SANTA CRUZ BIOTECHNOLOGY, INC.

BCMA (G-4): sc-390336

BACKGROUND

The B cell maturation protein (BCMA), also designated BCM and tumor necrosis factor receptor superfamily, member 17, is a type I integral membrane protein located on chromosome band 16p13.13 that belongs to the tumor necrosis factor receptor (TNF-R) superfamily. It is expressed as a 184 amino acid peptide that is expressed only in mature B lymphocytes and is located on the *cis* part of the Golgi apparatus. BCMA shares significant homology with TACI (transmembrane activator) within the cysteine-rich domain. TACI has been shown to bind CAML, which induces activation of NFAT (nuclear factor of activated T cells). Both BCMA and TACI have been shown to bind APRIL and TALL-1, which stimulate B cell proliferation in conjunction with other B-cell activators. When overexpressed, TALL-1 stimulates the development of systemic lupus erythaematosus (SLE).

REFERENCES

1. Laabi, Y., et al. 1992. A new gene, BCM, on chromosome 16 is fused to the interleukin 2 gene by a t(4;16) (q26;p13) translocation in a malignant T cell lymphoma. EMBO J. 11: 3897-3904.
2. Laabi, Y., et al. 1994. The BCMA gene, preferentially expressed during B lymphoid maturation, is bidirectionally transcribed. Nucleic Acids Res. 22: 1147-1154.
3. Gras, M.P., et al. 1995. BCMAp: an integral membrane protein in the Golgi apparatus of human mature B lymphocytes. Int. Immunol. 7: 1093-1106.
4. von Bulow, G.U., et al. 1997. NF-AT activation induces by a CAML-interacting member of the tumor necrosis factor receptor superfamily. Science 278: 138-141.
5. Madry, C., et al. 1998. The characterization of murine BCMA gene defines it as a new member of the tumor necrosis factor receptor superfamily. Int. Immunol. 10: 1693-1702.
6. Gross, J.A., et al. 2000. TACI and BCMA are receptors for a TNF homologue implicated in B-cell autoimmune disease. Nature 404: 995-999.
7. Smirnova, A.S., et al. 2007. Identification of new splice variants of the genes BAFF and BCMA. Mol. Immunol. 45: 1179-1183.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF17 (human) mapping to 16p13.13.

SOURCE

BCMA (G-4) is a mouse monoclonal antibody raised against amino acids 108-161 mapping within an internal region of BCMA of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

BCMA (G-4) is recommended for detection of BCMA of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BCMA siRNA (h): sc-40233, BCMA shRNA Plasmid (h): sc-40233-SH and BCMA shRNA (h) Lentiviral Particles: sc-40233-V.

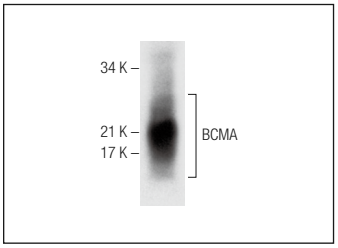
Molecular Weight of BCMA: 20 kDa.

Positive Controls: U-698-M whole cell lysate: sc-364799.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



BCMA (G-4): sc-390336. Western blot analysis of BCMA expression in U-698-M whole cell lysate.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.