SANTA CRUZ BIOTECHNOLOGY, INC.

PSMB11 (A-5): sc-514317

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In eukaryotic cells, selective breakdown of cellular proteins is ensured by their ubiquitination and subsequent degradation by the 26S Proteasome. The 26S Proteasome is a protease complex that selectively breaks down proteins that have been modified by polyubiquitin chains. It is made up of two multisubunit complexes: the 20S Proteasome chamber, which serves as the proteolytic core of the complex, and two 19S regulatory particles which recognize and unfold ubiquitinated proteins. The 20S Proteasome chamber contains α subunits (which are structural) and β subunits (which are predominantly catalytic). The outer two rings in the proteasome consist of seven α subunits each, and the inner two rings each consist of seven β subunits. PSMB11 (proteasome subunit β type-11), also known as BETA5T (Proteasome subunit β-5t) is a 300 amino acid protein that plays an important role in CD8-positive T-cells and reduces chymotripsin-like activity in proteasomes.

REFERENCES

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2. Nandi, D., Woodward, E., Ginsburg, D.B. and Monaco, J.J. 1997. Intermediates in the formation of mouse 20S proteasomes: implications for the assembly of precursor β subunits. EMBO J. 16: 5363-5375.
3. McCusker, D., Jones, T., Sheer, D. and Trowsdale, J. 1997. Genetic relationships of the genes encoding the human proteasome β subunits and the proteasome PA28 complex. Genomics 45: 362-367.
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5. Kwak, M.K., Huang, B., Chang, H., Kim, J.A. and Kensler, T.W. 2007. Tissue specific increase of the catalytic subunits of the 26S proteasome by indirect antioxidant dithiolethione in mice: enhanced activity for degradation of abnormal protein. Life Sci. 80: 2411-2420.

CHROMOSOMAL LOCATION

Genetic locus: PSMB11 (human) mapping to 14q11.2; Psmb11 (mouse) mapping to 14 C3.

SOURCE

PSMB11 (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 89-107 within an internal region of PSMB11 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-514317 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PSMB11 (A-5) is recommended for detection of PSMB11 of mouse, rat and 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 PSMB11 siRNA (h): sc-92455, PSMB11 siRNA (m): sc-152555, PSMB11 shRNA Plasmid (h): sc-92455-SH, PSMB11 shRNA Plasmid (m): sc-152555-SH, PSMB11 shRNA (h) Lentiviral Particles: sc-92455-V and PSMB11 shRNA (m) Lentiviral Particles: sc-152555-V.

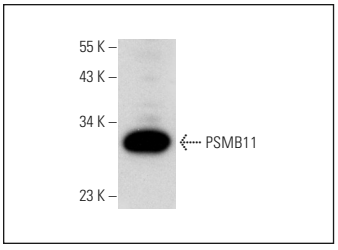
Molecular Weight of PSMB11: 33 kDa.

Positive Controls: MTE1D whole cell lysate: sc-364918.

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 L-Agarose: sc-2336 (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



PSMB11 (A-5): sc-514317. Western blot analysis of PSMB11 expression in MTE1D whole cell lysate.

STORAGE

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

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.