SANTA CRUZ BIOTECHNOLOGY, INC.

20S Proteasome β3 (MCP102): sc-58411



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BACKGROUND

The proteasome represents a large protein complex that exists inside all eukaryotes and archaea, and in some bacteria. The main function of proteasomes is to degrade unnecessary or damaged proteins by proteolysis. The most common form of the proteasome, known as the 26S Proteasome, contains one 20S Proteasome core particle structure and two 19S regulatory caps. The 20S Proteasome core is hollow and forms an enclosed cavity, where proteins are degraded, as well as openings at the two ends to allow the target protein to enter. The 20S Proteasome core particle contains many subunits, depending on the organism. All of the subunits fall into one of two types: α subunits, which are structural, serve as docking domains for the regulatory particles and exterior gates blocking unregulated access to the interior cavity; or 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.

REFERENCES

- Kristensen, P., Johnsen, A.H., Uerkvitz, W., Tanaka, K. and Hendil, K.B. 1995. Human proteasome subunits from two-dimensional gels identified by partial sequencing. Biochem. Biophys. Res. Commun. 205: 1785-1789.
- Morimoto, Y., Mizushima, T., Yagi, A., Tanahashi, N., Tanaka, K., Ichihara, A. and Tsukihara, T. 1995. Ordered structure of the crystallized bovine 20S Proteasome. J. Biochem. 117: 471-474.
- 3. Wenzel, T. and Baumeister, W. 1995. Conformational constraints in protein degradation by the 20S Proteasome. Nat. Struct. Biol. 2: 199-204.
- Schmidt, M., Schmidtke, G. and Kloetzel, P.M. 1997. Structure and structure formation of the 20S Proteasome. Mol. Biol. Rep. 24: 103-112.
- 5. Sassa, H., Oguchi, S., Inoue, T. and Hirano, H. 2000. Primary structural features of the 20S Proteasome subunits of rice *(Oryza sativa)*. Gene 250: 61-66.
- Ferrington, D.A. and Kapphahn, R.J. 2004. Catalytic site-specific inhibition of the 20S Proteasome by 4-hydroxynonenal. FEBS Lett. 578: 217-223.
- Huang, L. and Burlingame, A.L. 2006. Comprehensive mass spectrometric analysis of the 20S Proteasome complex. Meth. Enzymol. 405: 187-236.

CHROMOSOMAL LOCATION

Genetic locus: PSMB3 (human) mapping to 17q12; Psmb3 (mouse) mapping to 11 D.

SOURCE

20S Proteasome β 3 (MCP102) is a mouse monoclonal antibody raised against dinitrophenylated proteasomes of human origin.

PRODUCT

Each vial contains 50 $\mu g~lgG_1$ in 500 μl of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

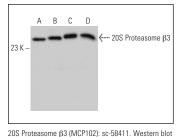
20S Proteasome β 3 (MCP102) is recommended for detection of 20S Proteasome β 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for 20S Proteasome β 3 siRNA (h): sc-62868, 20S Proteasome β 3 siRNA (m): sc-62870, 20S Proteasome β 3 shRNA Plasmid (h): sc-62868-SH, 20S Proteasome β 3 shRNA Plasmid (m): sc-62870-SH, 20S Proteasome β 3 shRNA (h) Lentiviral Particles: sc-62868-V and 20S Proteasome β 3 shRNA (m) Lentiviral Particles: sc-62870-V.

Molecular Weight of Proteasome 20S ß3: 23 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, RAW 264.7 whole cell lysate: sc-2211 or HL-60 whole cell lysate: sc-2209.

DATA



205 Proteasome β3 (MUCP102); sc-58411. Western biot analysis of 20S Proteasome β3 expression in K-562 (**A**), HL-60 (**B**), RAW 264.7 (**C**) and PC-12 (**D**) whole cell lysates

STORAGE

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

PROTOCOLS

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