Human BAFF/BLyS/TNFSF13B Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF124

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BAFF/BLyS/TNFSF13B in direct ELISAs and Western blots. In direct ELISAs, less than 15% cross-reactivity with recombinant murine BAFF and less than 1% cross-reactivity with recombinant human (rh) APRIL is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human BAFF/BLyS/TNFSF13B Ala134-Leu285 Accession # Q9Y275
Endotoxin Level	<0.60 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.

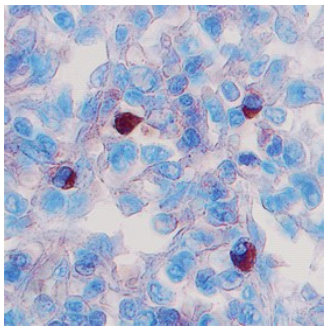
APPLICATIONS

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/BLyS/TNFSF13B (Catalog # 2149-BF)
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize BAFF/BLyS/TNFSF13B-induced proliferation in mouse B cells. The Neutralization Dose (ND_{50}) is typically 3-12 ng/mL in the presence of 5 ng/mL Recombinant Human BAFF/BLyS/TNFSF13B and 1 µg/mL Goat F(ab')2 Anti-mouse IgM.	

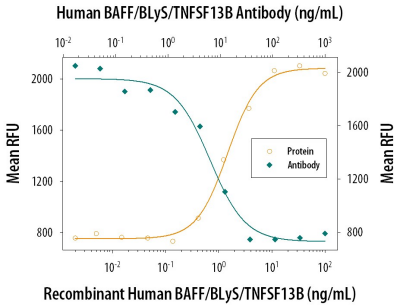
DATA

Immunohistochemistry



BAFF/BLyS/TNFSF13B in Human Spleen. BAFF/BLyS/TNFSF13B was detected in formalin fixed paraffin-embedded sections of human spleen using 15 µg/mL Goat Anti-Human BAFF/BLyS/TNFSF13B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF124) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Neutralization



Cell Proliferation Induced By BAFF/BLyS/TNFSF13B and Neutralization by Human BAFF/BLyS/TNFSF13B Antibody. In the presence of Goat F(ab')2 Anti-mouse IgM (1 µg/mL), Recombinant Human BAFF/BLyS/TNFSF13B (Catalog # 2149-BF) stimulates proliferation in mouse B cells in a dose-dependent manner (orange line). Under these conditions, proliferation elicited by Recombinant Human BAFF/BLyS/TNFSF13B (5 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human BAFF/BLyS/TNFSF13B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF124). The ND_{50} is typically 3-12 ng/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.** ● 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

BAFF (also known as TALL-1, BLyS, and THANK) is a type II transmembrane glycoprotein belonging to the TNF superfamily and has been designated as TNF superfamily member 13B (TNFSF13B). Human BAFF is a 285 amino acid (aa) protein consisting of a 218 aa extracellular domain, a 21 aa transmembrane region and a 46 aa cytoplasmic tail (1, 2). BAFF has the typical structural characteristics of the TNF superfamily ligands. It is a homotrimeric protein having the structurally conserved motif known as TNF homology domain (3, 4). A higher ordered structure composed of a cluster of trimeric units resembling the structure of a viral capsid has also been reported (4). Human BAFF may be shed from the cell surface by proteolytic cleavage between R133 and Ala134 to yield a soluble form of the protein that is detectable in serum (1, 5). Within the TNF superfamily BAFF shares the highest homology (48%) with APRIL (1). BAFF shares with APRIL the ability to bind to BCMA and TACI and also binds specifically to BAFF receptor (BAFF R, also known as BR3 or TNFSFR13C), which is the principal BAFF receptor (6-8). All three receptors are type III transmembrane proteins that are expressd in B cells. BAFF and APRIL can form active heteromers that bind to TACI (9). BAFF is expressed in peripheral blood mononuclear cells, in spleen and lymph nodes. Its expression in resting monocytes is up-regulated by IFN-α, IFN-β, LPS and IL-10. BAFF provides critical survival signals to a subset of B cells with intermediate maturation status (T2 B cells) during the immune response (10). BAFF also plays an important role in the development of lymphoid tissue and enhances the survival of activated memory B cells (7, 11). Human and mouse BAFF share 86% aa sequence identity (1).

References:

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