

PSMD1 (F-7): sc-166340

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. PSMD1 (prosome, macropain) 26S subunit, non-ATPase 1), also known as S1 or p112, is a regulatory component of the 26S Proteasome. It is widely expressed with highest expression levels found in skeletal muscle and heart. PSMD1 is the largest of at least 11 non-ATPase regulatory subunits of the 19S regulator lid and is implicated in substrate recognition and binding.

REFERENCES

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4. Thompson, H.G., et al. 2004. Posttranslationally modified S12, absent in transformed breast epithelial cells, is not associated with the 26S proteasome and is induced by proteasome inhibitor. *Int. J. Cancer* 111: 338-347.
5. Shibahara, T., et al. 2004. Mass spectrometric analysis of expression of ATPase subunits encoded by duplicated genes in the 19S regulatory particle of rice 26S proteasome. *Arch. Biochem. Biophys.* 421: 34-41.
6. Tan, Y., et al. 2006. Effects of tumor necrosis factor- α on the 26S proteasome and 19S regulator in skeletal muscle of severely scalded mice. *J. Burn Care Res.* 27: 226-233.
7. Guo, H., et al. 2006. Mapping of the CCK, PSMC, PSMC4, PSMD1, CPB1 and PSPH genes in cattle. *Anim. Genet.* 37: 73-75.
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CHROMOSOMAL LOCATION

Genetic locus: PSMD1 (human) mapping to 2q37.1; Psmd1 (mouse) mapping to 1 C5.

SOURCE

PSMD1 (F-7) is a mouse monoclonal antibody raised against amino acids 91-390 mapping near the N-terminus of PSMD1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG γ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PSMD1 (F-7) is recommended for detection of PSMD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 PSMD1 siRNA (h): sc-62898, PSMD1 siRNA (m): sc-62899, PSMD1 shRNA Plasmid (h): sc-62898-SH, PSMD1 shRNA Plasmid (m): sc-62899-SH, PSMD1 shRNA (h) Lentiviral Particles: sc-62898-V and PSMD1 shRNA (m) Lentiviral Particles: sc-62899-V.

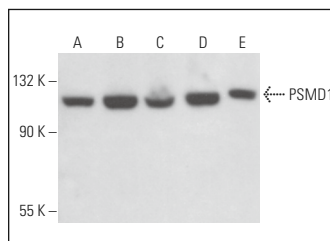
Molecular Weight of PSMD1: 106 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



PSMD1 (F-7): sc-166340. Western blot analysis of PSMD1 expression in K-562 (A), Jurkat (B), HeLa (C), C6 (D) and L6 (E) 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.

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.