

# PSMD8 (A-1): sc-398619

## BACKGROUND

In eukaryotic cells, the 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. PSMD8 (proteasome (prosome, macropain) 26S subunit, non-ATPase, 8), also known as HIP6, HYPF, Nin1p, Rpn12, S14 or p31, is a 257 amino acid protein and regulatory component of the 26S Proteasome belonging to the proteasome subunit S14 family. PSMD8 is required for the activation of CDC28 kinase, and is encoded by a gene that maps to human chromosome 19q13.2.

## REFERENCES

1. Thinnes, F.P., et al. 1984. On a basic 31 kDa muscle membrane protein in cattle and pig, presumably equivalent to the class II antigen associated p31 molecule. *Anim. Blood Groups Biochem. Genet.* 15: 181-189.
2. Kominami, K., et al. 1995. Nin1p, a regulatory subunit of the 26S Proteasome, is necessary for activation of Cdc28p kinase of *Saccharomyces cerevisiae*. *EMBO J.* 14: 3105-3115.
3. Zhou, J., et al. 1996. Expression of early lung cancer detection marker p31 in neoplastic and non-neoplastic respiratory epithelium. *Lung Cancer* 14: 85-97.
4. Bosak, N., et al. 2003. Construction of a high-resolution comparative gene map between swine chromosome region 6q11→q21 and human chromosome 19 q-arm by RH mapping of 51 genes. *Cytogenet. Genome Res.* 102: 109-115.
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- $\alpha$  on the 26S Proteasome and 19S regulator in skeletal muscle of severely scalded mice. *J. Burn Care Res.* 27: 226-233.
7. Wang, X., et al. 2007. Mass spectrometric characterization of the affinity-purified human 26S Proteasome complex. *Biochemistry* 46: 3553-3565.

## CHROMOSOMAL LOCATION

Genetic locus: PSMD8 (human) mapping to 19q13.2; Psm8 (mouse) mapping to 7 B1.

## SOURCE

PSMD8 (A-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 106-135 within an internal region of PSMD8 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  $\mu$ g IgG<sub>1</sub> 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-398619 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

PSMD8 (A-1) is recommended for detection of PSMD8 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 PSMD8 siRNA (h): sc-97286, PSMD8 siRNA (m): sc-152563, PSMD8 shRNA Plasmid (h): sc-97286-SH, PSMD8 shRNA Plasmid (m): sc-152563-SH, PSMD8 shRNA (h) Lentiviral Particles: sc-97286-V and PSMD8 shRNA (m) Lentiviral Particles: sc-152563-V.

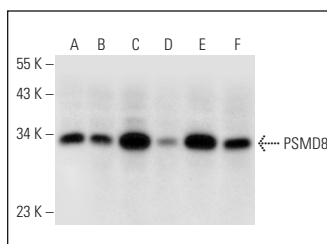
Molecular Weight of PSMD8: 36 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, MIA PaCa-2 cell lysate: sc-2285 or Hep G2 cell lysate: sc-2227.

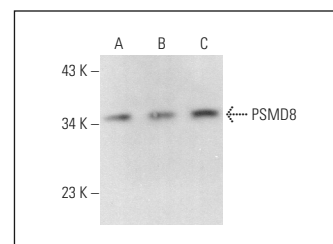
## RECOMMENDED SUPPORT REAGENTS

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



PSMD8 (A-1): sc-398619. Western blot analysis of PSMD8 expression in ES-2 (A), HeLa (B), COLO 320DM (C), SK-N-MC (D), MIA PaCa-2 (E) and Hep G2 (F) whole cell lysates.



PSMD8 (A-1): sc-398619. Western blot analysis of PSMD8 expression in HeLa (A), COLO 205 (B) and SW480 (C) whole cell lysates.

## RESEARCH USE

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