

PSMD11 (AT2C7): sc-517422

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. PSMD11 (proteasome (prosome, macropain) 26S subunit, non-ATPase, 11), also known as S9, Rpn6 or p44.5, is a 422 amino acid protein that contains one PCI domain and functions as a regulatory subunit of the 26S proteasome, playing a role in the ATP-dependent degradation of ubiquitinated proteins. The gene encoding PSMD11 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Kanayama, H.O., et al. 1992. Demonstration that a human 26S proteolytic complex consists of a proteasome and multiple associated protein components and hydrolyzes ATP and ubiquitin-ligated proteins by closely linked mechanisms. *Eur. J. Biochem.* 206: 567-578.
2. Coux, O., et al. 1996. Structure and functions of the 20S and 26S Proteasomes. *Annu. Rev. Biochem.* 65: 801-847.
3. Hoffman, L. and Rechsteiner, M. 1997. Molecular cloning and expression of subunit 9 of the 26S Proteasome. *FEBS Lett.* 404: 179-184.
4. Saito, A., et al. 1997. cDNA cloning and functional analysis of p44.5 and p55, two regulatory subunits of the 26S Proteasome. *Gene* 203: 241-250.
5. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604449. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Fong, A., et al. 2002. S9, a 19S proteasome subunit interacting with ubiquitinated NFκB2/p100. *J. Biol. Chem.* 277: 40697-40702.
7. Urso, M.L., et al. 2007. Alterations in mRNA expression and protein products following spinal cord injury in humans. *J. Physiol.* 579: 877-892.

CHROMOSOMAL LOCATION

Genetic locus: PSMD11 (human) mapping to 17q11.2; Psmd11 (mouse) mapping to 11 B5.

SOURCE

PSMD11 (AT2C7) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-422 of PSMD11 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and 1% glycerol.

RESEARCH USE

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

APPLICATIONS

PSMD11 (AT2C7) is recommended for detection of PSMD11 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PSMD11 siRNA (h): sc-76277, PSMD11 siRNA (m): sc-76278, PSMD11 shRNA Plasmid (h): sc-76277-SH, PSMD11 shRNA Plasmid (m): sc-76278-SH, PSMD11 shRNA (h) Lentiviral Particles: sc-76277-V and PSMD11 shRNA (m) Lentiviral Particles: sc-76278-V.

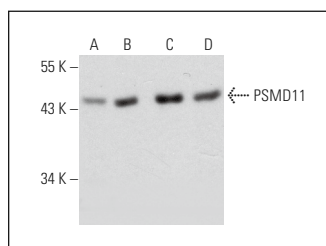
Molecular Weight of PSMD11: 46 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, ES-D3 whole cell lysate: sc-364776 or RAT2 whole cell lysate: sc-364198.

RECOMMENDED SUPPORT REAGENTS

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



PSMD11 (AT2C7): sc-517422. Western blot analysis of PSMD11 expression in Hep G2 (A), NIH/3T3 (B), ES-D3 (C) and RAT2 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Direito, I., et al. 2021. Protein aggregation patterns inform about breast cancer response to antiestrogens and reveal the RNA ligase RTCB as mediator of acquired tamoxifen resistance. *Cancers* 13: 3195.

STORAGE

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