

## BAFF, human recombinant protein

### Information

<b>Gene ID</b>	10673
<b>Accession #</b>	Q9Y275
<b>Alternate Names</b>	TNFSF13B, TNFSF20, TALL-1, BLys, THANK, B cell Activating Factor belonging to the TNF family
<b>Source</b>	<i>Escherichia coli</i> .
<b>M.Wt</b>	Approximately 17.2 kDa, a single non-glycosylated polypeptide chain containing 153 amino acids.
<b>AA Sequence</b>	MAVQGPEETV TQDCLQLIAD SETPTIQKGS YTFVPWLLSF KRGSALLEEKE NKILVKETGY FFIYGQVLYT DKTYAMGHLI QRKKVHVFGD ELSLVTLFRC IQNMPETLPN NSCYSAGIAK LEEGDELQLA IPRENAQISL DGDVTFFGAL KLL
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	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. - 3 months, -20 to -70 °C under sterile conditions after reconstitution.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.0.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a mouse splenocyte survival assay is 0.5-2 µg/ml.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	5 µg	100 µg	500 µg
BAFF, human recombinant protein	5 µg	100 µg	500 µg

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## Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuBAFF as determined by LAL method.

## Description

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. 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/TNFRSF 13C). 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 % a.a. 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.

## Reference

1. Craxton A, Draves KE, Gruppi A, et al. 2005. J Exp Med, 202: 1363-74.
2. Kalled SL. 2005. Immunol Rev, 204: 43-54.
3. Kuo SH, Yeh PY, Chen LT, et al. 2008. Blood, 112: 2927-34.
4. Rowland SL, Leahy KF, Halverson R, et al. 2010. J Immunol, 185: 4570-81.
5. Liu Z and Davidson A. 2011. Exp Cell Res, 317: 1270-7.

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**[www.apexbt.com](http://www.apexbt.com)**

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: [info@apexbt.com](mailto:info@apexbt.com)