

PSMD5 (L-13): sc-107073

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 multi-subunit 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. PSMD5 (proteasome (prosome, macropain) 26S subunit, non-ATPase 5), also known as S5B (S5 basic), is a regulatory component of the 26S Proteasome. More specifically, PSMD5 is a subunit of the 19S regulator base and associates in a heterotrimer with PSMC1 and PSMC2. It contains nine dileucine repeats and a motif similar to the tyrosine-based motif, suggesting a role for PSMD5 in trafficking, targeting and/or internalization.

REFERENCES

1. Deveraux, Q., Ustrell, V., Pickart, C. and Rechsteiner, M. 1994. A 26S protease subunit that binds ubiquitin conjugates. *J. Biol. Chem.* 269: 7059-7061.
2. Nomura, N., Nagase, T., Miyajima, N., Sazuka, T., Tanaka, A., Sato, S., Seki, N., Kawarabayasi, Y., Ishikawa, K. and Tabata, S. 1994. Prediction of the coding sequences of unidentified human genes. II. The coding sequences of 40 new genes (KIAA0041-KIAA0080) deduced by analysis of cDNA clones from human cell line KG-1. *DNA Res.* 1: 223-229.
3. Deveraux, Q., Jensen, C. and Rechsteiner, M. 1995. Molecular cloning and expression of a 26S protease subunit enriched in dileucine repeats. *J. Biol. Chem.* 270: 23726-23729.
4. Gorbea, C., Taillandier, D. and Rechsteiner, M. 2000. Mapping subunit contacts in the regulatory complex of the 26S Proteasome. S2 and S5b form a tetramer with ATPase subunits S4 and S7. *J. Biol. Chem.* 275: 875-882.
5. Lier, S. and Paululat, A. 2002. The proteasome regulatory particle subunit Rpn6 is required for *Drosophila* development and interacts physically with signalosome subunit alien/CSN2. *Gene* 298: 109-119.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604452. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Hirano, Y., Murata, S. and Tanaka, K. 2005. Large- and small-scale purification of mammalian 26S Proteasomes. *Meth. Enzymol.* 399: 227-240.
8. Zhong, L. and Belote, J.M. 2007. The testis-specific proteasome subunit Prosa6T of *D. melanogaster* is required for individualization and nuclear maturation during spermatogenesis. *Development* 134: 3517-3525.

CHROMOSOMAL LOCATION

Genetic locus: PSMD5 (human) mapping to 9q33.2; Psm5 (mouse) mapping to 2 B.

SOURCE

PSMD5 (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PSMD5 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107073 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PSMD5 (L-13) is recommended for detection of PSMD5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PSMD5 (L-13) is also recommended for detection of PSMD5 in additional species, including avian.

Suitable for use as control antibody for PSMD5 siRNA (h): sc-92791, PSMD5 siRNA (m): sc-152561, PSMD5 shRNA Plasmid (h): sc-92791-SH, PSMD5 shRNA Plasmid (m): sc-152561-SH, PSMD5 shRNA (h) Lentiviral Particles: sc-92791-V and PSMD5 shRNA (m) Lentiviral Particles: sc-152561-V.

Molecular Weight of PSMD5: 50 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.