

## Supplemental information

**Table S1:** Table summarizing the list of antibodies used for the staining Panel of B and T cells in the Bone Marrow and peripheral lymphoid organs (Spleen / mesenteric Lymph nodes). Antibodies used for intracellular staining of permeabilized cells are highlighted in grey.

**Figure S1:** (A). Gating strategy for staining of B cells in the bone marrow and periphery respectively. (B). Gating strategy for staining of B-lineage cells in the spleen or lymph nodes **(C)** Gating strategy for the staining of T cells in the periphery (staining examples are from a resting unimmunized WT mouse).

**Figure S2:** Heatmap showing expression of the Top 10 differentially expressed genes defining the various B-cell clusters identified by single-cell transcriptome analysis.

**Next-generation sequencing data are deposited on G.E.O. under the following accession numbers:**

- **GSE217605** for bulk RNAseq
- **GSE214095** for scRNAseq

Table S1: Staining Panel

LB Moelle (BM)				Peripheral B cells (Spleen + mesenteric Lymph nodes)				T cells (Spleen + mesenteric Lymph nodes)			
Antibody	Reference	Supplier	Dilution	Antibody	Reference	Supplier	Dilution	Antibody	Reference	Supplier	Dilution
Bcl2 BV421	Bcl-2/100	BD Biosciences	1/50	Bcl2 BV421	Bcl-2/100	BD Biosciences	1/50	Ki-67 BV786	B56	BD Biosciences	1/50
CD19 BV510	1D3	BD Biosciences	1/200	CD19 BV510	1D3	BD Biosciences	1/200	Bcl6 FITC	K112-91	BD Biosciences	1/50
CD24 BV650	M1/69	BD Biosciences	1/400	CD93 BV650	AA4.1	BD Biosciences	1/200	fox P3 PE	FJK-16s	Invitrogen	1/100
CD23 BV711	B3B4	BD Biosciences	1/100	CD138 Biotin	281-2	Biolegend	1/200	CD62L BV421	MEL-14	BD Biosciences	1/1000
B220Bv786	RA3-6B2	BD Biosciences	1/100	CD23 FITC/ A488	B3B4	Biolegend	1/100	CD4 PE-CF594	RM4-5	BD Biosciences	1/400
CD2 FITC/A488	RM2-5	BD Biosciences	1/800	IgD PerCP-Cy5.5	11-26c.2a	BD Biosciences	1/100	Icos PerCP-Cy5.5	C398.4A	Biolegend	1/100
CD117 PerCP-Cy5.5	2B8	Biolegend	1/50	CXCR4 PE	551966	BD Biosciences	1/50	PD1 PE-Cy7	29F.1A12	Biolegend	1/50
CD43 PE	S7	BD Biosciences	1/50	CD21 PE-CF594	7G6	BD Biosciences	1/400	CXCR5 APC	REA215	Milteny Biotech	1/50
BP1 Biotin	6C3	BD Biosciences	1/25	IgM PC7	eB121-15F9	Invitrogen	1/200	CD44 APC-cy7	IM7	BD Biosciences	1/100
IgM PE-Cy5	II/41	eBiosciences	1/100	GL7 APC	GL7	Invitrogen	1/100	FVS 510	564406	BD Biosciences	1/1000
CD25 PE-Cy7	PC61	Biolegend	1/50	CD38 APC-R700	90	Invitrogen	1/100				
CD127 APC	564175	BD Biosciences	1/50	Streptavidin BV786	563858	BD Biosciences	1/400				
CD138 APC-R700	281-2	BD Biosciences	1/200	FVS 780 APC-H7	565388	BD Biosciences	1/1000				
Streptavidin PE-CF594	562318	BD Biosciences	1/400								
FVS 780 APC-H7	565388	BD Biosciences	1/1000								

Antibodies used for intracellular staining of permeabilized cells are highlighted in Grey

Figure S1A : Gating strategy for B cells in the Bone marrow

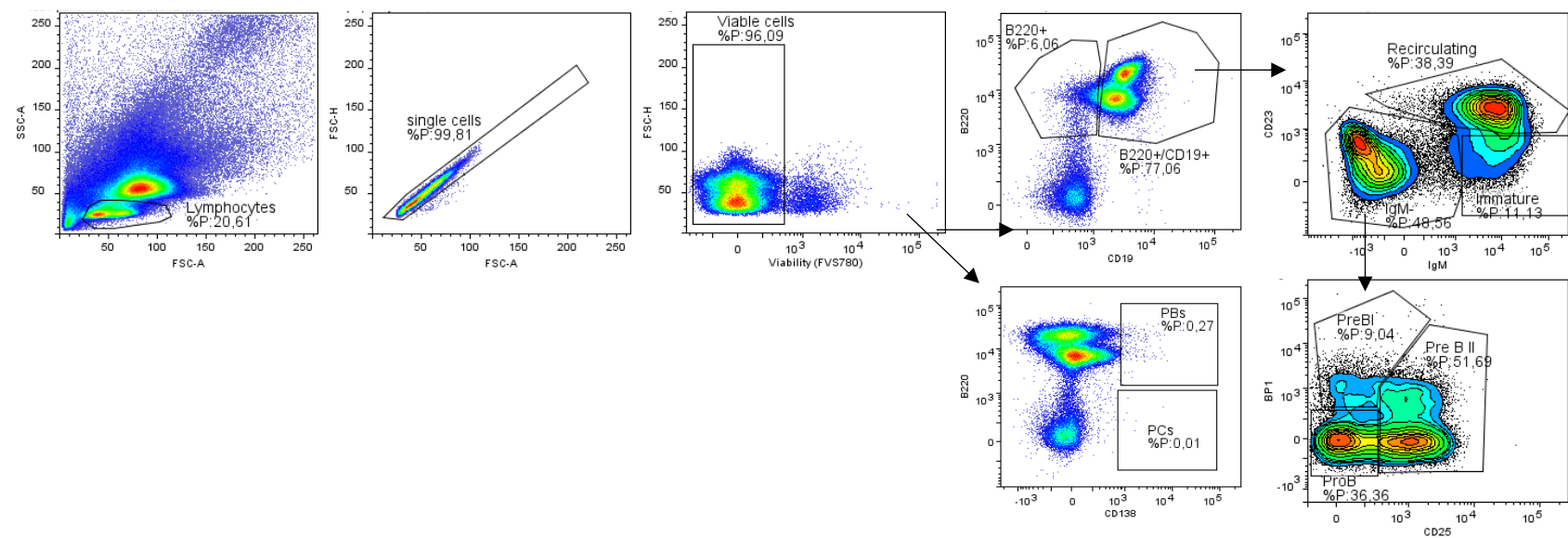


Figure S1B: Gating strategy for peripheral B cells (spleen and mesenteric LNs)

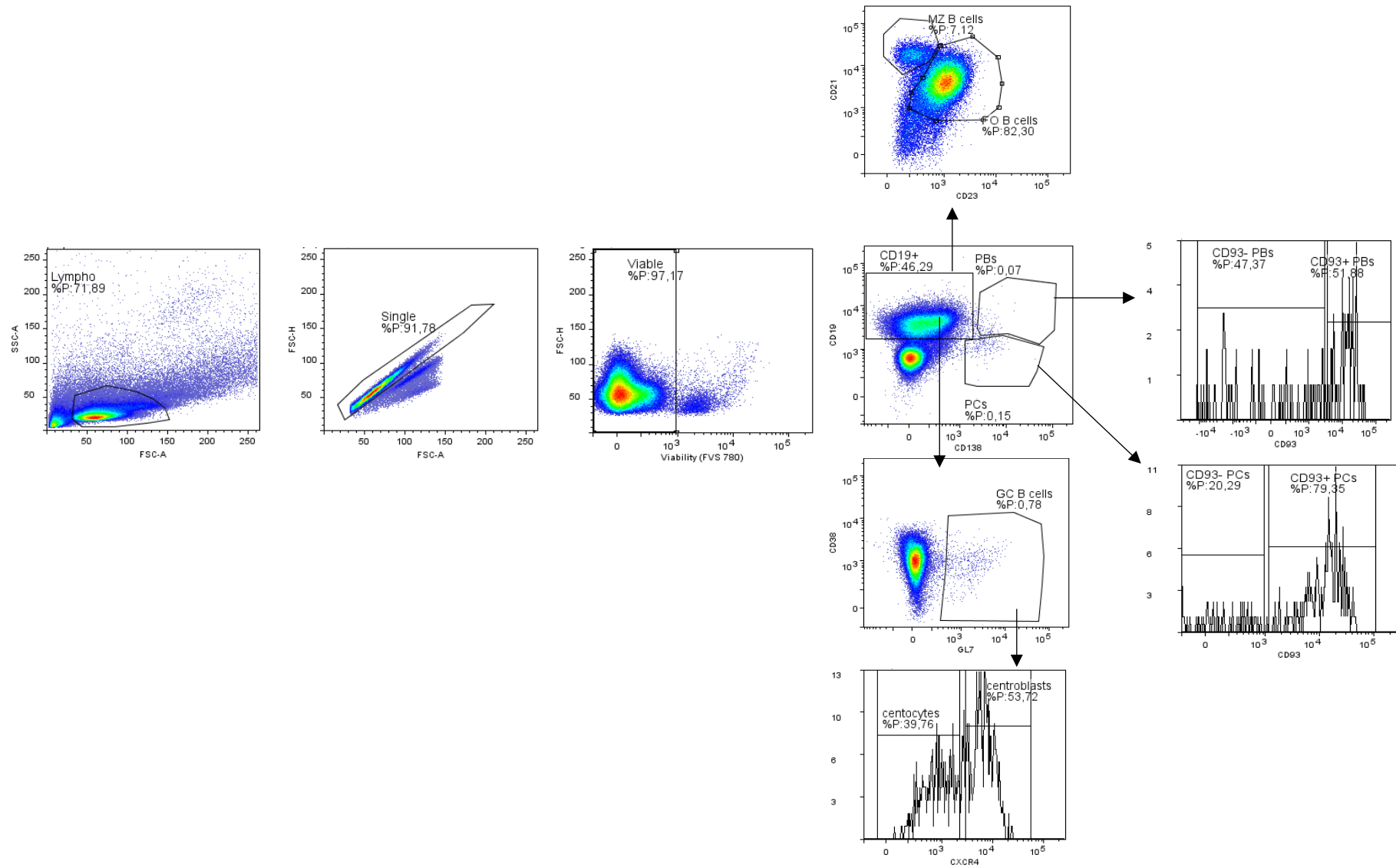


Figure S1C: Gating strategy for peripheral T cells (in spleen and mesenteric LNs)

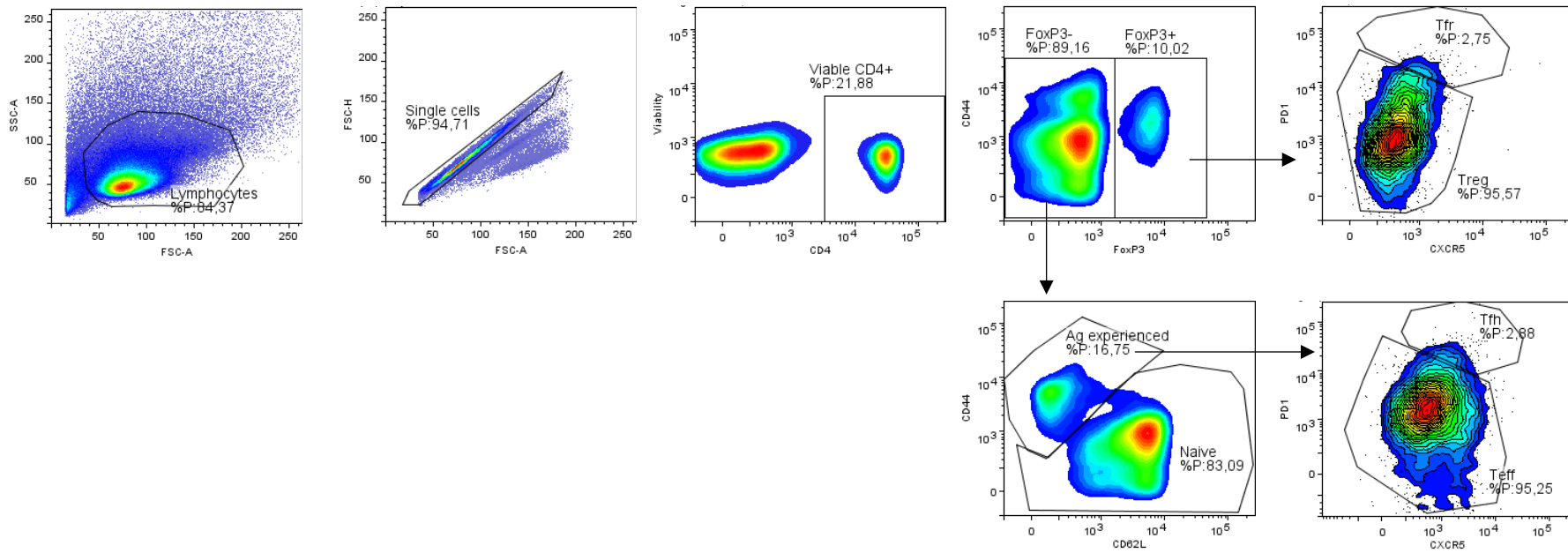


Figure S2: Top 10 differentially expressed genes in clusters.

