

## PP2B-B2 (C-19): sc-6120

### 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 subunits 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. The PP2B family comprises subfamily members PP2B- $\alpha$ , PP2B- $\beta$  and PP2B- $\gamma$ . Two additional regulatory subunits been identified, designated PP2B-B1 and PP2B-B2. PP2B-B2, also known as PPP3R2 (protein phosphatase 3, regulatory subunit B,  $\beta$ ), PPP3RL, CBLP (calcineurin B-like protein) or CNBII (calcineurin BII), is a 170 amino acid protein that belongs to the calcineurin regulatory subunit family. Encoded by a gene that maps to human chromosome 9q31.1, PP2B-B2 is highly conserved. PP2B-B2 contains four EF-hand domains and exhibits testis-specific localization. PP2B-B2 is composed of a catalytic subunit (A) and a regulatory subunit (B), and functions as a regulatory subunit of calcineurin, a calcium-dependent, calmodulin stimulated protein phosphatase.

### REFERENCES

1. Ueki, K., et al. 1992. Structure and expression of two isoforms of the murine calmodulin-dependent protein phosphatase regulatory subunit (calcineurin B). *Biochem. Biophys. Res. Commun.* 187: 537-543.
2. Cohen, P.T. 1993. Important roles for novel protein phosphatases dephosphorylating serine and threonine residues. *Biochem. Soc. Trans.* 21: 884-888.

### CHROMOSOMAL LOCATION

Genetic locus: Ppp3r2 (mouse) mapping to 4 B1.

### SOURCE

PP2B-B2 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PP2B-B2 of mouse origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-6120 P, (100  $\mu$ g 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.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### APPLICATIONS

PP2B-B2 (C-19) is recommended for detection of PP2B-B2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 PP2B-B2 siRNA (m): sc-39201, PP2B-B2 shRNA Plasmid (m): sc-39201-SH and PP2B-B2 shRNA (m) Lentiviral Particles: sc-39201-V.

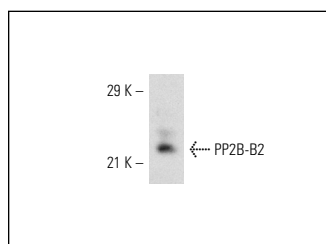
Molecular Weight of PP2B-B2: 21 kDa.

Positive Controls: mouse testis extract: sc-2405.

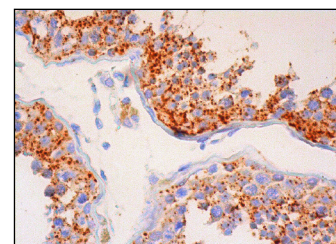
### RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

### DATA



PP2B-B2 (C-19): sc-6120. Western blot analysis of PP2B-B2 expression in mouse testis tissue extract.



PP2B-B2 (C-19): sc-6120. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts.

### SELECT PRODUCT CITATIONS

1. Ryeom, S., et al. 2003. The threshold pattern of calcineurin-dependent gene expression is altered by loss of the endogenous inhibitor calcipressin. *Nat. Immunol.* 4: 874-881.
2. Jayanthi, S., et al. 2005. Calcineurin/NFAT-induced up-regulation of the Fas ligand/Fas death pathway is involved in methamphetamine-induced neuronal apoptosis. *Proc. Natl. Acad. Sci. USA* 102: 868-873.