

PTP δ (C-18): sc-10867

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 ζ , PTP κ and PTP μ . 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 ζ . PTP κ and PTP μ share a conserved amino terminal 160 amino acid MAM domain which facilitates homophilic binding. PTP μ 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: PTPRD (human) mapping to 9p24.1; Ptprd (mouse) mapping to 4 C3.

SOURCE

PTP δ (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PTP δ 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.

Blocking peptide available for competition studies, sc-10867 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PTP δ (C-18) is recommended for detection of PTP δ of mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with rat.

PTP δ (C-18) is also recommended for detection of PTP δ in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PTP δ siRNA (h): sc-44052, PTP δ siRNA (m): sc-155951, PTP δ shRNA Plasmid (h): sc-44052-SH, PTP δ shRNA Plasmid (m): sc-155951-SH, PTP δ shRNA (h) Lentiviral Particles: sc-44052-V and PTP δ shRNA (m) Lentiviral Particles: sc-155951-V.

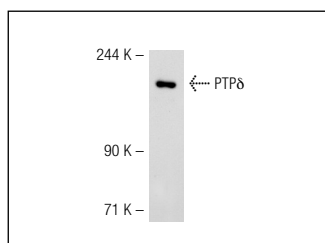
Molecular Weight of PTP δ : 215 kDa.

Positive Controls: mouse embryo extract: sc-364239.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



PTP δ (C-18): sc-10867. Western blot analysis of PTP δ expression in mouse embryo tissue extract.

SELECT PRODUCT CITATIONS

- Solomon, D.A., et al. 2008. Mutational inactivation of PTPRD in glioblastoma multiforme and malignant melanoma. *Cancer Res.* 68: 10300-10306.
- González-Fernández, L., et al. 2009. Identification of protein tyrosine phosphatases and dual-specificity phosphatases in mammalian spermatozoa and their role in sperm motility and protein tyrosine phosphorylation. *Biol. Reprod.* 80: 1239-1252.
- Veeriah, S., et al. 2009. The tyrosine phosphatase PTPRD is a tumor suppressor that is frequently inactivated and mutated in glioblastoma and other human cancers. *Proc. Natl. Acad. Sci. USA* 106: 9435-9440.
- Clark, O., et al. 2012. Functional analysis of the putative tumor suppressor PTPRD in neuroblastoma cells. *Cancer Invest.* 30: 422-432.

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.