

Cytokines

Human Recombinant BAFF

B cell activating factor



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Catalog #	78002	10 µg
	78002.1	50 µg
	78002.2	1000 µg

Product Description

B cell activating factor (BAFF) is part of the tumor necrosis factor (TNF) superfamily and is expressed by monocytes, macrophages, dendritic cells, and neutrophils (Mackay & Browning; Scapini et al.). It binds to 3 receptors: BAFF-R, TACI, and BCMA, all of which are expressed by B cells at various times in their development (Liu & Davidson). BAFF-R signaling activates the NF-κB signaling pathway, and promotes B cell survival, Ig class switching, and antigen presentation (Bossen & Schneider; Liu & Davidson; Naradikian et al.). BAFF also has functions in other cell types: it promotes monocyte survival and activation, proinflammatory cytokine secretion, and differentiation into macrophages (Chang et al.), and co-stimulates anti-CD3-mediated activation of human T cells (Huard et al.; Mackay & Leung).

Product Information

Alternative Names:	BLyS, TALL1, TNFSF13B
Accession Number:	Q9Y275
Amino Acid Sequence:	AVQGPEETVT QDCLQLIADS ETPTIQKGSY TFPWLLSFK RGSALLEKEN KILVKETGYF FIYGQVLYTD KTYAMGHLIQ RKKVHVFGDE LSLVTLFRCI QNMPETLPNN SCYSAGIAKL EEGDELQLAI PRENAQISLD GDVTFFGALK LL
Predicted Molecular Mass:	17 kDa
Species:	Human
Cross Reactivity:	Mouse
Formulation:	Lyophilized after dialysis against phosphate-buffered saline.
Source:	CHO

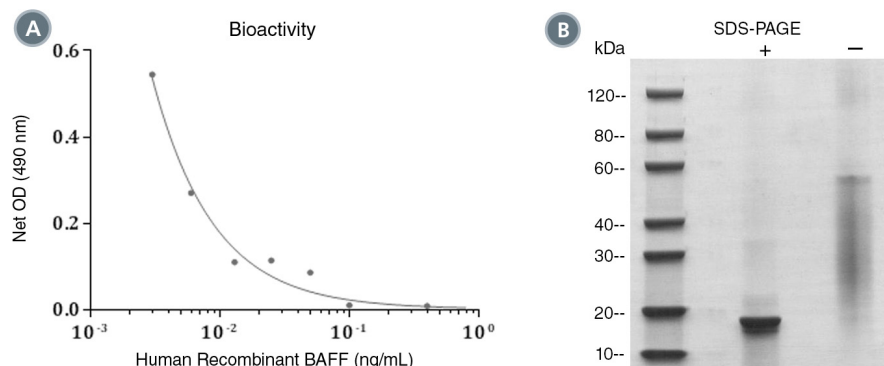
Specifications

Activity:	The specific activity is $> 5 \times 10^4$ units/mg ($EC_{50} < 20$ ng/mL) as determined by a cell proliferation assay of RPMI-8226 cells.
Purity:	$> 95\%$
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is < 0.2 EU/µg protein.

Preparation and Storage

Storage:	Store at -80°C .
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Resuspend the product in sterile water or phosphate-buffered saline to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at $2 - 8^{\circ}\text{C}$ for up to 1 week or at -20°C to -80°C for up to 2 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant BAFF was tested by its ability to promote mitosis of RPMI-8226 cells. Mitogenic activity was measured using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the growth factor at which mitogenic activity is at 50% of maximum. The EC₅₀ in the above example is less than 20 ng/mL.

(B) 1 µg of Human Recombinant BAFF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions visualized by Coomassie Blue staining. Human Recombinant BAFF has a predicted molecular mass of 17 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

- Bossen C & Schneider P. (2006) BAFF, APRIL and their receptors: structure, function and signaling. *Semin Immunol* 18(5): 263–75.
- Chang SK et al. (2006) A role for BLyS in the activation of innate immune cells. *Blood* 108(8): 2687–94.
- Huard et al. (2001) T Cell Costimulation by the TNF Ligand BAFF. *J Immunol* 167:6225.
- Liu Z & Davidson A. (2011) BAFF and selection of autoreactive B cells. *Trends Immunol* 32(8): 388–94.
- Mackay F & Browning JL (2002) BAFF: A fundamental survival factor for B cells, *Nat Rev Immunol* 2: 465–75.
- Mackay F & Leung H (2006) The role of the BAFF/APRIL system on T cell function. *Semin Immunol*. 18(5): 284–9.
- Naradikian MS et al. (2015) BAFF receptors and ligands create independent homeostatic niches for B cell subsets. *Curr Opin Immunol* 34: 126–9.
- Scapini et al. (2003) G-CSF-stimulated neutrophils are a prominent source of functional BLyS. *J Exp Med*. 197: 297–302.

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