BAFFR/TNFRSF13C Protein, Human

Cat. No.:	HY-P7130
Synonyms:	rHuBAFF-R; CD268; TNFRSF13C; BR3
Species:	Human
Source:	E. coli
Accession:	Q96RJ3 (M1-G76)
Gene ID:	115650
Molecular Weight:	Approximately 7.8 kDa

PROPERTIES

AA Sequence	M R R G P R S L R G R D A P A P T P C V P A E C F D L L V R H C V A C G L L R T P R P K P A G A S S P A P R T A L Q P Q E S V G A G A G E A A L P L P G
Biological Activity	Fully biologically active when compared to standard. The ED_{50} as determined by its ability to block BAFF induced mouse splenocyte survival is 1.0-5.0 μg/mL in the presence of 1.0 μg/mL of rHuBAFF.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against 20 mM PB, pH 8.0, 500 mM NaCl.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	BAFF Receptor is expressed on all B cells (except plasma cells), including immature, transitional, mature, memory, and germinal center B cells, as well as on plasma cells[2], while BAFF-R is also expressed on follicular helper T cells (TFH)[3]. The amino acid sequence of human BAFF Receptor protein has low homology for mouse and rat BAFF Receptor protein. BAFF Receptor binds to BAFF and recruits TNF receptor-associated factor 3 (TRAF-3) and TRAF-2 to the intracellular domain of BAFF-R molecules. The binding of TRAF3 to the BAFF-R reverses the inhibitory effect of unbound/cytoplasmic TRAF3 on the alternative NF-κB2 signaling pathway. It releases NF-κB-inducing kinase (NIK), which phosphorylates inhibitor of κB kinase 1 (IKK1) leading to activation of non-canonical NF-κB. BAFF-R signaling is critical for peripheral B cell survival and

differentiation, germinal center formation, plasma cell survival, and IgG and IgE class switching[2].
BAFF Receptor binds to BAFF mediates B-cell survival, proliferation, and differentiation, and involves in the formation of GCs in secondary follicles in murine models and tertiary lymphoid structures in autoimmune diseases[3]. BAFF/BAFF-R signaling is crucial for primary B cell survival, differentiation and homeostasis[4]. A/WySnJ mice expressing a defective BAFF-R have disrupted B cell maturation, similar to that seen in BAFF-deficient mice[5].

REFERENCES

[1]. Rodig SJ, et al. BAFF-R, the major B cell-activating factor receptor, is expressed on most mature B cells and B-cell lymphoproliferative disorders. Hum Pathol. 2005 Oct;36(10):1113-9.

[2]. Thompson N, et al. Exploring BAFF: its expression, receptors and contribution to the immunopathogenesis of Sjögren's syndrome. Rheumatology (Oxford). 2016 Sep;55(9):1548-55.

[3]. Carrillo-Ballesteros FJ, et al. B-cell activating factor receptor expression is associated with germinal center B-cell maintenance. Exp Ther Med. 2019 Mar;17(3):2053-2060.

[4]. Zheng N, et al. BAFF promotes proliferation of human mesangial cells through interaction with BAFF-R. BMC Nephrol. 2015 May 15;16:72.

[5]. Ng LG, et al. B cell-activating factor belonging to the TNF family (BAFF)-R is the principal BAFF receptor facilitating BAFF costimulation of circulating T and B cells. J Immunol. 2004 Jul 15;173(2):807-17.

[6]. Warnatz K, et al. B-cell activating factor receptor deficiency is associated with an adult-onset antibody deficiency syndrome in humans. Proc Natl Acad Sci U S A. 2009 Aug 18;106(33):13945-50.

[7]. Thompson JS, et al. BAFF-R, a newly identified TNF receptor that specifically interacts with BAFF. Science. 2001 Sep 14;293(5537):2108-11.

[8]. Losi CG, et al. Mutational analysis of human BAFF receptor TNFRSF13C (BAFF-R) in patients with common variable immunodeficiency. J Clin Immunol. 2005 Sep;25(5):496-502.

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