

BAFFR/TNFRSF13C Protein, Rat (HEK293, Fc)

Cat. No.:	HY-P76744
Synonyms:	Tumor necrosis factor receptor superfamily member 13C; BAFF-R; CD268; TNFRSF13C; BR3
Species:	Rat
Source:	HEK293
Accession:	D4A281 (S10-A71)
Gene ID:	500910
Molecular Weight:	Approximately 42 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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	<p>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].</p> <p>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].</p>
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REFERENCES

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- [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.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA