

# PSMB4 (C-18): sc-74864

## 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. The 20S proteasome chamber contains  $\alpha$  subunits (which are structural) and  $\beta$  subunits (which are predominantly catalytic). The outer two rings in the proteasome consist of seven  $\alpha$  subunits each, and the inner two rings each consist of seven  $\beta$  subunits. PSMB4 (proteasome (prosome, macropain) subunit,  $\beta$  type, 4), also known as HN3, PROS26, macropain  $\beta$  chain, proteasome  $\beta$  chain or proteasome subunit 3, is a  $\beta$  subunit of the 20S proteasome.

## REFERENCES

- McCusker, D., Jones, T., Sheer, D. and Trowsdale, J. 1997. Genetic relationships of the genes encoding the human proteasome  $\beta$  subunits and the proteasome PA28 complex. *Genomics* 45: 362-367.
- Orlowski, M., Cardozo, C., Eleuteri, A.M., Kohanski, R., Kam, C.M. and Powers, J.C. 1997. Reactions of [14C]-3,4-dichloroisocoumarin with subunits of pituitary and spleen multicatalytic proteinase complexes (proteasomes). *Biochemistry* 36: 13946-13953.
- Nandi, D., Woodward, E., Ginsburg, D.B. and Monaco, J.J. 1997. Intermediates in the formation of mouse 20S proteasomes: implications for the assembly of precursor  $\beta$  subunits. *EMBO J.* 16: 5363-5375.
- Takezaki, N., Zaleska-Rutczynska, Z. and Figueroa, F. 2002. Sequencing of amphioxus PSMB5/8 gene and phylogenetic position of agnathan sequences. *Gene* 282: 179-187.

## CHROMOSOMAL LOCATION

Genetic locus: PSMB4 (human) mapping to 1q21.3; Psmb4 (mouse) mapping to 3 F2.1.

## SOURCE

PSMB4 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PSMB4 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-74864 P, (100  $\mu$ g 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

PSMB4 (C-18) is recommended for detection of PSMB4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

PSMB4 (C-18) is also recommended for detection of PSMB4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PSMB4 siRNA (h): sc-76269, PSMB4 siRNA (m): sc-76270, PSMB4 shRNA Plasmid (h): sc-76269-SH, PSMB4 shRNA Plasmid (m): sc-76270-SH, PSMB4 shRNA (h) Lentiviral Particles: sc-76269-V and PSMB4 shRNA (m) Lentiviral Particles: sc-76270-V.

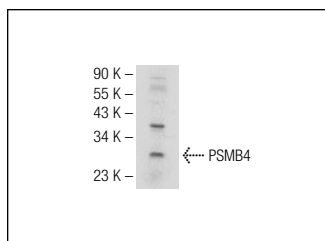
Molecular Weight of PSMB4: 29 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## 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



PSMB4 (C-18): sc-74864. Western blot analysis of PSMB4 expression in HeLa whole cell lysate.

## RESEARCH USE

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

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Try **PSMB4 (H-3): sc-390878** or **PSMB4 (LX-1): sc-100454**, our highly recommended monoclonal alternatives to PSMB4 (C-18).