

PRODUCT INFORMATION



Soluble BLyS/BAFF (human, recombinant)

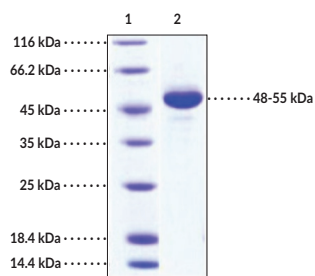
Item No. 31824

Overview and Properties

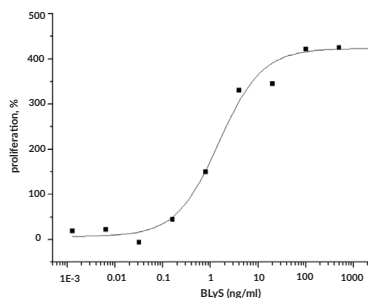
Synonyms:	B Cell-activating Factor, B Lymphocyte Stimulator, BAFF, CD257, Dendritic Cell-derived TNF-like Molecule, DTL, TALL-1, THANK, TNF Ligand Superfamily Member 13B, TNF- and APOL-related Leukocyte Expressed Ligand 1, TNFSF13B, TNFSF20, ZTNF4
Source:	Active recombinant N-terminal human IgG1 Fc-tagged BLyS/BAFF expressed in HEK293 cells
Amino Acids:	134-285
Uniprot No.:	Q9Y275-1
Molecular Weight:	43.7 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing:	<1.0 EU/μg, determined by the LAL endotoxin assay
Bioactivity:	See figures for details
Specific Activity:	1. Measured by its binding ability in a functional ELISA. Immobilized Soluble BLyS/BAFF (human, recombinant) at 1 μg/ml (100 μl/well) can bind human TNFRSF17. The EC ₅₀ for this effect is 0.07 μg/ml.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



SDS-PAGE Analysis of Soluble BLyS. This protein has a calculated molecular weight of 43.7 kDa. It has an apparent molecular weight of approximately 48-55 kDa by SDS-PAGE under reducing conditions due to glycosylation.



Cell Proliferation Assay of Soluble BLyS. Measured in a cell proliferation assay in mouse splenocytes. The EC₅₀ for this effect is typically 0.6-3.2 ng/ml.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

B lymphocyte stimulator (BLyS), also known as B cell-activating factor (BAFF), is a cytokine that belongs to the TNF ligand superfamily and has roles in B cell survival and differentiation.^{1,2} It is a type II transmembrane protein with an extracellular C-terminal TNF homology domain that is cleaved from the cell surface by a furin protease and corresponds to the soluble form of BLyS, which circulates as a trimer.^{1,2,4} BLyS is encoded by the *TNFSF13B* gene in humans, expressed primarily in monocytes, macrophages, dendritic cells, and neutrophils, and can be upregulated by IFN- γ , IL-10, IFN- α , and CD40 ligand.¹⁻³ Binding of BLyS to the B cell receptors TACI, BCMA, and BAFF-R/BR3 inhibits apoptosis in, as well as increases survival and promotes differentiation of, B cells.^{1,2} Elevated serum levels of BLyS have been found in patients with rheumatoid arthritis, systemic lupus erythematosus (SLE), and primary Sjögren's syndrome.⁴ Formulations containing a monoclonal antibody against soluble BLyS have been used in the treatment of SLE.⁵ Cayman's Soluble BLyS/BAFF (human, recombinant) protein can be used for cell-based and binding assay applications. This protein is a disulfide-linked homodimer. The reduced monomer, comprised of BLyS/BAFF (amino acids 134-285) fused to human IgG1 Fc at its N-terminus, consists of 389 amino acids and has a calculated molecular weight of 43.7 kDa. As a result of glycosylation, the monomer migrates at approximately 48-55 kDa by SDS-PAGE under reducing conditions.

References

1. Nardelli, B., Moore, P.A., Li, Y., *et al.* B lymphocyte stimulator (BLyS): a therapeutic trichotomy for the treatment of B lymphocyte diseases. *Leuk. Lymphoma* **43**(7), 1367-1373 (2002).
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4. Lahiri, A., Pochard, P., Le Pottier, L., *et al.* The complexity of the BAFF TNF-family members: Implications for autoimmunity. *J. Autoimmun.* **39**(3), 189-198 (2012).
5. Sanz, I., Yasothan, U., and Kirkpatrick, P. Belimumab. *Nat. Rev.* **10**, 335-336 (2011).

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