

# PSMD13 (K-14): sc-109410

## 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 multi-subunit 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. PSMD13 (proteasome (prosome, macropain) 26S subunit, non-ATPase, 13), also known as S11, Rpn9, p40.5 or HSPC027, is a 376 amino acid protein that belongs to the proteasome subunit S11 family. PSMD13 acts as a regulatory subunit of the 26S Proteasome, which is involved in the ATP-dependent degradation of ubiquitinated proteins.

## REFERENCES

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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- $\alpha$  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. Deng, S., et al. 2007. Over-expression of genes and proteins of ubiquitin specific peptidases (USPs) and proteasome subunits (PSs) in breast cancer tissue observed by the methods of RFDD-PCR and proteomics. *Breast Cancer Res. Treat.* 104: 21-30.
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## CHROMOSOMAL LOCATION

Genetic locus: PSMD13 (human) mapping to 11p15.5; Psm13 (mouse) mapping to 7 F5.

## SOURCE

PSMD13 (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PSMD13 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109410 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PSMD13 (K-14) is recommended for detection of PSMD13 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PSMD13 (K-14) is also recommended for detection of PSMD13 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for PSMD13 siRNA (h): sc-96416, PSMD13 siRNA (m): sc-152559, PSMD13 shRNA Plasmid (h): sc-96416-SH, PSMD13 shRNA Plasmid (m): sc-152559-SH, PSMD13 shRNA (h) Lentiviral Particles: sc-96416-V and PSMD13 shRNA (m) Lentiviral Particles: sc-152559-V.

Molecular Weight of PSMD13: 43 kDa.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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<sup>™</sup> Mounting Medium: sc-24941.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.