SANTA CRUZ BIOTECHNOLOGY, INC.

PP2Cα (L-18): sc-32402

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine protein phosphatases. Protein phosphatase 2Cα (PP2Cα) has broad specificity. It dephosphorylates and negatively regulates the activities of MAP kinases and MAP kinase-kinases while also inhibiting the activation of p38 and JNK kinase cascades, induced by environmental stresses. PP2Cα also induces the expression of endogenous p53 and the p53-responsive gene p21, leading to cell cycle arrest and apoptosis. The PP2Cα protein, which contains an active site containing a dinuclear metal ion center, shows highest expression in epithelial cells, as well as in the digestive tract, lung, kidney, breast, prostate, endocrine glands and brain.

CHROMOSOMAL LOCATION

Genetic locus: PPM1A (human) mapping to 14q23.1; Ppm1a (mouse) mapping to 12 C3.

SOURCE

PP2Cα (L-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PP2Cα1 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-32402 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

PP2Cα (L-18) is recommended for detection of PP2Cα isoforms 1 and 2 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).

PP2Cα (L-18) is also recommended for detection of PP2Cα isoforms 1 and 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PP2Cα siRNA (h): sc-45214, PP2Cα siRNA (m): sc-45215, PP2Cα shRNA Plasmid (h): sc-45214-SH, PP2Cα shRNA Plasmid (m): sc-45215-SH, PP2Cα shRNA (h) Lentiviral Particles: sc-45214-V and PP2Cα shRNA (m) Lentiviral Particles: sc-45215-V.

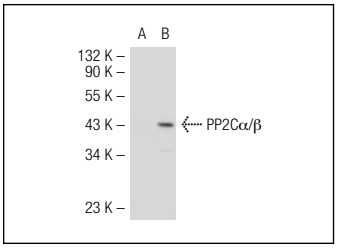
Molecular Weight of PP2Cα: 46 kDa.

Positive Controls: PP2Cα/β (h2): 293T Lysate: sc-116262, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

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



PP2Cα (L-18): sc-32402. Western blot analysis of PP2Cα/β expression in non-transfected: sc-117752 (**A**) and human PP2Cα/β transfected: sc-116262 (**B**) 293T whole cell lysates.

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.