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Human BAFF/TNFSF13B (hBAFF)

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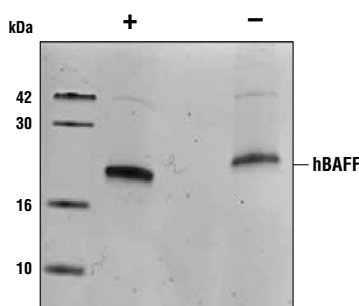
Molecular Wt.
18.5 kDaSource
Human Recombinant Protein
expressed in *E. coli*Purity
> 90%

Background: BAFF, a member of the TNF superfamily of proteins, is a homotrimeric transmembrane protein, which is cleaved to produce a soluble cytokine (1). BAFF may also further oligomerize into 60-mer structures (1). BAFF is expressed by neutrophils, macrophages, dendritic cells, activated T cells, and epithelial cells (1,2). BAFF plays a key role in B cell development, survival, and activation (1,3,4). BAFF binds to three distinct receptors, BAFF-R, TACI, and BCMA (1). These receptors are differentially expressed during B cell development and among B cell subsets (1,2,4). While BAFF-R and BCMA bind to the homotrimeric form of BAFF, TACI only binds to membrane bound or higher order BAFF structures (1). The BAFF/BAFF-R interaction activates both canonical and non-canonical NF- κ B pathways, PI3K/Akt, and mTOR (2,4). Activation of the noncanonical NF- κ B pathway via BAFF-R is negatively regulated by TRAF3 (5). Elevated levels of BAFF may exacerbate many autoimmune disorders, making it an attractive therapeutic target (2).

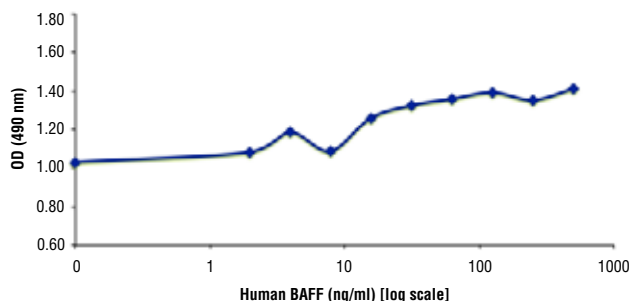
Background References:

- (1) Mackay, F. and Schneider, P. (2009) *Nat Rev Immunol* 9, 491-502.
- (2) Moisini, I. and Davidson, A. (2009) *Clin Exp Immunol* 158, 155-63.
- (3) Schiemann, B. et al. (2001) *Science* 293, 2111-4.
- (4) Khan, W.N. (2009) *J Immunol* 183, 3561-7.
- (5) Gardam, S. et al. (2008) *Immunity* 28, 391-401.

Source/Purification: Recombinant human BAFF was expressed in *E. coli* and is supplied in a lyophilized form. A greater than 90% purity was determined by SDS-PAGE. Endotoxin levels are less than or equal to 1 EU / 1 μ g hBAFF.



The purity of recombinant hBAFF was determined by SDS-PAGE of 1.5 μ g reduced (+) and non-reduced (-) recombinant hBAFF and staining overnight with Coomassie Blue.



RPMI 8226 cells were cultured with 0 to 500 ng/mL of hBAFF in the presence of 0.1 μ M dexamethasone. Cell proliferation was assessed after 91 hours by measuring the OD_{490} .

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