

p-IPP-2 (Thr 72)-R: sc-28016-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 IPP1. The IPP1 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 3 in the major histocompatibility complex region.

REFERENCES

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CHROMOSOMAL LOCATION

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

SOURCE

p-IPP-2 (Thr 72)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Thr 72 phosphorylated IPP-2 of human origin.

RESEARCH USE

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

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-28016-R P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-IPP-2 (Thr 72)-R is recommended for detection of Thr 72 phosphorylated IPP-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

p-IPP-2 (Thr 72)-R is also recommended for detection of correspondingly phosphorylated IPP-2 in additional species, including equine, bovine, porcine and avian.

Molecular Weight of p-IPP-2: 31 kDa.

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 B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.