

PSMD1 (G-10): sc-514808

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 (proteasome (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

1. Yokota, K., et al. 1996. CDNA cloning of p112, the largest regulatory subunit of the human 26S proteasome, and functional analysis of its yeast homologue, sen3p. *Mol. Biol. Cell* 7: 853-870.
2. Wang, H.Y. and Liu, S.X. 2002. Investigation on NB4 cell responses to realgar by cDNA microarray. *Zhongguo Zhong Yao Za Zhi* 27: 600-604.
3. Wang, H., et al. 2003. Gene expression profile changes in NB4 cells induced by realgar. *Chin. Med. J.* 116: 1074-1077.
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.

CHROMOSOMAL LOCATION

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

SOURCE

PSMD1 (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 938-953 at the C-terminus of PSMD1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PSMD1 (G-10) 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.

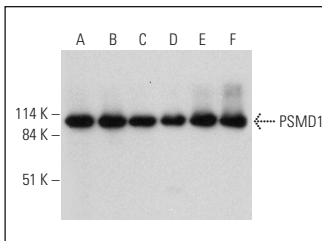
Molecular Weight of PSMD1: 106 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-673 cell lysate: sc-2414 or K-562 whole cell lysate: sc-2203.

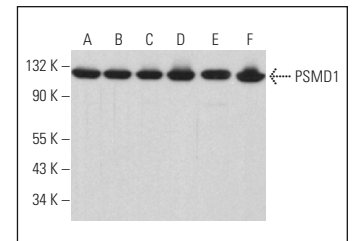
RECOMMENDED SUPPORT REAGENTS

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 (G-10): sc-514808. Western blot analysis of PSMD1 expression in Jurkat (A), HeLa (B), A-673 (C), Sol8 (D), K-562 (E) and HEK293T (F) whole cell lysates.



PSMD1 (G-10): sc-514808. Western blot analysis of PSMD1 expression in K-562 (A), HEL 92.1.7 (B), Caki-1 (C), C2C12 (D), SW-13 (E) and U-87 MG (F) 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.