

# PSMD7 (N-14): sc-107287

## 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. PSMD7 (proteasome (prosome, macropain) 26S subunit, non-ATPase 7), also referred to as P40, S12 or MOV34, is a regulatory subunit of the 26S Proteasome which is involved in the ATP-dependent degradation of ubiquitinated proteins. PSMD7 contains a proteolytically resistant MPN domain. MPN domain family members comprise subunits of the proteasome, COP9-signalosome and eIF3 (translation initiation factor 3) complexes. PSMD7 interacts with HIV-1 Vpr and together they function as a cellular factor linked to the G2/M phase transition of the mammalian cell cycle.

## REFERENCES

- Gridley, T., et al. 1990. Molecular analysis of the Mov 34 mutation: transcript disrupted by proviral integration in mice is conserved in *Drosophila*. *Development* 109: 235-242.
- Gridley, T., et al. 1991. The murine Mov-34 gene: full-length cDNA and genomic organization. *Genomics* 11: 501-507.
- Deveraux, Q., et al. 1994. A 26S protease subunit that binds ubiquitin conjugates. *J. Biol. Chem.* 269: 7059-7061.
- Deveraux, Q., et al. 1995. Molecular cloning and expression of a 26S protease subunit enriched in dileucine repeats. *J. Biol. Chem.* 270: 23726-23729.
- Dubiel, W., et al. 1995. Molecular cloning and expression of subunit 12: a non-MCP and non-ATPase subunit of the 26S protease. *FEBS Lett.* 363: 97-100.

## CHROMOSOMAL LOCATION

Genetic locus: PSMD7 (human) mapping to 16q23.1; Psm7 (mouse) mapping to 8 D3.

## SOURCE

PSMD7 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PSMD7 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107287 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

PSMD7 (N-14) is recommended for detection of PSMD7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other PSMD family members.

PSMD7 (N-14) is also recommended for detection of PSMD7 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PSMD7 siRNA (h): sc-93196, PSMD7 siRNA (m): sc-152562, PSMD7 shRNA Plasmid (h): sc-93196-SH, PSMD7 shRNA Plasmid (m): sc-152562-SH, PSMD7 shRNA (h) Lentiviral Particles: sc-93196-V and PSMD7 shRNA (m) Lentiviral Particles: sc-152562-V.

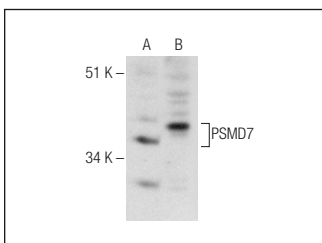
Molecular Weight of PSMD7: 34 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, C4 whole cell lysate: sc-364186 or Hep G2 nuclear extract.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



PSMD7 (N-14): sc-107287. Western blot analysis of PSMD7 expression in c4 whole cell lysate (A) and Hep G2 nuclear extract (B).

## RESEARCH USE

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

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Try **PSMD7 (F-2): sc-390705** or **PSMD7 (24-KK): sc-100458**, our highly recommended monoclonal alternatives to PSMD7 (N-14).