Mouse BAFF R/TNFRSF13C Antibody

Monoclonal Rat IgG_{2A} Clone # 204406

Catalog Number: MAB1755

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse BAFF R/TNFRSF13C in direct ELISAs. In direct ELISAs, 100% cross-reactivity with recombinant human (rh) BAFF R is observed, approximately 10-25% cross-reactivity with recombinant mouse (rm) 4-1BB, rmDR3, rhDR6, rmEDAR, rhHVEM, rmNGF R, rmOX40, and rmTROY is observed, and no cross-reactivity with rmCD27, rmCD30, rmCD40, rmFAS, rmGITR, rmLymphotoxin βR, rmOPG, rmRANK, rmTNFRI, or rmTNF RII is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 204406
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse BAFF R/TNFRSF13C Gly2-Ala71 Accession # Q9D8D0
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

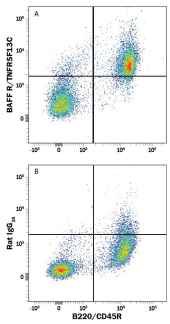
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Flow Cytometry



Detection of BAFF R/TNFRSF13C in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes were stained with Rat Anti-Mouse B220/CD45R APC-conjugated Monoclonal Antibody (Catalog # FAB1217A) and either (A) Rat Anti-Mouse BAFF R/TNFRSF13C Monoclonal Antibody (Catalog # MAB1755) or (B) Rat IgG_{2A} Isotype Control (Catalog # MAB006) followed by Fluorescein-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0104B).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

B-cell activating factor (BAFF), also known as BlyS, TALL-1, TNAK, and zTNF4, is a TNF ligand superfamily member and has been designated TNFSF13B. It is produced by macrophages, dendritic cells, and T lymphocytes. BAFF promotes the survival of B cells and is essential for B cell maturation (1-4). BAFF binds to three TNF receptor superfamily members: B-cell maturation antigen (BCMA/TNFRSF17), transmembrane activator and calcium-modulator and cyclophilin ligand interactor (TACI/TNFRSF13B) and BAFF receptor (BAFF R/BR3/TNFRSF 13C). These receptors are type III transmembrane proteins that lack a signal peptide. Whereas TACI and BCMA bind BAFF and another TNF superfamily ligand, APRIL(a proliferation-inducing ligand), BAFF-R selectively binds BAFF. Mouse BAFF-R cDNA encodes a 175 amino acid residue (aa) transmembrane protein with a 71 aa extracellular domain, a 21 aa transmembrane domain, and a 83 aa cytoplasmic region. A second isoform of BAFF R that has a 72 aa cytoplamic region can also be produced by alternative splicing. The BAFF R extracellular domain lacks the TNF receptor canonical cysteine-rich domain (CRD) and contains only a partial CRD with four cysteine residues. Human and mouse BAFF R share 56% aa sequence identity. BAFF R is highly expressed in spleen, lymph node and resting B cells. It is also expressed at lower levels in activated B cells, in resting $CD4^+$ T cells, in thymus and peripheral blood leukocytes. BAFF knockout mice lack mature B cells and has profound defects in antibody mediated immune responses. Similarly, A/WySnJ mice that are defective in BAFF R intracellular signaling also lack mature B cells, suggesting that BAFF R is the critical receptor for BAFF during B lymphopoiesis. In contrast, BCMA- or TACI-deficient mice have no major defect in B-cell development. While the function of BCMA is not defined, TACI has been shown to control B-cell homeostasis and T-cell-independent immune responses.

References:

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3. Laabi, Y. *et al.* (2001) Current Biol. **11**:R1013.
4. Thompson, J.S. *et al.* (2001) Science **14**:2108.

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