Datasheet for ABIN1344400

BAFF Protein (AA 134-285, Extracellular Domain, Soluble) (His tag)

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Overview

Quantity:	10 µg
Target:	BAFF (TNFSF13B)
Protein Characteristics:	AA 134-285, Extracellular Domain, Soluble
Origin:	Human, Mouse
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This BAFF protein is labelled with His tag.
Application:	SDS-PAGE (SDS)

Product Details

Specificity:	Binds to human and mouse BAFF-R, TACI and BCMA. Relative binding affinity (EC50) for BAFF-R (human): ~3 ng/mL.
Cross-Reactivity:	Human, Mouse (Murine)
Characteristics:	The extracellular domain of human BAFF (aa 134-285) is fused at the N-terminus to a His-tag.
Purity:	>95 % (SDS-PAGE)
Endotoxin Level:	<0.01EU/µg purified protein (LAL test, Lonza).

Target Details

Target:	BAFF (TNFSF13B)

Target Details

Alternative Name:	BAFF (TNFSF13B Products)
Background:	BAFF is mainly produced by innate immune cells such as neutrophils, monocytes, macrophages, dendritic cells, follicular dendritic cells. T cells, activated B cells, some malignant B cells and also non-lymphoid cells like astrocytes, synoviocytes and epithelial cells can also produce BAFF. BAFF binds three distinct receptors (BAFF-R, TACI and BCMA) expressed predominantly on B cells, although activated T cells also express BAFF-R. BAFF is a master regulator of peripheral B cell survival, and together with IL-6, promotes Ig class-switching and plasma cell differentiation. Besides its major role in B cell biology, BAFF co-stimulates activated T cells. Deregulated expression of BAFF leads to autoimmune disorders in mice. In humans, elevated levels of soluble BAFF have been detected in the serum of patients with various autoimmune diseases such as Sjoegren syndrome, Rheumatoid arthritis (RA), Multiple sclerosis (MS) and Systemic Lupus Erythematosus (SLE). BAFF has also increased levels in some lymphoid cancers. Processed human BAFF can either remain as a trimer, which is usual for TNF family ligands or assemble into 60-mer composed of 20 trimers. Mouse BAFF 60-mer has been identified in the serum of BAFF transgenic mice. Oligomerization of BAFF 3-mer into 60-mer in human BAFF is prevented by mutation of His218, a residue critical for 3-mer-to-3-mer interactions, but not for receptor binding. Despite the predominant functional role of processed BAFF in vivo, membrane-bound BAFF might also play a role. Indeed, soluble BAFF (3-mer) can trigger BAFF-R but not TACI or BCMA, whereas oligomeric forms of BAFF (BAFF 60-mer), which mimic membrane-bound BAFF, activate all BAFF receptors.
Molecular Weight:	~19kDa (under reduced conditions)~1100kDa (under native conditions)
UniProt:	Q9Y275
Pathways:	NF-kappaB Signaling, Production of Molecular Mediator of Immune Response

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Increases B cell survival/proliferation. Increases CD21/CD23 expression on B cells in vivo. Activates BAFF-R, TACI and BCMA receptors. Works at concentrations <20ng/ml.
Restrictions:	For Research Use only

Handling

Format:	Lyophilized

Handling

Concentration:	Lot specific
Buffer:	Lyophilized. Contains PBS.
Storage:	4 °C,-20 °C
Storage Comment:	Short Term Storage: +4°C Long Term Storage: -20°C Stable for at least 6 months after receipt when stored at -20°C.
Expiry Date:	6 months

Publications

Product cited in:	Bossen, Tardivel, Willen, Fletcher, Perroud, Beermann, Rolink, Scott, Mackay, Schneider: " Mutation of the BAFF furin cleavage site impairs B-cell homeostasis and antibody responses." in: **European journal of immunology**, Vol. 41, Issue 3, pp. 787-97, (2011) (PubMed). Bossen, Cachero, Tardivel, Ingold, Willen, Dobles, Scott, Maquelin, Belnoue, Siegrist, Chevrier, Acha-Orbea, Leung, Mackay, Tschopp, Schneider: "TACI, unlike BAFF-R, is solely activated by oligomeric BAFF and APRIL to support survival of activated B cells and plasmablasts." in: **Blood**, Vol. 111, Issue 3, pp. 1004-12, (2008) (PubMed).