BCMA/TNFRSF17 Protein, Mouse (HEK293, His-Fc)

Cat. No.:	HY-P72850
Synonyms:	Tumor necrosis factor receptor superfamily member 17; CD269; TNFRSF17; BCM; BCMA
Species:	Mouse
Source:	HEK293
Accession:	O88472 (M1-T49)
Gene ID:	21935
Molecular Weight:	35-48 kDa

PROPERTIES

AA Sequence	M A Q Q C F H S E Y F D S L L H A C K P C H L R C S N P P A T C Q P Y C D P S V T S S V K G T Y T
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized human BAFF at 10 μg/mL (100 μl/well) can bind mouse BCMA-Fch, The EC_{50} of mouse BCMA-Fch is 0.02-0.06 μg/mL.
Appearance	Solution
Formulation	Supplied as a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	BCMA is expressed preferentially by mature B lymphocytes, with minimal expression in hematopoietic stem cells or nonhematopoietic tissue[1]. BCMA is almost exclusively expressed on plasmablasts and PCs[2]. The amino acid sequence of human BCMA protein has low homology for mouse BCMA protein. BCMA is a 184 amino acid and 20.2-kDa type III transmembrane glycoprotein, with the extracellular N terminus containing a conserved motif of 6 cysteines. BCMA has two agonist ligands: a proliferation-inducing ligand (APRIL) and B cell activating factor (BAFF). Upon binding of the ligands to BCMA, activates B cells (NF-κβ), rat sarcoma/mitogen-activated protein kinase (RAS/MAPK), and phosphoinositide-3-kinase-protein kinase B/Akt (PI3K-PKB/Akt) signaling pathway. These pathways result in proliferation stimulation by modulating cell cycle checkpoints, increasing survival by upregulating anti-apoptotic

proteins, and production of cell adhesion molecules, angiogenesis factors, and immunosuppressive molecules[2]. BCMA can be used as a promising antigen to target using a variety of immuno-therapy treatments including CART cells, for MM patients[3]. BCMA markedly reduces plasma IgA, IgG, and IgM levels and splenic Ig heavy chain mRNA levels in mouse[4]. In BCMA−/− mice, the long-term survival of PCs is impaired, but lack of BCMA has no effect in short-lived PCs, B cell development, or early humoral immune response, and the splenic architecture and germinal centers appear intact in these BCMA-deficient mice[5]. BCMA overexpression significantly promotes in vivo growth of xenografted MM cells in murine models[6].

REFERENCES

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[5]. O'Connor BP, et al. BCMA is essential for the survival of long-lived bone marrow plasma cells. J Exp Med. 2004 Jan 5;199(1):91-8.

[6]. Tai YT, et al. APRIL and BCMA promote human multiple myeloma growth and immunosuppression in the bone marrow microenvironment. Blood. 2016 Jun 23;127(25):3225-36.

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