

PP1 β (C-20): sc-6106

BACKGROUND

In eukaryotes, the phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions, including division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the protein phosphatases. In general, the protein phosphatase (PP) holoenzyme is a trimeric complex composed of a regulatory subunit, a variable subunit and a catalytic subunit. Four major families of protein phosphatase catalytic subunit have been identified, designated PP1, PP2A, PP2B (calcineurin) and PP2C. An additional protein phosphatase catalytic subunit, PPX (also known as PP4) is a putative member of a novel PP family. The PP1 family is comprised of subfamily members PP1 α , PP1 β and PP1 γ , which are MgATP-dependent enzymes. PP1 inactivity is maintained through its association with the inhibitory protein NIPP-1 (nuclear inhibitor of PP1). Phosphorylation of NIPP-1 by cAMP-PK or casein kinase II results in the release of active PP1.

CHROMOSOMAL LOCATION

Genetic locus: PPP1CB (human) mapping to 2p23.2; Ppp1cb (mouse) mapping to 5 B1.

SOURCE

PP1 β (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PP1 β of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6106 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PP1 β (C-20) is recommended for detection of PP1 β of mouse, rat and 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).

PP1 β (C-20) is also recommended for detection of PP1 β in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PP1 β siRNA (h): sc-36295, PP1 β siRNA (m): sc-36296, PP1 β shRNA Plasmid (h): sc-36295-SH, PP1 β shRNA Plasmid (m): sc-36296-SH, PP1 β shRNA (h) Lentiviral Particles: sc-36295-V and PP1 β shRNA (m) Lentiviral Particles: sc-36296-V.

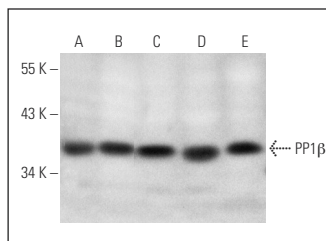
Molecular Weight of PP1 β : 36 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-673 cell lysate: sc-2414 or SJRH30 cell lysate: sc-2287.

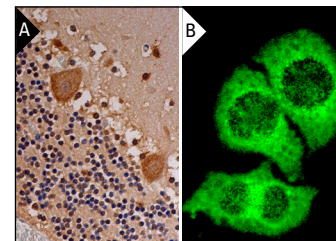
STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



PP1 β (C-20): sc-6106. Western blot analysis of PP1 β expression in HeLa (A), A-673 (B), SJRH30 (C) and SK-N-SH (D) whole cell lysates and mouse brain extract (E).



PP1 β (C-20): sc-6106. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic and nuclear staining of Purkinje cells, cells in granular layer and cells in molecular layer (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining (B).

SELECT PRODUCT CITATIONS

- Varmuza, S., et al. 1999. Spermiogenesis is impaired in mice bearing a targeted mutation in the protein phosphatase 1c γ gene. *Dev. Biol.* 205: 98-110.
- Bozzo, C., et al. 2005. Nerve influence on myosin light chain phosphorylation in slow and fast skeletal muscles. *FEBS J.* 272: 5771-5785.
- Mi, J., et al. 2007. Protein phosphatase-1 α regulates centrosome splitting through Nek2. *Cancer Res.* 67: 1082-1089.
- Petrich, A., et al. 2013. Phosphorylation of threonine 333 regulates trafficking of the human sst5 somatostatin receptor. *Mol. Endocrinol.* 27: 671-682.
- Kliwer, A. and Schulz, S. 2014. Differential regulation of somatostatin receptor dephosphorylation by β -arrestin1 and β -arrestin2. *Naunyn Schmiedebergs Arch. Pharmacol.* 387: 263-269.

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.



Try **PP1 β (A-6): sc-365678** or **PP1 β (C-5): sc-373782**, our highly recommended monoclonal alternatives to PP1 β (C-20).