	D
RNF168	ENSMUSG00000014074	-0.344188853	6.282446279	0.483800687	D
RNF8	ENSMUSG00000090083	0.270150984	1.191524039	0.714284863	D
TRP53BP1	ENSMUSG00000043909	-0.326913139	6.489515086	0.510604111	D
XRCC4	ENSMUSG00000021615	-0.610396518	4.28122986	0.179179985	D
XRCC5	ENSMUSG00000026187	-0.556048809	6.402687408	0.213750919	D
XRCC6	ENSMUSG00000022471	-0.25567987	6.741484047	0.622992519	D
PAXIP1	ENSMUSG00000002221	-0.280738058	6.492274743	0.583241585	E
SUPT16	ENSMUSG00000035726	-0.586101643	9.378448083	0.183251245	E
EXO1	ENSMUSG00000039748	-0.498682259	6.259496778	0.276790004	F
MLH1	ENSMUSG00000032498	-0.353504751	5.700896853	0.472342445	F
MLH3	ENSMUSG00000021245	-0.379627331	5.427832586	0.435181677	F

MSH2	ENSMUSG00000024151	-0.417706636	6.834268696	0.377474928	F
MSH6	ENSMUSG00000005370	-0.172815004	8.102291743	0.75473192	F
PMS2	ENSMUSG00000079109	-0.367174199	5.861778313	0.449367716	F

**Class code for Appendix Table S1**

A	AID-binding factors
B	B cell-specific factors
C	Base excision repair factors
D	DNA damage sensors, adaptors and effectors
E	Factors involved in chromatin modification or transcription
F	Mismatch repair factors

**Appendix Table S2: Expression of unfold protein response genes (UPR)**

**Activated B cells (LPS + IL-4)-Day 02**

Symbol	Ensemble_id	log <sub>2</sub> FC (KO/WT)	log <sub>2</sub> CPM	FDR	Direction
KDELR3	ENSMUSG00000010830	3.247117583	0.39792167	1.83E-08	up in KO
XBP1	ENSMUSG00000020484	1.03759429	9.30853137	0.00609591	up in KO
PDIA6	ENSMUSG00000020571	0.951207615	9.46863521	0.01393015	up in KO
PDIA5	ENSMUSG00000022844	3.901776327	0.62301879	8.47E-11	up in KO
VEGFA	ENSMUSG00000023951	1.136257563	3.11570159	0.00516219	up in KO
BAG3	ENSMUSG00000030847	1.847088707	2.06419502	0.00000632	up in KO
HERPUD1	ENSMUSG00000031770	1.144244776	7.09910264	0.00206591	up in KO
HYOU1	ENSMUSG00000032115	0.85715382	8.92763372	0.03148537	up in KO
DNAJA4	ENSMUSG00000032285	1.057850732	1.9718521	0.01561533	up in KO
CCL2	ENSMUSG00000035385	2.934101708	1.61962897	6.26E-11	up in KO
WFS1	ENSMUSG00000039474	1.336826324	2.65899779	0.00086907	up in KO
WIPI1	ENSMUSG00000041895	2.199136612	1.45291297	0.000000986	up in KO
TUBB2A	ENSMUSG00000058672	2.476153534	3.14923086	1.16E-10	up in KO
DKC1	ENSMUSG00000031403	-0.856039022	8.74443954	0.031792	down in KO
DDX10	ENSMUSG00000053289	-0.921486708	7.2663858	0.01868136	down in KO
NPM1	ENSMUSG00000057113	-0.88066088	11.945197	0.02585723	down in KO
NHP2	ENSMUSG00000001056	-0.028926224	5.64937506	0.9633208	Non-Significant
CALR	ENSMUSG00000003814	0.640919807	11.3107756	0.13732202	Non-Significant
MTHFD2	ENSMUSG00000005667	-0.376428105	7.05367961	0.43294744	Non-Significant
ZBTB17	ENSMUSG00000006215	0.654043106	2.98780737	0.16324985	Non-Significant
KIF5B	ENSMUSG00000006740	-0.442567322	9.05603109	0.34013182	Non-Significant
KHSRP	ENSMUSG00000007670	-0.064356792	7.16553214	0.91639477	Non-Significant
ATP6V0D1	ENSMUSG00000013160	0.468000462	6.1611161	0.31327407	Non-Significant
DNAJB9	ENSMUSG00000014905	0.608446416	5.76991144	0.16874318	Non-Significant
NOLC1	ENSMUSG00000015176	-0.235331285	8.22680434	0.65225346	Non-Significant
MTREX	ENSMUSG00000016018	-0.514887933	8.20057275	0.25582648	Non-Significant
EXOSC10	ENSMUSG00000017264	0.05253682	6.97139113	0.93264449	Non-Significant
HSP90B1	ENSMUSG00000020048	0.597122279	12.4162054	0.17314147	Non-Significant
DDIT4	ENSMUSG00000020108	0.354197815	4.01326533	0.48530959	Non-Significant
SLC1A4	ENSMUSG00000020142	-0.632750017	3.74354912	0.16112025	Non-Significant
CNOT2	ENSMUSG00000020166	-0.525502584	7.67036848	0.24393267	Non-Significant
NFYB	ENSMUSG00000020248	-0.392831482	6.21230641	0.41272589	Non-Significant
CNOT6	ENSMUSG00000020362	-0.472739445	8.85747084	0.30419924	Non-Significant
ERN1	ENSMUSG00000020715	0.382983027	4.7705642	0.43294744	Non-Significant
GOSR2	ENSMUSG00000020946	0.163536436	6.94619011	0.76949994	Non-Significant
EIF2S1	ENSMUSG00000021116	-0.55843651	8.70661028	0.20878331	Non-Significant

EXOC2	ENSMUSG00000021357	0.020790923	6.11428414	0.97389129	Non-Significant
SSR1	ENSMUSG00000021427	0.182069966	8.73075464	0.73738069	Non-Significant
SLC30A5	ENSMUSG00000021629	-0.002353719	7.6277146	0.99893208	Non-Significant
SPCS1	ENSMUSG00000021917	0.430567447	6.37774546	0.36047835	Non-Significant
DCP1A	ENSMUSG00000021962	-0.132826106	6.61470896	0.81731943	Non-Significant
DNAJC3	ENSMUSG00000022136	0.442166613	8.27017333	0.34109297	Non-Significant
YWHAZ	ENSMUSG00000022285	-0.292011751	9.89279435	0.56386111	Non-Significant
PARN	ENSMUSG00000022685	-0.370776993	6.06184373	0.44413064	Non-Significant
EIF4A2	ENSMUSG00000022884	-0.635303013	9.59613937	0.1417821	Non-Significant
NFYA	ENSMUSG00000023994	-0.160247581	7.09378967	0.77444963	Non-Significant
HSPA9	ENSMUSG00000024359	-0.711158269	10.4573733	0.08947966	Non-Significant
DCP2	ENSMUSG00000024472	-0.574950282	7.79587212	0.19445067	Non-Significant
CXXC1	ENSMUSG00000024560	0.437788433	4.56258015	0.36482014	Non-Significant
RPS14	ENSMUSG00000024608	0.477037638	7.99876594	0.29968984	Non-Significant
PSAT1	ENSMUSG00000024640	-0.170530418	8.12683625	0.75757803	Non-Significant
BANF1	ENSMUSG00000024844	-0.076959969	6.51637887	0.89759146	Non-Significant
YIF1A	ENSMUSG00000024875	0.542860942	3.550164	0.2561741	Non-Significant
ALDH18A1	ENSMUSG00000025007	0.022074927	6.55597643	0.97232232	Non-Significant
PAIP1	ENSMUSG00000025451	-0.414463655	6.52254889	0.38181343	Non-Significant
EIF4A3	ENSMUSG00000025580	-0.111935652	6.85339701	0.84779748	Non-Significant
SEC11A	ENSMUSG00000025724	0.129703257	6.72624007	0.82261828	Non-Significant
NABP1	ENSMUSG00000026107	0.301884329	8.78377559	0.54888531	Non-Significant
ATF3	ENSMUSG00000026628	-0.657082275	3.75806901	0.14724832	Non-Significant
ATF6	ENSMUSG00000026663	0.723604325	7.77162234	0.08329224	Non-Significant
HSPA5	ENSMUSG00000026864	0.277023574	11.4682889	0.58657887	Non-Significant
NOP56	ENSMUSG00000027405	-0.622425813	8.97053921	0.15217163	Non-Significant
ARFGAP1	ENSMUSG00000027575	0.461319817	5.20734177	0.32567207	Non-Significant
EXOSC9	ENSMUSG00000027714	-0.610526631	7.02190683	0.16413854	Non-Significant
SERP1	ENSMUSG00000027808	0.04881001	9.74865417	0.938097	Non-Significant
CKS1B	ENSMUSG00000028044	0.340787504	5.14027586	0.49448602	Non-Significant
EIF4E	ENSMUSG00000028156	-0.646757811	8.24391436	0.13373266	Non-Significant
SDAD1	ENSMUSG00000029415	-0.687503513	7.84846055	0.10488967	Non-Significant
ASNS	ENSMUSG00000029752	-0.352332894	5.9389813	0.47262392	Non-Significant
EDEM1	ENSMUSG00000030104	0.572043872	9.06583419	0.19664737	Non-Significant
POP4	ENSMUSG00000030423	-0.2709673	5.92597386	0.60162631	Non-Significant
FUS	ENSMUSG00000030795	-0.557100558	9.01081264	0.20978702	Non-Significant
EIF4EBP1	ENSMUSG00000031490	-0.065109499	2.9019814	0.9211792	Non-Significant
EIF2AK3	ENSMUSG00000031668	0.605649583	6.42413256	0.16937163	Non-Significant
LSM4	ENSMUSG00000031848	0.699261889	3.91721633	0.11531525	Non-Significant
DCTN1	ENSMUSG00000031865	0.811114588	4.46975819	0.05312949	Non-Significant

IMP3	ENSMUSG00000032288	-0.220902058	5.51887997	0.68064647	Non-Significant
SRPRB	ENSMUSG00000032553	0.554859259	5.03450475	0.22281873	Non-Significant
TTC37	ENSMUSG00000033991	-0.44205628	7.25455596	0.34260545	Non-Significant
EXOSC4	ENSMUSG00000034259	-0.261666266	3.33624482	0.63514811	Non-Significant
EXOSC1	ENSMUSG00000034321	-0.487820476	5.5553005	0.29302611	Non-Significant
IFIT1	ENSMUSG00000034459	0.269165982	6.75833284	0.60226522	Non-Significant
XPOT	ENSMUSG00000034667	-0.560374835	7.68366963	0.20771094	Non-Significant
EEF2	ENSMUSG00000034994	0.635954596	10.3151564	0.14115106	Non-Significant
SEC31A	ENSMUSG00000035325	0.274511299	7.54897371	0.59266302	Non-Significant
EDC4	ENSMUSG00000036270	0.417423631	5.44706871	0.3819	Non-Significant
NOP14	ENSMUSG00000036693	-0.730254354	7.55589168	0.07958366	Non-Significant
LSM1	ENSMUSG00000037296	-0.502338694	4.5221849	0.28240154	Non-Significant
CNOT4	ENSMUSG00000038784	-0.289815795	6.13311631	0.57200415	Non-Significant
EXOSC2	ENSMUSG00000039356	-0.464524349	6.73300796	0.31492337	Non-Significant
SLC7A5	ENSMUSG00000040010	0.052585748	7.59889524	0.93255506	Non-Significant
TSPYL2	ENSMUSG00000041096	0.230518768	5.32355542	0.66772108	Non-Significant
RRP9	ENSMUSG00000041506	-0.082439465	4.14844772	0.88693274	Non-Significant
ATF4	ENSMUSG00000042406	-0.301950636	8.11586806	0.5490964	Non-Significant
SHC1	ENSMUSG00000042626	0.304587565	6.35193561	0.54797967	Non-Significant
PREB	ENSMUSG00000045302	0.448752886	6.50645462	0.33591596	Non-Significant
EIF4G1	ENSMUSG00000045983	-0.083044203	9.88284657	0.88842741	Non-Significant
SPCS3	ENSMUSG00000054408	-0.034390162	8.59293086	0.95705613	Non-Significant
CEBPG	ENSMUSG00000056216	-0.364379967	6.2185668	0.45371819	Non-Significant
CEBPB	ENSMUSG00000056501	1.063842288	0.68535308	0.05501577	Non-Significant
TATDN2	ENSMUSG00000056952	-0.255414018	6.72409655	0.62334152	Non-Significant
EIF4A1	ENSMUSG00000059796	-0.405080996	10.1553163	0.39027245	Non-Significant
EXOSC5	ENSMUSG00000061286	0.688530882	2.00450195	0.18241079	Non-Significant



**Appendix Table S3: Surface markers for identification of specific cellular population**

**Bone Marrow**

B cells	CD19 <sup>+</sup> B220 <sup>+</sup>
Immature B cells	CD19 <sup>+</sup> B220 <sup>low</sup> IgM <sup>+</sup>
Mature B cells	CD19 <sup>+</sup> B220 <sup>high</sup> IgM <sup>+</sup>
Pro B cells	CD19 <sup>+</sup> B220 <sup>low</sup> IgM <sup>-</sup> c-Kit <sup>+</sup> CD25 <sup>-</sup>
Pre-B cells	CD19 <sup>+</sup> B220 <sup>low</sup> IgM <sup>-</sup> c-Kit <sup>-</sup> CD25 <sup>+</sup>

**Spleen**

B cells	CD19 <sup>+</sup> B220 <sup>+</sup>
B1-a cells	CD19 <sup>+</sup> B220 <sup>low</sup>
T1 cells	CD19 <sup>+</sup> B220 <sup>+</sup> CD23 <sup>-/low</sup> CD21/35 <sup>-/low</sup> IgM <sup>high</sup>
T2 cells	CD19 <sup>+</sup> B220 <sup>+</sup> CD23 <sup>high</sup> CD21/35 <sup>-/low</sup> IgM <sup>high</sup>
Marginal Zone progenitor	CD19 <sup>+</sup> B220 <sup>+</sup> CD23 <sup>high</sup> CD21/35 <sup>high</sup> IgM <sup>high</sup>
Marginal Zone B cells	CD19 <sup>+</sup> B220 <sup>+</sup> CD23 <sup>-/low</sup> CD21/35 <sup>high</sup> IgM <sup>high</sup>
Follicular B cells	CD19 <sup>+</sup> B220 <sup>+</sup> CD23 <sup>high</sup> CD21/35 <sup>low</sup> IgM <sup>-/low</sup>
Follicular B-I cells	B220 <sup>+</sup> CD93 <sup>-/low</sup> CD21/35 <sup>low</sup> IgM <sup>low</sup> IgD <sup>high</sup>
Follicular B-II cells	B220 <sup>+</sup> CD93 <sup>-</sup> CD21/35 <sup>low</sup> IgM <sup>high</sup> IgD <sup>high</sup>
Germinal center B cells	CD19 <sup>+</sup> B220 <sup>+</sup> PNA/GL7 <sup>high</sup> CD95 <sup>high</sup>
Plasma cells	CD19 <sup>+</sup> B220 <sup>+</sup> IgD <sup>-</sup> CD138 <sup>+</sup>
T cells	CD3 <sup>+</sup> CD19 <sup>-</sup>

**Peyer's patches**

Germinal center B cells	CD19 <sup>+</sup> B220 <sup>+</sup> PNA/GL7 <sup>high</sup> CD95 <sup>high</sup>
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**Appendix Table S4: Antibodies used for flowcytometry**

**Bone Marrow**

Antibodies	Fluorophore	Clone	Dilution	Vendor
CD19	APC-H7	1D3	1:200	BD Pharmingen
CD19	PerCpCy5,5	1D3	1:200	BD Pharmingen
CD45R (B220)	Pacific Blue	RA3-6B2	1:200	BD Pharmingen
IgM	PECy7	11/41	1:200	eBioscience
CD117 (cKit)	APC	2B8	1:200	eBioscience
CD117 (cKit)	BV605	2B8	1:100	BD Bioscience
CD25	PE	PC61	1:200	Biolegend
IgD	FITC	11-26c.2a	1:200	BD Pharmingen
DAPI			1:20	Sigma-Aldrich
PI			1:20	Sigma-Aldrich
Annexin V	APC		1:20	Biolegend

**Spleen**

Antibodies	Fluorophore	Clone	Dilution	Vendor
GL-7	FITC	GL7	1:200	BD Pharmingen
Peanut Agglutinin	FITC		1:400	Vector
CD23	BV421	B3B4	1:200	Biolegend
CD19	PerCpCy5,5	1D3	1:200	BD Pharmingen
CD19	APC-H7	1D3	1:200	BD Pharmingen
CD19	A780	1D3	1:200	eBioscience
CD95	Biotin	15A7	1:100	eBioscience
CD95	PE	Jo2	1:200	BD Pharmingen
CD21/35	APC	7E9	1:200	Biolegend
CD93	BV650	AA4.1	1:200	BD Pharmingen
IgM	BV785	11/41	1:200	BD Pharmingen
IgD	BV650	11-26c.2a	1:200	Biolegend
IgD	PE	11-26C	1:800	eBioscience
IgD	AF-488	11-26c2a	1:200	eBioscience
CD3	FITC	17A2	1:200	Biolegend
CD3	AF488	145-2C11	1:200	eBioscience
CD45R (B220)	V500	RA3-6B2	1:200	BD Pharmingen
CD45R (B220)	PB	RA3-6B2	1:200	BD Pharmingen
CD45R (B220)	APC	RA3-6B2	1:200	BD Pharmingen
CD45R (B220)	BV510	RA3-6B2	1:200	Biolegend
CD138	PE	281-2	1:200	BD Pharmingen

CD138	BV605	281-2	1:200	Biolegend
Streptavidin	BV605		1:400	BD Pharmingen
Zombie NIR			1:1000	Biolegend
7AAD			1:500	Biolegend
PI			1:20	Sigma-Aldrich
DAPI			1:20	Sigma-Aldrich
Annexin V	APC		1:20	Biolegend

#### **Peyer's Patches**

Antibodies	Fluorophore	Clone	Dilution	Vendor
CD45R (B220)	Pacific Blue	RA3-6B2	1:200	BD Pharmingen
CD19	PerCpCy5,5	1D3	1:200	BD Pharmingen
IgM	APC	Polyclonal	1:200	Southern Biotech
Peanut Agglutinin	FITC		1:400	Vector
CD95	PE	Jo2	1:200	BD Pharmingen
DAPI			1:20	Sigma-Aldrich

#### **Class switch recombination (*In vitro*)**

Antibodies	Fluorophore	Clone	Dilution	Vendor
CD19	PerCpCy5,5	1D3	1:400	BD Pharmingen
IgG1	PE	15H6	1:800	Southern Biotech
IgM	APC	Polyclonal	1:1000	Southern Biotech
IgG3	PE	Polyclonal	1:800	Southern Biotech
DAPI			1:20	Sigma-Aldrich

#### **Plasma cells (*In vitro*)**

Antibodies	Fluorophore	Clone	Dilution	Vendor
CD138	BV605	281-2	1:200	Biolegend
CD45R (B220)	BV510	RA3-6B2	1:200	Biolegend
IgD	BV650	11-26c.2a	1:200	Biolegend
Sca1	PeCy7	D7	1:200	Biolegend
CD3e	APC	145-2C11	1:200	BD Pharmingen
Ter119	APC	TER-119	1:200	BD Pharmingen
Blimp1*	PE	SE7	1:200	Biolegend
Zombie NIR			1:1000	Biolegend
* Intracellular				

#### **Cleaved Caspase-3 (*In vitro*)**

Antibodies	Fluorophore	Clone	Dilution	Vendor
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CD19	PerCpCy5,5	1D3	1:400	BD Pharmingen
Cleaved Caspse-3*	AF488		1:50	Cell signaling
Zombie NIR			1:1000	Biolegend
* Intracellular				