

IPP-2 (I-20)-R: sc-14265-R

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*. Phosphorylation 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 6 in the major histocompatibility complex region.

REFERENCES

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- Orgad, S., et al. 1987. The protein phosphatases of *Drosophila melanogaster* and their inhibitors. *Eur. J. Biochem.* 164: 31-38.
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- Alessi, M.R., et al. 1993. Inhibitor protein phosphatase-1 into a conformation with the specificity and regulatory properties of the native enzyme. *Eur. J. Biochem.* 213: 1055-1066.
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CHROMOSOMAL LOCATION

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

SOURCE

IPP-2 (I-20)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of IPP-2 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with 0.1% sodium azide and 0.2% gelatin.

Blocking peptide available for competition studies, sc-14265 P, (100 µg peptide in 0.5 ml PBS containing 0.1% sodium azide and 0.2% BSA)

APPLICATIONS

IPP-2 (I-20)-R 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), 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).

IPP-2 (I-20)-R 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.

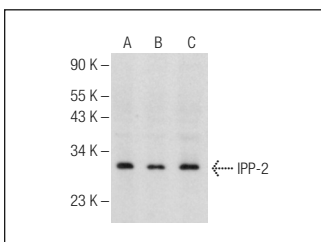
Molecular Weight of IPP-2: 31 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MES-SA/Dx5 cell lysate: sc-2284 or Raji 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.

DATA



IPP-2 (I-20): sc-14265. Western blot analysis of IPP-2 expression in Jurkat (A), MES-SA/Dx5 (B) and Raji (C) whole cell lysates.

RESEARCH USE

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