SANTA CRUZ BIOTECHNOLOGY, INC.

# p44S10 (H-5): sc-398745

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

In eukaryotic cells, selective breakdown of cellular proteins is ensured by two distinct pathways, ubiquitination and degradation by the 26S proteasome. At specific stages of development, embryo- and tissue-specific components of the 26S proteasome are formed by developmentally regulated alternative splicing, including Rpn10a through Rpn10e (also designated pUb-R2 through pUb-R5). The pUb-R2 subunit, originally identified as S5a, is ubiquitously expressed and may perform proteolysis constitutively in a wide variety of cells. p44S10 is a highly conserved proteasome regulatory subunit that is expressed in heart, liver, skeletal muscle and pancreas. In addition to normal tissue expression, p44S10 is also expressed in several melanoma cell lines, such as MCF-7, 451Lu and WM164. Since forced expression of p44S10 in radial growth phase melanoma cells results in an increase in cellular proliferation, p44S10 may represent a potential link between regulation of proteasome activity and tumor cell proliferation *in vivo*.

## REFERENCES


1. Lonnroth, I. and Lange, S. 1986. Purification and characterization of the antisecretory factor: a protein in the central nervous system and in the gut which inhibits intestinal hypersecretion induced by cholera toxin. Biochim. Biophys. Acta 883: 138-144.
2. Johansson, E., et al. 1995. Molecular cloning and expression of a pituitary gland protein modulating intestinal fluid secretion. J. Biol. Chem. 270: 20615-20620.
3. Coux, O., et al. 1996. Structure and functions of the 20S and 26S proteasomes. Annu. Rev. Biochem. 65: 801-847.
4. Voges, D., et al. 1999. The 26S proteasome: a molecular machine designed for controlled proteolysis. Annu. Rev. Biochem. 68: 1015-1068.
5. Kawahara, H., et al. 2000. Developmentally regulated, alternative splicing of the Rpn10 gene generates multiple forms of 26S proteasomes. EMBO J. 19: 4144-4153.
6. Ren, S., et al. 2000. The p44S10 locus, encoding a subunit of the proteasome regulatory particle, is amplified during progression of cutaneous malignant melanoma. Oncogene 19: 1419-1427.


## CHROMOSOMAL LOCATION

Genetic locus: PSMD6 (human) mapping to 3p14.1.

## SOURCE

p44S10 (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 31-69 near the N-terminus of p44S10 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398745 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

p44S10 (H-5) is recommended for detection of p44S10 of human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for p44S10 siRNA (h): sc-41383, p44S10 shRNA Plasmid (h): sc-41383-SH and p44S10 shRNA (h) Lentiviral Particles: sc-41383-V.

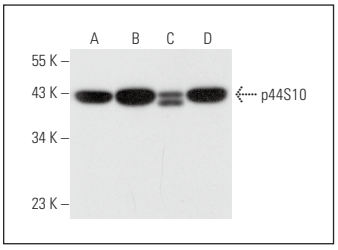
Molecular Weight of p44S10: 44 kDa.

Positive Controls: A-375 cell lysate: sc-3811, Jurkat whole cell lysate: sc-2204 or MDA-MB-231 cell lysate: sc-2232.

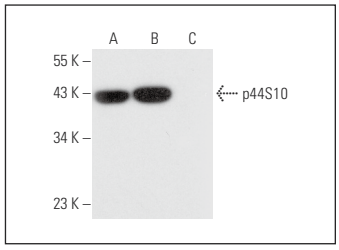
## RECOMMENDED SUPPORT REAGENTS

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




p44S10 (H-5): sc-398745. Western blot analysis of p44S10 expression in HeLa (**A**), A-375 (**B**), MDA-MB-468 (**C**) and MDA-MB-231 (**D**) whole cell lysates.




p44S10 (H-5): sc-398745. Western blot analysis of p44S10 expression in Hs67 (**A**), Jurkat (**B**) and NIH/3T3 (**C**) whole cell lysates. Note lack of reactivity in Lane **C**.

## 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.