BAFF (TNFSF13B) Active Protein

PRODUCT OVERVIEW

Product Name	BAFF (TNFSF13B), Active Protein
Full Product Name	BAFF, Recombinant, Human (B cell Activating Factor belonging to TNF Family, BLyS, TALL-1, THANK)
Product Gene Name	TNFSF13B active protein
Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Met-Ala-Va l-Gln-Gly.
Host	E Coli
Form/Format	Supplied as a lyophilized powder in mannitol, HSA.
Purity/Purification	Highly Purified 95% by RP-HPLC, FPLC, or reducing/non-reducing SDS-PAGE Silver Stain. Chromatographically purified.
Preparation and Storage	Lyophilized powder may be stored at 4 degree C for short-term only. Reconstitute to nominal volume by adding sterile dH2O and store at -20 degree C. Reconstituted product is stable for 12 months at -20 degree C. For maximum recovery of product, centrifuge the original vial prior to removing the cap. Further dilutions can be made in assay buffer.
Molecular Weight	31,223 Da
Chromosome Location	Chromosome: 13; NC_000013.10 (108921977..108959365). Location: 13q32-q34
OMIM	603969
3D Structure	ModBase 3D Structure for Q9Y275
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Biological Activity	Recombinant B Lymphocyte Stimulator is fully biologically active when compared to standard. The activity is determined by the dose-dependent stimulation of IL-8 production by human PBMC. The ED50 for this effect is less than 10ng/ml. Please note: results may vary with PBMC donors.
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280. 2. Analysis by RP-HPLC, using a standard solution of BAFF as a Reference Standard.
Reconstitution	Reconstitute the lyophilized BAFF in sterile 18M -cm H2O not less than 100ug/ml, which can then be further diluted to other aqueous solutions.
Product Categories/Family for TNFSF13B active protein	Growth Factors; Cytokines; Growth Factors-Apoptosis
Related Product Information for TNFSF13B active protein	The TNF-related ligand, B cell-activating factor belonging to the TNF family (BAFF), is necessary for normal B cell development and survival, and specifically binds the receptors transmembrane activator and calcium-modulator and cyclophilin ligand interactor (TACI), B cell maturation Ag (BCMA), and BAFF-R.Using specific mAbs, BAFF-R was found to be the predominant BAFF receptor expressed on peripheral B cells, in both humans and mice, and antagonist mAbs to BAFF-R blocked BAFF-mediated costimulation of anti- micro responses. The other BAFF receptors showed a much more restricted expression pattern, suggestive of specialized roles. Recombinant Human B Lymphocyte Stimulator is a single, non-glycosylated polypeptide chain containing 153 amino acids and having a molecular mass of 17,007 Daltons.
Other Notes	Small volumes of TNFSF13B active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for TNFSF13B purchase	MBS650001 is an active protein targeting TNFSF13B. Also known as BAFF, Recombinant, Human (B cell Activating Factor belonging to TNF Family, BLyS, TALL-1, THANK). Host: E Coli.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TNFSF13B. It may not necessarily be applicable to this product.

NCBI GI #	4585275
NCBI GeneID	10673
UniProt Primary Accession #	Q9Y275
UniProt Secondary Accession #	Q6FHD6; Q7Z5J2
UniProt Related Accession #	Q8IZI4; Q8IZI5; Q8IZI6; Q9Y275
NCBI Official Full Name	B-cell activating factor
NCBI Official Synonym Full Names	tumor necrosis factor (ligand) superfamily, member 13b
NCBI Official Symbol	TNFSF13B
NCBI Official Synonym Symbols	DTL; BAFF; BLYS; CD257; TALL1; THANK; ZTNF4; TALL-1; TNFSF20
UniProt Protein Name	Tumor necrosis factor ligand superfamily member 13B
UniProt Synonym Protein Names	B lymphocyte stimulator; BLyS; B-cell-activating factor; BAFF; Dendritic cell-derived TNF-like molecule; TNF- and APOL-related leukocyte expressed ligand 1
Protein Family	Tumor necrosis factor ligand superfamily
UniProt Gene Name	TNFSF13B
UniProt Synonym Gene Names	BAFF; BLYS; TALL1; TNFSF20; ZTNF4
UniProt Entry Name	TN13B_HUMAN
NCBI Protein Information	tumor necrosis factor ligand superfamily member 13B; delta BAFF; Delta4 BAFF; OTTHUMP00000018691; B-lymphocyte stimulator; B-cell-activating factor; ApoL related ligand TALL-1; TNF homolog that activates apoptosis; dendritic cell-derived TNF-like molecule; tumor necrosis factor-like protein ZTNF4; TNF and ApoL-related leukocyte expressed ligand 1; tumor necrosis factor (ligand) superfamily, member 20
NCBI Summary for TNFSF13B	The protein encoded by this gene 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. Alternatively spliced transcript variants encoding distinct isoforms have been identified. [provided by RefSeq]

UniProt Comments for TNFSF13B	Function: Cytokine that binds to TNFRSF13B/TACI and TNFRSF17/BCMA. TNFSF13/APRIL binds to the same 2 receptors. Together, they form a 2 ligands -2 receptors pathway involved in the stimulation of B- and T-cell function and the regulation of humoral immunity. A third B-cell specific BAFF-receptor (BAFFR/BR3) promotes the survival of mature B-cells and the B-cell response. Ref.15Isoform 2 seems to inhibit isoform 1 secretion and bioactivity By similarity. Ref.15 Subunit structure: Homotrimer. Isoform 2 heteromultimerizes with isoform 1, probably limiting the amount of functional isoform 1 on the cell surface. Ref.4 Subcellular location: Cell membrane; Single-pass type II membrane protein. Tumor necrosis factor ligand superfamily member 13b, soluble form: Secreted. Tissue specificity: Abundantly expressed in peripheral blood Leukocytes and is specifically expressed in monocytes and macrophages. Also found in the spleen, lymph node, bone marrow, T-cells and dendritic cells. A lower expression seen in placenta, heart, lung, fetal liver, thymus, and pancreas. Isoform 2 is expressed in many myeloid cell lines. Ref.4 Induction: Up-regulated by exposure to IFNG/IFN-gamma. Down-regulated by phorbol myristate acetate/ionomycin treatment. Post-translational modification: The soluble form derives from the membrane form by proteolytic processing.Isoform 2 is not efficiently shed from the membrane unlike isoform 1 By similarity.N-glycosylated. Sequence similarities: Belongs to the tumor necrosis factor family.
Research Articles on TNFSF13B	**1.** Data show negative correlations for BAFF concentration vs blood B cell percentage and serum CXCL13 concentration.
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