

## PP5 (C-20): sc-32588

### 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 and PP2C. An additional protein phosphatase catalytic subunit, PPX (also known as PP4), is a putative member of a novel PP family. PP5, also designated protein phosphatase T (PP-T, PPP5C), a predominantly nuclear protein which belongs to the PPP phosphatase family and the PP-T subfamily, interacts with Cdc16 and Cdc27. It dephosphorylates serine residues of skeletal muscle phosphorylase and Histone H1 and may be involved in mitosis and RNA biogenesis regulation.

### CHROMOSOMAL LOCATION

Genetic locus: PPP5C (human) mapping to 19q13.32; Ppp5c (mouse) mapping to 7 A2.

### SOURCE

PP5 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of serine/threonine protein phosphatase 5 of human origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-32588 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

PP5 (C-20) is recommended for detection of PP5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

PP5 (C-20) is also recommended for detection of PP5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PP5 siRNA (h): sc-44602, PP5 siRNA (m): sc-44603, PP5 shRNA Plasmid (h): sc-44602-SH, PP5 shRNA Plasmid (m): sc-44603-SH, PP5 shRNA (h) Lentiviral Particles: sc-44602-V and PP5 shRNA (m) Lentiviral Particles: sc-44603-V.

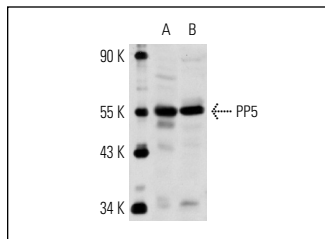
Molecular Weight of PP5: 57 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, Jurkat whole cell lysate: sc-2204 or rat brain extract: sc-2392.

### 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



PP5 (C-20): sc-32588. Western blot analysis of PP5 expression in PC-12 whole cell lysate (A) and rat brain tissue extract (B).

### SELECT PRODUCT CITATIONS

1. Yan, Y., et al. 2010. Protein phosphatase 2A has an essential role in the activation of gamma-irradiation-induced G<sub>2</sub>/M checkpoint response. *Oncogene* 29: 4317-4329.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **PP5 (H-7): sc-271816** or **PP5 (G-6): sc-515257**, our highly recommended monoclonal alternatives to PP5 (C-20).