

PSMC4 (H-2): sc-166003

BACKGROUND

In eukaryotic cells, selective breakdown of cellular proteins is ensured by their ubiquitination and subsequent degradation by the 26S Proteasome. At specific stages of development, embryo- and tissue-specific components of the 26S Proteasome are formed, which are responsible for proteolysis. These components of the 26S Proteasome include Rpn10 α through Rpn10 ϵ , or, alternatively, pUb-R2 through pUb-R5, and can be generated by a single Rpn10 gene by developmentally regulated alternative splicing. Gankyrin and p44S10 are proteasome regulatory particles that are expressed in heart, liver, skeletal muscle and pancreas. Proteasome component C2 (PROS-30), also designated macro-pain subunit C2, is a prosomal protein involved in a non-lysosomal ATP/ubiquitin-dependent proteolytic pathway. PSMC4 (26S protease regulatory subunit 6B) is involved in the ATP-dependent degradation of ubiquitinated proteins. PSMC4 interacts with gankyrin, a liver oncoprotein, as well as with a liver-specific member of the nuclear hormone receptor superfamily.

CHROMOSOMAL LOCATION

Genetic locus: PSMC4 (human) mapping to 19q13.2; Psmc4 (mouse) mapping to 7 A3.

SOURCE

PSMC4 (H-2) is a mouse monoclonal antibody raised against amino acids 1-167 mapping at the N-terminus of PSMC4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PSMC4 (H-2) is recommended for detection of PSMC4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 PSMC4 siRNA (h): sc-45851, PSMC4 siRNA (m): sc-45852, PSMC4 shRNA Plasmid (h): sc-45851-SH, PSMC4 shRNA Plasmid (m): sc-45852-SH, PSMC4 shRNA (h) Lentiviral Particles: sc-45851-V and PSMC4 shRNA (m) Lentiviral Particles: sc-45852-V.

Molecular Weight of PSMC4: 47 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, DU 145 cell lysate: sc-2268 or WEHI-231 whole cell lysate: sc-2213.

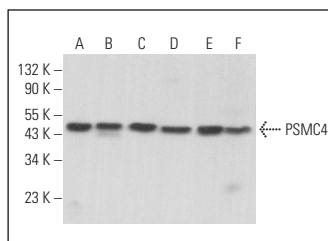
STORAGE

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

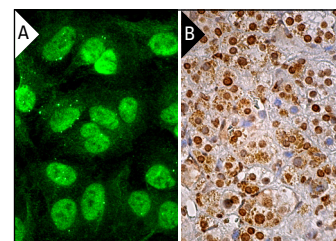
RESEARCH USE

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

DATA



PSMC4 (H-2): sc-166003. Western blot analysis of PSMC4 expression in ES-2 (A), OVCAR-3 (B), 3T3-L1 (C), DU 145 (D) and WEHI-231 (E) whole cell lysates and rat lymph node tissue extract (F).



PSMC4 (H-2): sc-166003. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing nuclear and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Amoroso, M.R., et al. 2011. TRAP1 and the proteasome regulatory particle TBP7/Rpt3 interact in the endoplasmic reticulum and control cellular ubiquitination of specific mitochondrial proteins. *Cell Death Differ.* 19: 592-604.
- Matassa, D.S., et al. 2014. TRAP1-dependent regulation of p70S6K is involved in the attenuation of protein synthesis and cell migration: relevance in human colorectal tumors. *Mol. Oncol.* 8: 1482-1494.
- Guo, X., et al. 2016. Site-specific proteasome phosphorylation controls cell proliferation and tumorigenesis. *Nat. Cell Biol.* 18: 202-212.
- Palladino, G., et al. 2016. TRAP1 regulates cell cycle and apoptosis in thyroid carcinoma cells. *Endocr. Relat. Cancer* 23: 699-709.
- Lettini, G., et al. 2016. TRAP1 regulates stemness through Wnt/ β -catenin pathway in human colorectal carcinoma. *Cell Death Differ.* 23: 1792-1803.
- Maddalena, F., et al. 2017. TRAP1 protein signature predicts outcome in human metastatic colorectal carcinoma. *Oncotarget* 8: 21229-21240.
- Ge, Y., et al. 2019. UBASH3A regulates the synthesis and dynamics of TCR-CD3 complexes. *J. Immunol.* 203: 2827-2836.
- Lettini, G., et al. 2020. TRAP1 regulates Wnt/ β -catenin pathway through LRP5/6 receptors expression modulation. *Int. J. Mol. Sci.* 21: E7526.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.