

PSMD12 (H-8): sc-393401

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. PSMD12 (proteasome (prosome, macropain) 26S subunit, non-ATPase, 12), also known as p55 or Rpn5, is a 456 amino acid protein belonging to the proteasome subunit p55 family. PSMD12 acts as a regulatory subunit of the 26S proteasome and is a component of the PA700 complex. PSMD12 contains one PCI domain.

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. Zhang, N., et al. 2003. Using yeast to place human genes in functional categories. *Gene* 303: 121-129.
3. 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.
4. Thompson, H.G., et al. 2004. Post-translationally 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. 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.
6. Wang, Z., et al. 2006. Prostaglandin J2 alters pro-survival and pro-death gene expression patterns and 26S Proteasome assembly in human neuroblastoma cells. *J. Biol. Chem.* 281: 21377-21386.
7. Cui, F., et al. 2006. The up-regulation of proteasome subunits and lysosomal proteases in hepatocellular carcinomas of the HBx gene knockin transgenic mice. *Proteomics* 6: 498-504.

CHROMOSOMAL LOCATION

Genetic locus: PSMD12 (human) mapping to 17q24.2; Psmd12 (mouse) mapping to 11 E1.

SOURCE

PSMD12 (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-14 at the N-terminus of PSMD12 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

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

Blocking peptide available for competition studies, sc-393401 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PSMD12 (H-8) is recommended for detection of PSMD12 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 PSMD12 siRNA (h): sc-93915, PSMD12 siRNA (m): sc-152558, PSMD12 shRNA Plasmid (h): sc-93915-SH, PSMD12 shRNA Plasmid (m): sc-152558-SH, PSMD12 shRNA (h) Lentiviral Particles: sc-93915-V and PSMD12 shRNA (m) Lentiviral Particles: sc-152558-V.

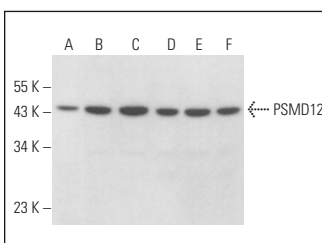
Molecular Weight of PSMD12: 53 kDa.

Positive Controls: SUP-T1 whole cell lysate: sc-364796, HeLa whole cell lysate: sc-2200 or IMR-32 cell lysate: sc-2409.

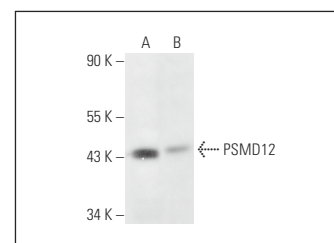
RECOMMENDED SUPPORT REAGENTS

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



PSMD12 (H-8): sc-393401. Western blot analysis of PSMD12 expression in HeLa (A), Jurkat (B), SUP-T1 (C), KNRK (D), RAW 264.7 (E) and 3T3-L1 (F) whole cell lysates.



PSMD12 (H-8): sc-393401. Western blot analysis of PSMD12 expression in HeLa (A) and IMR-32 (B) whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.