SANTA CRUZ BIOTECHNOLOGY, INC.

PP2A-Cα (N-25): sc-130237

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (calcineurin) and PP2C. Characteristic of the protein phosphatase complexes, the PP2A phosphatase core enzyme is composed of a regulatory subunit and a catalytic subunit, the latter of which exists as two isoforms, designated PP2Aα and PP2Aβ. The multiple subunits of PP2A work in concert to regulate a variety of metabolic pathways, including transcription, translation, cell cycle progression and oncogenic transformation.

REFERENCES

1. Strack, S., et al. 2002. Protein phosphatase 2A holoenzyme assembly: identification of contacts between B-family regulatory and scaffolding A subunits. J. Biol. Chem. 277: 20750-20755.
2. Avdi, N.J., et al. 2002. A role for protein phosphatase-2A in p38 mitogen-activated protein kinase-mediated regulation of the c-Jun NH_2-terminal kinase pathway in human neutrophils. J. Biol. Chem. 277: 40687-40696.

CHROMOSOMAL LOCATION

Genetic locus: PPP2CA (human) mapping to 5q31.1.

SOURCE

PP2A-Cα (N-25) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of PP2A-Cα of human origin.

PRODUCT

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

APPLICATIONS

PP2A-Cα (N-25) is recommended for detection of PP2A-Cα of 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), 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 PP2A-Cα siRNA (h): sc-43509, PP2A-Cα shRNA Plasmid (h): sc-43509-SH and PP2A-Cα shRNA (h) Lentiviral Particles: sc-43509-V.

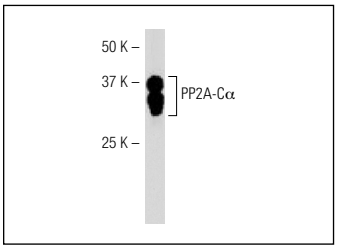
Molecular Weight of PP2A-Cα: 36 kDa.

Positive Controls: CEM whole cell lysate.

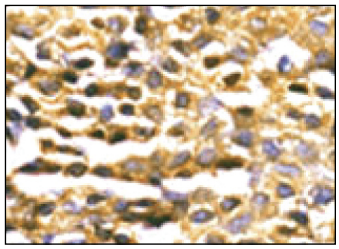
RECOMMENDED SECONDARY REAGENTS

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



PP2A-Cα (N-25): sc-130237. Western blot analysis of PP2A-Cα expression in CEM whole cell lysate.



PP2A-Cα (N-25): sc-130237. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human cancer tissue showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Sen, S., et al. 2012. Maintenance of higher H_2O_2 levels, and its mechanism of action to induce growth in breast cancer cells: important roles of bioactive catalase and PP2A. Free Radic. Biol. Med. 53: 1541-1551.
2. Tay, K.H., et al. 2015. Involvement of vacuolar H^+ -ATPase in killing of human melanoma cells by the sphingosine kinase analogue FTY720. Pigment Cell Melanoma Res. 28: 171-183.

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.