

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived BCMA/TNFRSF17 protein		
	Cynomolgus Monkey BCMA (Met1-Ile54) Accession # XP_005591343	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence	Met1		
Analysis			
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	33 kDa		

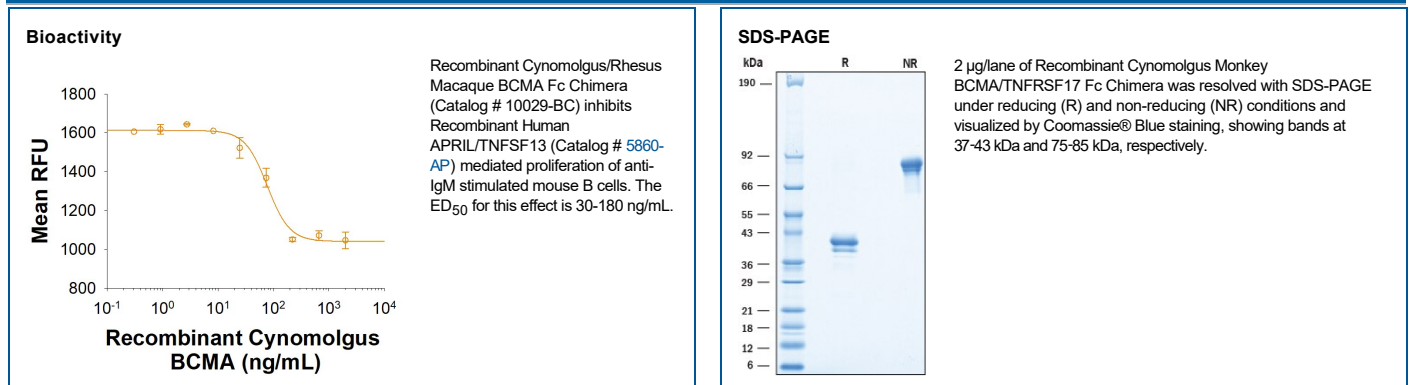
SPECIFICATIONS

SDS-PAGE	37-43 kDa, reducing conditions
Activity	Measured by its ability to inhibit APRIL-mediated proliferation of anti-IgM stimulated mouse B cells. Moore, P.A. <i>et al.</i> (1999) <i>Science</i> 285 :260; Gross, J.A. <i>et al.</i> (2000) <i>Nature</i> 404 :995; Schneider, P. <i>et al.</i> (1999) <i>J. Exp. Med.</i> 189 :1747. The ED ₅₀ for this effect is 30-180 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<ul style="list-style-type: none"> • 12 months from date of receipt, ≤ -20 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, ≤ -20 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

BCMA, B cell maturation antigen, also known as Tumor Necrosis Factor Receptor Superfamily member 17 (gene name TNFSF17), is a member of the TNFR superfamily, due to the presence of its TNFR motif (1). BCMA is a type III membrane protein containing one extracellular cysteine rich domain, a transmembrane domain, and an intracellular domain. Within the TNFRSF, it shares the highest homology with TACI. BCMA and TACI have both been shown to bind to APRIL and BAFF, members of the TNF ligand superfamily (2, 3). This binding to APRIL and BAFF has been shown to stimulate IgM production in peripheral B cells and increase the survival of cultured B cells (3, 4). This data suggests that BCMA may play an important role in B cell development, function and regulation (5). BCMA expression has been found in immune organs and mature B cell lines (5). Although some expression has been observed at the cell surface, BCMA appears to be localized to the Golgi compartment (6). Within the ECD, cynomolgus monkey BCMA shares 89% sequence identity with human BCMA, 62% with mouse BCMA, and 59% with rat BCMA. The expression of BCMA has also been linked to various cancers, autoimmune disorders, and infectious diseases (7). Proteolytic shedding of the BCMA extracellular domain generated soluble BCMA (sBCMA) via direct cleavage by γ -secretase, elevated sBCMA levels in serum may correlate with disease activity (8). More recently, BCMA has been indicated as a possible biomarker in various human immunological disease, and as a potential therapeutic target for multiple myeloma (MM) (9-11).

References:

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4. Huang, H. *et al.* (2013). *PNAS.* **110**:10928.
5. Laâbi, Y. *et al.* (1994). *Nucleic Acids Res.* **22**:1147.
6. Gras, M. *et al.* (1995) *Int. Immunol.* **7**:1093.
7. Coquery, C.M. *et al.* (2012) *Crit Rev Immunol.* **32**:287.
8. Laurent, S.A. *et al.* (2015) *Nat Commun.* **6**:7333.
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