SANTA CRUZ BIOTECHNOLOGY, INC.

IPP-2 (N-17): sc-14263

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Two inhibitors of protein phosphatase 1 (PP1) include the phosphatase inhibitor 1 (IPP-1) and phosphatase inhibitor 2 (IPP-2). IPP-2, also known as I-2, interacts with the catalytic subunit of PP1 to form the heterodimer PP1I. The PP1I complex is present in the cytosol of cells in a broad range of vertebrate and invertebrate species. Although the heterodimer itself is inactive, a reversible phosphorylation of IPP-2 at Thr 72 by glycogen-synthase-kinase (GSK3) initiates activation of the heterodimer complex *in vitro*. Phosphoryla-tion of IPP-2 by casein kinase-II at Ser 86, Ser 120, and Ser 121 enhances the rate of phosphorylation by GSK3 at Thr 72 and effectively activates the heterodimer complex. Besides moderating PP1 activity, IPP-2 may play a role as a chaperone for the correct folding of PP1. The gene for human IPP-2 maps to chromosome 3q29 in the major histocompatiblity complex region.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PPP1R2 (human) mapping to 3q29; Ppp1r2 (mouse) mapping to 16 B2.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

SOURCE

IPP-2 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IPP-2 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-14263 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IPP-2 (N-17) is recommended for detection of IPP-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

IPP-2 (N-17) is also recommended for detection of IPP-2 in additional species, including canine.

Suitable for use as control antibody for IPP-2 siRNA (h): sc-105581, IPP-2 siRNA (m): sc-146263, IPP-2 shRNA Plasmid (h): sc-105581-SH, IPP-2 shRNA Plasmid (m): sc-146263-SH, IPP-2 shRNA (h) Lentiviral Particles: sc-105581-V and IPP-2 shRNA (m) Lentiviral Particles: sc-146263-V.

Molecular Weight of IPP-2: 31 kDa.

Positive Controls: Mouse liver extract: sc-2256.

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) 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.

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.