

PTP ζ (H-300): sc-25432

BACKGROUND

Protein tyrosine phosphatases, or PTPs, are type I transmembrane proteins, membrane associated proteins or proteins localized in nuclei. Examples of transmembrane PTPs are LAR, PTP α , PTP β , PTP γ , PTP δ , PTP ϵ , PTP μ , PTP κ and PTP ζ . Transmembrane PTPs play diverse roles during development and in adult tissues. Immunodepletion studies have suggested LAR to be a regulator of Insulin receptor phosphorylation. PTP α activity is increased twofold in response to phorbol ester stimulation, resulting in serine phosphorylation either directly or indirectly by members of the PKC family. Overexpression of v-H-Ras and Neu, but not Myc or Int2, in mammary tumors has been shown to induce PTP ϵ expression. An alternative splicing event leads to a nervous tissue-specific chondroitin sulfate proteoglycan called phosphacan, which represents the amino terminal portion of PTP μ . PTP κ and PTP ζ share a conserved amino terminal 160 amino acid MAM domain which facilitates homophilic binding. PTP ζ localizes to points of cell contact and may be involved in regulating the assembly and disassembly of cadherin/catenin complexes *in vivo*.

CHROMOSOMAL LOCATION

Genetic locus: PTPRZ1 (human) mapping to 7q31.32; Ptpz1 (mouse) mapping to 6 A3.1.

SOURCE

PTP ζ (H-300) is a rabbit polyclonal antibody raised against amino acids 141-440 mapping near the N-terminus of PTP ζ of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PTP ζ (H-300) is recommended for detection of PTP ζ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

PTP ζ (H-300) is also recommended for detection of PTP ζ in additional species, including canine.

Suitable for use as control antibody for PTP ζ siRNA (h): sc-44048, PTP ζ siRNA (m): sc-44970, PTP ζ shRNA Plasmid (h): sc-44048-SH, PTP ζ shRNA Plasmid (m): sc-44970-SH, PTP ζ shRNA (h) Lentiviral Particles: sc-44048-V and PTP ζ shRNA (m) Lentiviral Particles: sc-44970-V.

Molecular Weight of PTP ζ short form: 190 kDa.

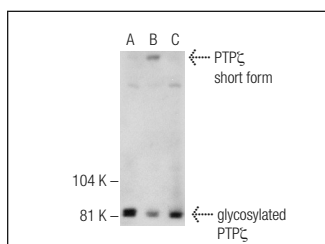
Molecular Weight of glycosylated PTP ζ form: 350-400/90 kDa.

Positive Controls: Daudi cell lysate: sc-2415, MOLT-4 cell lysate: sc-2233 or U-698-M whole cell lysate: sc-2410.

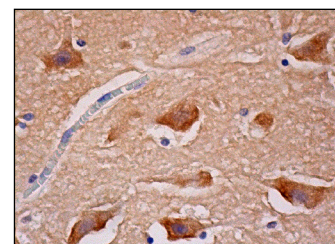
RECOMMENDED SECONDARY REAGENTS

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



PTP ζ (H-300): sc-25432. Western blot analysis of PTP ζ expression in Daudi (A), MOLT-4 (B) and U-698-M (C) whole cell lysates.



PTP ζ (H-300): sc-25432. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells.

SELECT PRODUCT CITATIONS

1. Kobayashi, T., et al. 2013. Role of GalNAc4S-6ST in astrocytic tumor progression. PLoS ONE 8: e54278.

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.

PROTOCOLS

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



Try **PTP ζ (122.2): sc-33664**, our highly recommended monoclonal alternative to PTP ζ (H-300).