

FITC-Labeled Human BAFF / TNFSF13B / CD257 Protein, Fc Tag

Catalog # BAF-HF268

For Research Use Only

Description

Source FITC-Labeled Human BAFF, Fc Tag (BAF-HF268) is expressed from human HEK293 cells. It contains AA Ala 134 - Leu 285 (Accession # AAH20674.1). It is the FITC labeled form of Human BAFF, Fc Tag (Cat # BAF-H4268).
Predicted N-terminus: Glu

Predicted N-terminus Glu

Protein Structure

Fc(Thr 106 - Lys 330) P01857	BAFF(Ala 134 - Leu 285) AAH20674.1
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Molecular Characterization This protein carries a human IgG1 Fc tag at the N-terminus. The protein has a calculated MW of 44.5 kDa. The protein migrates as 55 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Conjugate FITC
Excitation source: 488 nm spectral line, argon-ion laser
Excitation Wavelength: 488 nm
Emission Wavelength: 535 nm

Labeling The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with FITC using standard chemical labeling method. The residual FITC is removed by molecular seive treatment during purification process.

FITC:Protein Ratio The FITC to protein molar ratio is 1.5-3 as determined by UV-Vis absorbance.

Endotoxin Less than 1.0 EU per µg by the LAL method.

Purity >95% as determined by SDS-PAGE.

Bioactivity Measured by its binding ability in a functional ELISA. Immobilized Human BCMA, Fc Tag (Cat. No. BC7-H5254) at 10 µg/mL (100 µL/well) can bind FITC-Labeled Human BAFF, Fc Tag (Cat. No. BAF-HF268) with a linear range of 0.156-2.5 µg/mL (QC tested).

Formulation and Storage

Formulation Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.
Contact us for customized product form or formulation.

Reconstitution Please see Certificate of Analysis for specific instructions. For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage For long term storage, the product should be stored at lyophilized state at -20°C or lower. Please protect from light and avoid repeated freeze-thaw cycles.
No activity loss was observed after storage at:

- 4-8°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

Background

Background B-cell activating factor (BAFF) is also known as tumor necrosis factor ligand superfamily member 13B, TNFSF13B, BAFF, B Lymphocyte Stimulator (BLyS), cluster of differentiation 257 (CD257), DTL, TNF- and APOL-related leukocyte expressed ligand (TALL-1), THANK, TNFSF20, ZTNF4, and is a cytokine that belongs to the tumor necrosis factor (TNF) ligand family. This cytokine is a ligand for receptors TNFRSF13B/TACI, TNFRSF17/BCMA, and TNFRSF13C/BAFFR. This cytokine is expressed in B cell lineage cells, and acts as a potent B cell activator. It has been also shown to play an important role in the proliferation and differentiation of B cells. It is expressed as transmembrane protein on various cell types including monocytes, dendritic cells and bone marrow stromal cells. BAFF is the natural ligand of three unusual tumor necrosis factor receptors named BAFF-R, TACI, and BCMA, all of which have differing binding affinities for it. These receptors are expressed mainly on mature B lymphocytes (TACI is also found on a subset of T-cells and BCMA on plasma cells). TACI binds worst since its affinity is higher for a protein similar to BAFF, called a proliferation-inducing ligand (APRIL). BCMA displays an intermediate binding phenotype and will work with either BAFF or APRIL to varying degrees. Signaling through BAFF-R and BCMA stimulates B lymphocytes to undergo proliferation and to counter apoptosis. All these ligands act as heterotrimers (i.e. three of the same molecule) interacting with heterotrimeric receptors, although BAFF has been known to be active as either a hetero- or homotrimer. BAFF acts as a potent B cell activator and has been shown to play an important role in the proliferation and differentiation of B cells.

References (1) Oren, D.A., et al., 2002, Nat. Struct. Biol. 9 (4): 288-292.

(2) Daridon C, et al., 2008, Autoimmun Rev 7 (4): 267-71.

Please contact us at TechSupport@acrobiosystems.com, if you have any questions about this product.

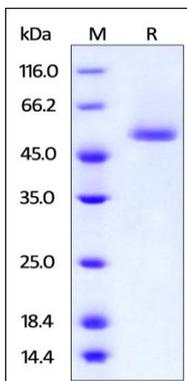
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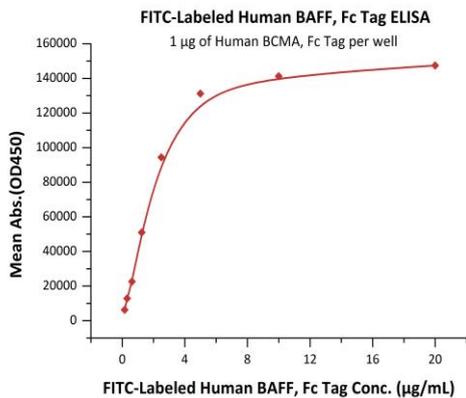
Assay Data

SDS-PAGE Data



FITC-Labeled Human BAFF, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity Data



Immobilized Human BCMA, Fc Tag (Cat. No. BC7-H5254) at 10 µg/mL (100 µL/well) can bind FITC-Labeled Human BAFF, Fc Tag (Cat. No. BAF-HF268) with a linear range of 0.156-2.5 µg/mL (QC tested).