

PSMB6 (JQ-3): sc-100455

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 α subunits (which are structural) and β subunits (which are predominantly catalytic). The outer two rings in the proteasome consist of seven α subunits each, and the inner two rings each consist of seven β subunits. PSMB6 (prosome, macropain) subunit, β type, 6), also known as LMPY (PSY large multifunctional protease Y), macropain δ chain, proteasome δ chain or proteasome subunit Y, is a β subunit of the 20S Proteasome and, upon stimulation with IFN- γ , can be displaced by LMP2.

REFERENCES

1. Orlowski, M., et al. 1997. Reactions of [14C]-3,4-dichloroisocoumarin with subunits of pituitary and spleen multicatalytic proteinase complexes (proteasomes). *Biochemistry* 36: 13946-13953.
2. Nandi, D., et al. 1997. Intermediates in the formation of mouse 20S Proteasomes: implications for the assembly of precursor β subunits. *EMBO J.* 16: 5363-5375.

CHROMOSOMAL LOCATION

Genetic locus: PSMB6 (human) mapping to 17p13.2.

SOURCE

PSMB6 (JQ-3) is a mouse monoclonal antibody raised against recombinant PSMB6 of human origin.

PRODUCT

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

APPLICATIONS

PSMB6 (JQ-3) is recommended for detection of PSMB6 of human origin by Western Blotting (starting dilution 1:200, 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 PSMB6 siRNA (h): sc-76271, PSMB6 shRNA Plasmid (h): sc-76271-SH and PSMB6 shRNA (h) Lentiviral Particles: sc-76271-V.

Molecular Weight of PSMB6: 25 kDa.

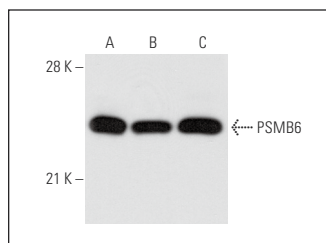
Positive Controls: SK-N-SH cell lysate: sc-2410, HeLa whole cell lysate: sc-2200 or SW-13 cell lysate: sc-24778.

RECOMMENDED SUPPORT REAGENTS

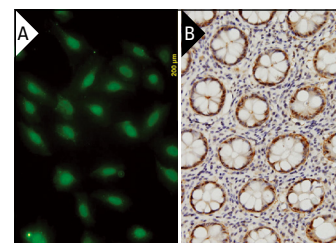
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PSMB6 (JQ-3): sc-100455. Western blot analysis of PSMB6 expression in SK-N-SH (A), HeLa (B) and SW-13 (C) whole cell lysates.



PSMB6 (JQ-3): sc-100455. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells (A) showing nuclear localization and immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon tissue (B) showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Yuan, F., et al. 2013. Proteomic profiling of expression of proteasomal subunits from livers of mice treated with diethylnitrosamine. *Proteomics* 13: 389-397.
2. Yuan, F., et al. 2013. A novel role of proteasomal β 1 subunit in tumorigenesis. *Biosci. Rep.* 33: e00050.
3. Teixeira, V.O.N., et al. 2023. The role of proteasome in muscle wasting of experimental arthritis. *Adv. Rheumatol.* 63: 14.

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 for detailed protocols and support products.