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APC Human BCMA (CD269) Protein (C-Fc)

Catalog Number:	802403, 802404
Size:	25 ug, 100 ug
Target Name:	TNFRSF17, CD269, BCM, BCMA
Regulatory Status:	RUO

PRODUCT DETAILS

Application:	Flow Cytometry
Format:	Liquid, APC
Expression Host:	HEK293
Species:	Human
Sources:	Human BCMA protein (NP_001183.2) (Met1-Ala54) with C-terminus Human IgG1 Fc tag is expressed in HEK293 cells and conjugated to APC.
Accession Number:	Q02223
Molecular Weight:	The protein has a predicted molecular weight of 33kDa. Under DTT-reducing conditions, it migrates at approximately 35-45 kDa on SDS-PAGE prior to conjugation.
Affinity Tag:	C-Fc
Formulation:	1xPBS buffer, pH7.4, 0.09% NaN3 with a carrier protein
Endotoxin level:	Not tested
Protein Concentration:	25μg size is bottled at 0.2 mg/mL concentration. 100 μg size is bottled at lot specific concentration.
Storage and Handling:	Briefly centrifuge the vial upon receipt. An unopened vial may be stored at 2–8°C for up to six months.

BACKGROUND INFORMATION

B-cell maturation antigen (BCMA), also known as CD269 or TNFRSF17, is a transmembrane glycoprotein that serves as a critical regulator of B cell development and function. It belongs to the tumor necrosis factor receptor (TNFR) superfamily and is predominantly expressed on plasma cells and a subset of late-stage B cells. BCMA's primary biological role is to promote the survival, differentiation, and long-term maintenance of antibody-producing plasma cells by mediating signals from specific ligands in the TNF family.

Structurally, BCMA is a type I transmembrane protein consisting of an extracellular cysteine-rich domain responsible for ligand binding, a single transmembrane region, and a short cytoplasmic tail that interacts with intracellular signaling molecules. The cytoplasmic domain lacks death domains but recruits TRAF (TNF receptor-associated factor) adaptor proteins to activate downstream pathways such as NF-κB and MAPK. These signaling cascades enhance plasma cell survival and immunoglobulin production, contributing to humoral immunity maintenance. Soluble BCMA, generated through proteolytic cleavage by γ-secretase,

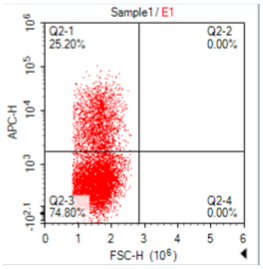
can act as a decoy receptor to regulate ligand availability in the serum.

BCMA binds two main ligands: B-cell activating factor (BAFF, also known as BLyS) and a proliferation-inducing ligand (APRIL). Both ligands are produced by myeloid and stromal cells and support B cell homeostasis. Among these, APRIL binds BCMA with higher affinity and is the primary mediator of BCMA-dependent signaling in plasma cells. The BAFF/APRIL–BCMA axis thus serves as a crucial checkpoint for sustained antibody production and plasma cell survival.

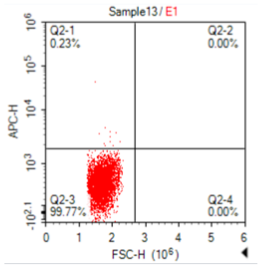
In disease contexts, BCMA is strongly implicated in multiple myeloma (MM) and certain B-cell lymphomas. Its selective overexpression on malignant plasma cells makes it an important diagnostic marker and a therapeutic target. BCMA-directed treatments have revolutionized therapy for multiple myeloma, including antibody-drug conjugates (e.g., belantamab mafodotin), bispecific T cell engagers (e.g., teclistamab, elranatamab), and CAR-T cell therapies (e.g., idecabtagene vicleucel, ciltacabtagene autoleucel). These agents exploit BCMA's restricted expression pattern to deliver targeted cytotoxicity, leading to durable responses in refractory disease. Consequently, BCMA has emerged as a prototypical target in the development of next-generation immunotherapies for hematologic malignancies.

PRODUCT DATA

A: BCMA CAR-transfected
Stained with APC-BCMA-Fc



B: Mock-transfected
Stained with APC-BCMA-Fc



CHO cells transfected with either BCMA CAR or Mock plasmid were stained with APC conjugated BCMA (C-Fc) protein at 4ug_test

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