

# PSMD4 (E-2): sc-393546



The Power to Question

## BACKGROUND

In eukaryotic cells, selective breakdown of cellular proteins is ensured by two distinct pathways. First, appropriate proteins are tagged for degradation by ubiquitination. Second, these multiubiquitinated proteins are degraded by the highly selective 26S Proteasome protein-destroying machinery. At specific stages of development, embryo- and tissue-specific components of the 26S Proteasome are formed, which are termed Rpn10a through Rpn10e. All members of this family can be generated by a single PSMD4 gene by developmentally regulated alternative splicing. PSMD4, originally identified as S5a (also designated antiseecretory factor and multiubiquitin chain binding protein) is ubiquitously expressed and may perform proteolysis constitutively in a wide variety of cells. Rpn10D and Rpn10E may have embryo- or tissue-specific expression and may play specialized roles in early embryonic development.

## REFERENCES

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- Johansson, E., Lonroth, I., Lange, S., Jonson, I., Jennische, E. and Lonroth, C. 1995. Molecular cloning and expression of a pituitary gland protein modulating intestinal fluid secretion. *J. Biol. Chem.* 270: 20615-20620.
- Coux, O., Tanaka, K. and Goldberg, A.L. 1996. Structure and functions of the 20S and 26S proteasomes. *Annu. Rev. Biochem.* 65: 801-847.
- Voges, D., Zwickl, P. and Baumeister, W. 1999. The 26S Proteasome: a molecular machine designed for controlled proteolysis. *Annu. Rev. Biochem.* 68: 1015-1068.
- Kawahara, H., Kasahara, M., Nishiyama, A., Ohsumi, K., Goto, T., Kishimoto, T., Saeki, Y., Yokosawa, H., Shimbara, N., Murata, S., Chiba, T., Suzuki, K. and Tanaka, K. 2000. Developmentally regulated, alternative splicing of the Rpn10 gene generates multiple forms of 26S proteasomes. *EMBO J.* 19: 4144-4153.

## CHROMOSOMAL LOCATION

Genetic locus: PSMD4 (human) mapping to 1q21.3; Psm4 (mouse) mapping to 3 F2.1.

## SOURCE

PSMD4 (E-2) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PSMD4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> 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

PSMD4 (E-2) is recommended for detection of PSMD4 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).

PSMD4 (E-2) is also recommended for detection of PSMD4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PSMD4 siRNA (h): sc-41385, PSMD4 siRNA (m): sc-41386, PSMD4 shRNA Plasmid (h): sc-41385-SH, PSMD4 shRNA Plasmid (m): sc-41386-SH, PSMD4 shRNA (h) Lentiviral Particles: sc-41385-V and PSMD4 shRNA (m) Lentiviral Particles: sc-41386-V.

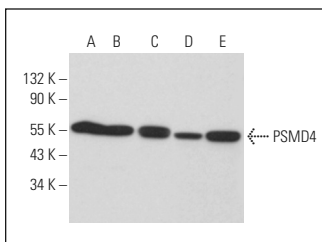
Molecular Weight of pUb-R5: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-MEL-28 cell lysate: sc-2236 or HeLa nuclear extract: sc-2120.

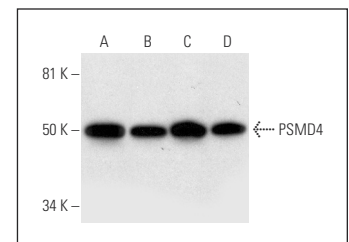
## RECOMMENDED SUPPORT REAGENTS

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



PSMD4 (E-2): sc-393546. Western blot analysis of PSMD4 expression in HeLa (A), Jurkat (B), 3T3-L1 (C), L6 (D) and RPE-J (E) whole cell lysates.



PSMD4 (E-2): sc-393546. Western blot analysis of PSMD4 expression in HeLa (A) and SK-MEL-28 (B) whole cell lysates and HeLa (C) and CCRF-CEM (D) nuclear extracts.

## 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.