

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BAFF R in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant mouse BAFF R and less than 2% cross-reactivity with recombinant human (rh) 4-1BB, rhCD27, rhCD30, rhCD40, rhDR3, rhDR6, rhEDAR, rhFas, rhGITR, rhHVEM, rhNGF R, rhOPG, rhRANK, rhTNF RI, and rhTNF RII is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human BAFF R/TNFRSF13C Arg2-Ala71 Accession # Q96RJ3
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

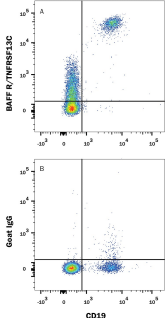
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human BAFF R/TNFRSF13C Fc Chimera (Catalog # 1162-BR)
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.	
Neutralization	Measured by its ability to neutralize BAFF R/TNFRSF13C-mediated inhibition of proliferation in mouse B cells. The Neutralization Dose (ND ₅₀) is typically 3-15 µg/mL in the presence of 0.3 µg/mL Recombinant Human BAFF R/TNFRSF13C Fc Chimera and 5 ng/mL Recombinant Human BAFF/BLyS/TNFSF13B.	

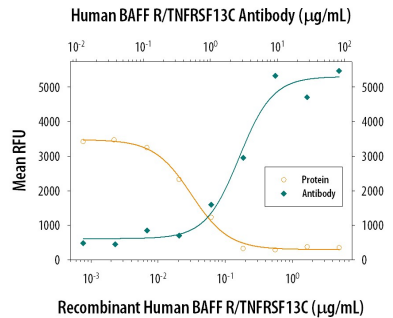
DATA

Flow Cytometry



Detection of BAFF R/TNFRSF13C in PBMCs by Flow Cytometry. Peripheral blood mononuclear cells (PBMCs) were stained with Mouse Anti-Human CD19 Fluorescein-conjugated Monoclonal Antibody (Catalog # [FAB4867F](#)) and either (A) Goat Anti-Human BAFF R/TNFRSF13C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1162) or (B) Normal Goat IgG Control (Catalog # [AB-108-C](#)) followed by APC-conjugated anti-goat secondary antibody (Catalog # F0108). View our protocol for [Staining Membrane-associated Proteins](#).

Neutralization



BAFF R/TNFRSF13C Inhibition of BAFF/BLyS/TNFSF13B-dependent Cell Proliferation and Neutralization by Human BAFF R/TNFRSF13C Antibody. Recombinant Human BAFF R/TNFRSF13C Fc Chimera (Catalog # 1162-BR) inhibits Recombinant Human BAFF/BLyS/TNFSF13B (Catalog # 2149-BF) induced proliferation in mouse B cells in a dose-dependent manner (orange line). Inhibition of Recombinant Human BAFF/BLyS/TNFSF13B (5 ng/mL) activity elicited by Recombinant Human BAFF R/TNFRSF13C Fc Chimera (0.3 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human BAFF R/TNFRSF13C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1162). The ND₅₀ is typically 3-15 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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. <ul style="list-style-type: none"> ● 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.

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. 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/TNFRSF13C). 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. 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 cell, in resting CD4⁺ T cells, in thymus and peripheral blood leukocytes. BAFF knockout mice lack mature B cells. 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:

1. Rolink, A.G. and F. Melcher (2002) *Curr. Opin. Immunol.* **14**:266.
2. Mackay F. and J.L. Browning (2002) *Nature Reviews Immunology* **2**:464.
3. Laabi, Y. *et al.* (2001) *Current Biol.* **11**:R1013.
4. Thompson, J.S. *et al.* (2001) *Science* **14**:2108.