

PSMD2 (K-15): sc-55263

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. PSMD2 (proteasome (prosome, macropain) 26S subunit, non-ATPase 2), also known as S2, TRAP2 (tumor necrosis factor type 1 receptor-associated protein 2) or p97, is a regulatory component of the 26S Proteasome. It is expressed in skeletal muscle, brain, liver, placenta, kidney, pancreas, lung and heart. PSMD2 is one of the non-ATPase regulatory subunits of the 19S regulator lid and is implicated in substrate recognition and binding.

REFERENCES

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2. Hampton, R.Y., et al. 1996. Role of 26S Proteasome and HRD genes in the degradation of 3-hydroxy-3-methylglutaryl-CoA reductase, an integral endoplasmic reticulum membrane protein. *Mol. Biol. Cell* 7: 2029-2044.
3. Wilkinson, C.R., et al. 1997. Mts4, a non-ATPase subunit of the 26 S Protease in fission yeast is essential for mitosis and interacts directly with the ATPase subunit Mts2. *J. Biol. Chem.* 272: 25768-25777.
4. Dunbar, J.D., et al. 1997. Two-hybrid cloning of a gene encoding TNF receptor-associated protein 2, a protein that interacts with the intracellular domain of the type 1 TNF receptor: identity with subunit 2 of the 26S protease. *J. Immunol.* 158: 4252-4259.
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.

CHROMOSOMAL LOCATION

Genetic locus: PSMD2 (human) mapping to 3q27.1; Psmd2 (mouse) mapping to 16 B1.

SOURCE

PSMD2 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PSMD2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-55263 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PSMD2 (K-15) is recommended for detection of PSMD2 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).

PSMD2 (K-15) is also recommended for detection of PSMD2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PSMD2 siRNA (h): sc-62900, PSMD2 siRNA (m): sc-62901, PSMD2 shRNA Plasmid (h): sc-62900-SH, PSMD2 shRNA Plasmid (m): sc-62901-SH, PSMD2 shRNA (h) Lentiviral Particles: sc-62900-V and PSMD2 shRNA (m) Lentiviral Particles: sc-62901-V.

Molecular Weight of PSMD2: 97 kDa.

Positive Controls: mouse brain extract: sc-2253 or SK-N-SH cell lysate: sc-2410.

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) 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.

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 or our catalog for detailed protocols and support products.



Try **PSMD2 (A-11): sc-271775** or **PSMD2 (C-10): sc-271584**, our highly recommended monoclonal alternatives to PSMD2 (K-15).