

# PSMD5 (35-K): sc-100461

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: PSMD5 (human) mapping to 9q33.2.

## SOURCE

PSMD5 (35-K) is a mouse monoclonal antibody raised against recombinant PSMD5 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

PSMD5 (35-K) is recommended for detection of PSMD5 of human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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 PSMD5 siRNA (h): sc-92791, PSMD5 shRNA Plasmid (h): sc-92791-SH and PSMD5 shRNA (h) Lentiviral Particles: sc-92791-V.

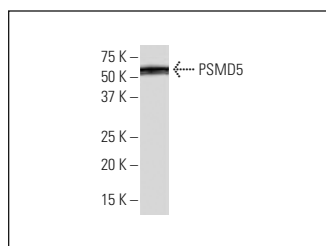
Molecular Weight of PSMD5: 50 kDa.

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

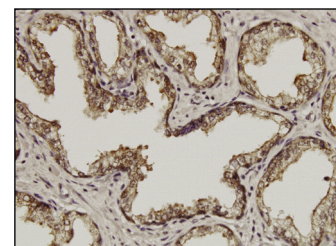
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



PSMD5 (35-K): sc-100461. Western blot analysis of PSMD5 expression in A-431 whole cell lysate.



PSMD5 (35-K): sc-100461. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human prostate tissue showing membrane and cytoplasmic localization.

## 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](http://www.scbt.com) for detailed protocols and support products.