

PA200 (A-13): sc-135512

BACKGROUND

PA200 (proteasome activator 200 kDa), also known as PSME4 (proteasome (prosome, macropain) activator subunit 4), is a 1,843 amino acid nuclear protein that contains 6 HEAT (huntington, elongation factor 3, PR65/A, TOR) repeats, which are conserved residues that form the hydrophobic domain core and are usually found in proteins that are involved in intracellular transport. Existing as a homodimer, PA200 interacts with the 20S and 26S proteasomes and activates proteasomal cleavage of peptides in an energy-independent manner. PA200 and proteasomes function together within cells and respond to specific radiation-induced damage independent of the stage of cell cycle arrest. Broadly expressed, PA200 may also be involved in spermatogenesis and in DNA repair double-strand breaks (DSBs). Four isoforms of PA200 exist due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: PSME4 (human) mapping to 2p16.2; Psme4 (mouse) mapping to 11 A4.

SOURCE

PA200 (A-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PA200 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-135512 P, (100 µg 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

PA200 (A-13) is recommended for detection of PA200 isoforms 1-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PA200 (A-13) is also recommended for detection of PA200 isoforms 1-4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PA200 siRNA (h): sc-94428, PA200 siRNA (m): sc-151976, PA200 shRNA Plasmid (h): sc-94428-SH, PA200 shRNA Plasmid (m): sc-151976-SH, PA200 shRNA (h) Lentiviral Particles: sc-94428-V and PA200 shRNA (m) Lentiviral Particles: sc-151976-V.

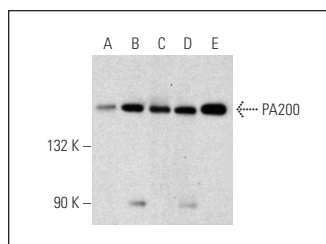
Molecular Weight of PA200: 200 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or PA200 (m): 293T Lysate: sc-179282.

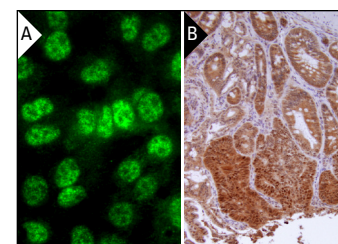
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PA200 (A-13): sc-135512. Western blot analysis of PA200 expression in non-transfected 293T: sc-117752 (A), mouse PA200 transfected 293T: sc-179282 (B), Hep G2 (C), K-562 (D) and HeLa (E) whole cell lysates.



PA200 (A-13): sc-135512. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (A). Cytoplasmic and nuclear proteasomal activator 200 (PA200) in small intestinal adenoma in APC min/+ (20X microscopic magnification). Dilution 1:80 in dilution buffer (0.05% BSA in PBS) Blocking: 0.1% BSA in PBS at room temp. Kindly provided by Dr. Albert J. Fornace Jr., Georgetown University (B).

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.