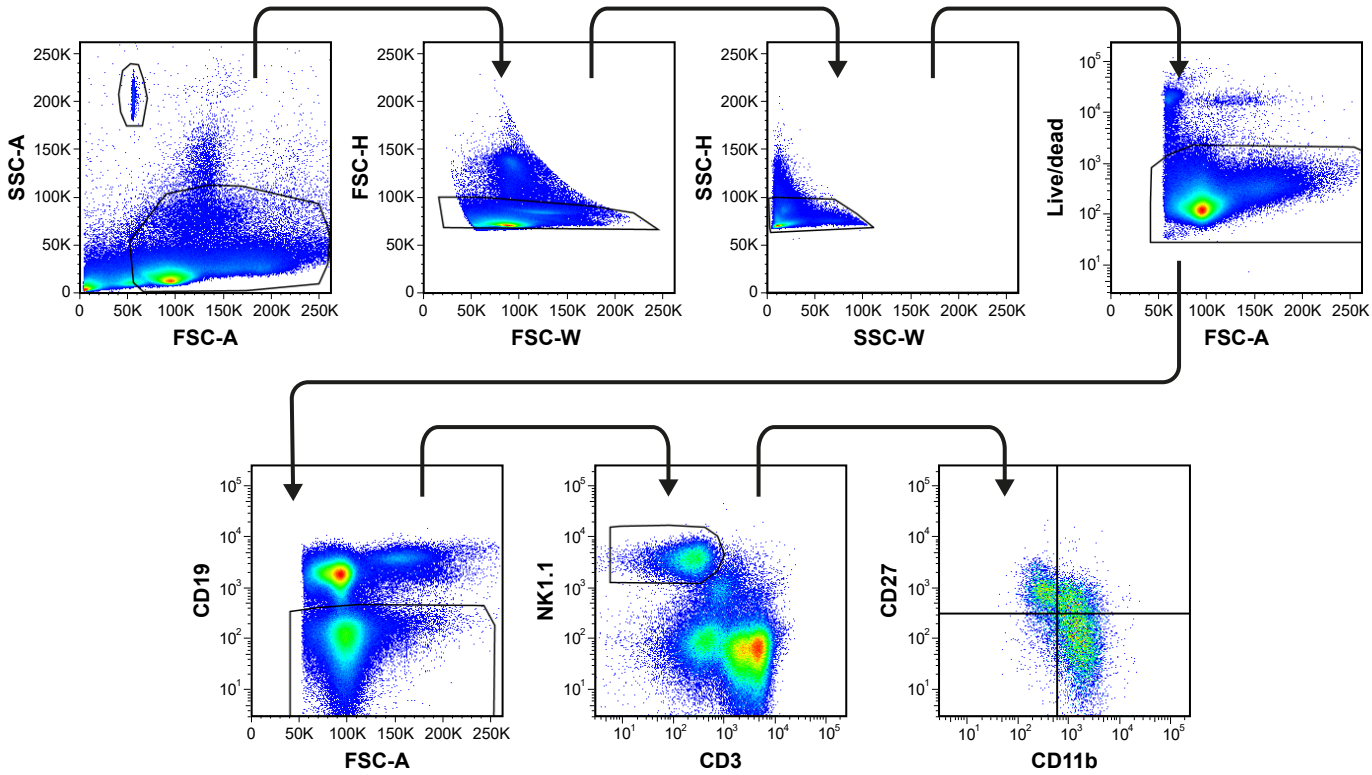
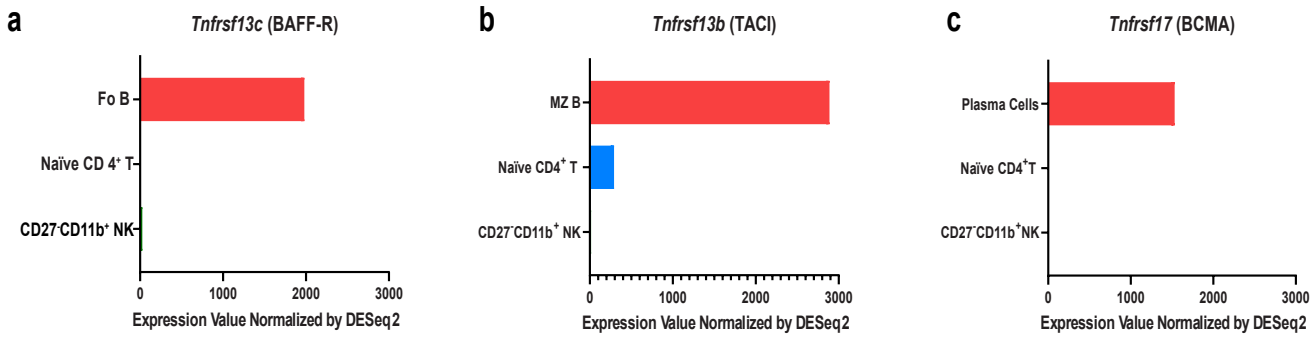



**Supplementary figure 1.** Gating strategy used to identify NK cells in mouse spleens. Single lymphocytic cells were initially identified based on their characteristic forward scatter (FSC) and side scatter (SSC) properties. Zombie$^{TM}$ Aqua Fixable Viability Kit was used to exclude dead cells. Cells within the CD19$^{-}$ gate were identified to exclude lineage cells. NK cells were identified as the CD3$^{-}$ NK1.1$^{+}$ population, which was then divided into distinct maturation stages based on the expression of CD11b and CD27.




**Supplementary figure 2.** RNA sequencing (RNAseq) analysis of **(a)** *Tnfrsf13c* (BAFF-R), **(b)** *Tnfrsf13b* (TACI) and **(c)** *Tnfrsf17* (BCMA) in splenic $CD27^{-}CD11b^{+}$ NK cells, naïve T cells and B cells from 6 weeks old C57BL/6J mice ($n$ = 1–3). B cells consists of follicular (Fo) B cells, marginal zone (MZ) B cells and plasma cells. The gene expression values are derived from the Immunological Genome Project (ImmGen) database. Cell types are colour-coded: B cells (red), naïve T cells (blue) and natural killer (NK) cells (green).

**Supplementary table 1.** Genetically-modified mice of the BAFF system

| Genotype | Phenotype | Genetic modification† | Reference |
|---|---|---|---|
| BAFF$^{-/-}$ | Mice exhibit impaired B cell survival and maturation. | Exons 1 and 2 (732 bp) that include the first 134 residues of the coding sequence were replaced with a human CD2 reporter gene fused to a neomycin-resistance cassette | Schiemann, B, Gommerman, JL, Vora, K, *et al.* An essential role for BAFF in the normal development of B cells through a BCMA-independent pathway. *Science*. 2001; **293**: 2111-2114. |
| BAFF-R$^{-/-}$ | Mice exhibit impaired B cell survival and maturation. | Cre-recombinase-mediated excision of a floxed region containing exons 3 and 4. The excised region encoded the entire extracellular and transmembrane domains and part of the cytoplasmic domain of this receptor. | Sasaki, Y, Casola, S, Kutok, J, *et al.* TNF family member B cell-activating factor (BAFF) receptor-dependent and -independent roles for BAFF in B cell physiology. *J Immunol*. 2004; **173**: 2245-2252. |
| TACI$^{-/-}$ | Mice exhibit increased numbers of peripheral | A tail-less human CD2 reporter cDNA and PGK- | Von Bülow GU, Van Deursen JM, Bram RJ. Regulation of the T-independent humoral response by TACI. *Immunity* 2001; **14**: 573-582. |

| | | | |
|---|---|---|---|
| | B cells, decreased serum IgA levels, and impaired responses to T cell-independent antigens, most notably those that are Type II. | neo cassette replaced 6.12 kb immediately downstream of the start ATG codon. This resulted in the insertion of stop codons in all potential reading frames downstream of the inserted reporter. | |
| BCMA$^{-/-}$ | Mice have reduced number of long-lived bone marrow plasma cells | A region of the gene containing the translation initiation codon and 1.3 kb of downstream sequences were replaced with a human CD2 reporter gene fused to a neomycin resistance cassette. The mutation deletes the first 87 residues, which includes a putative transmembrane domain. | Schiemann, B, Gommerman, JL, Vora, K, *et al.* An essential role for BAFF in the normal development of B cells through a BCMA-independent pathway. *Science*. 2001; **293**: 2111-2114. |
| BAFF Tg | Mice overproduce BAFF and have increased numbers of | Full-length murine Tnfsf13b (BAFF) was expressed under the control of the human | Mackay, F, Woodcock, SA, Lawton, P, Ambrose C, Baetscher M, Schneider P. Mice transgenic for BAFF develop lymphocytic disorders |

| | | | |
|---|---|---|---|
| | peripheral B cells. These mice develop symptoms of an autoimmune disorder from approximately 8 weeks of age. | liver-specific alpha-1-antitrypsin promoter with an apolipoprotein E enhancer. | along with autoimmune manifestations. *J Exp Med*. 1999; **190**: 1697-1710. |

† The information included under genetic modification was extracted from the Mouse Genome Database (MGD) at the Mouse Genome Informatics website, The Jackson Laboratory, Bar Harbor, Maine. World Wide Web (URL: http://www.informatics.jax.org).

**Supplementary table 2.** Antibodies used in this experiment.

| Target antigen | Fluorochrome/conjugate | Clone | Isotype | Manufacturer |
|---|---|---|---|---|
| BAFF-R | PE | TH22-E16 | Rat IgG1, κ | Biolegend |
| CD3 | APC<br>V450 | 145-2C11<br>17A2 | Armenian Hamster IgG<br>Rat IgG2b, κ | Biolegend<br>BD |
| CD11b | FITC | M1/70 | Rat IgG2b, κ | BD |
| CD16/32 (Fc block) | - | 2.4G2 | Rat IgG2b, κ | BD |
| CD19 | PerCP-Cy5.5 | 1D3 | Rat IgG2a, κ | BD |
| CD21/35 | eFluor450 | eBio4E3 | Rat IgG2a, λ | eBioscience |
| CD23 | PE-Cy7 | B3B4 | Rat IgG2a, κ | eBioscience |
| CD27 | PE | LG.3A10 | Armenian Hamster IgG1, κ | BD |
| CD44 | APC | IM7 | Rat IgG2b, κ | eBioscience |
| CD62L | FITC<br>PE | MEL14<br>MEL14 | Rat IgG2a, κ<br>Rat IgG2a, κ | BD<br>BD |
| CD93 | APC | AA4.1 | Rat IgG2b, κ | eBioscience |
| Granzyme B | AF647 | GB11 | Mouse (BALB/c) IgG1, κ | BD |
| IgM | FITC | II/41 | Rat IgG2a, κ | BD |
| NK1.1 | PE-Cy7 | PK136 | Mouse (C3H x BALB/c) IgG2a, κ | BD |
| TACI | PE | 8F10 | Rat IgG2a | Biolegend |
| TCRβ | V450 | H57-597 | Mouse IgG2, λ1 | BD |