

PTP ρ (H-66): sc-135096

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 , PTP μ and PTP ρ . Transmembrane PTPs play diverse roles in a variety of cellular processes during development and in adult tissues. PTP ρ , also known as PTPRT, RPTPT or RPTP ρ , is a receptor-type PTP (RPTP) containing a transmembrane region, two intracellular tandem catalytic domains, an extracellular region with Ig-like and fibronectin type III-like repeats and a MAM (meprin-A5 antigen-PTP μ) domain. RPTPs participate in neurite extension, signal transduction and cell adhesion. PTP ρ is expressed at high levels in the central nervous system of both developing and adult tissues. It interacts with a variety of proteins that function at intercellular adheren junctions and it specifically binds and dephosphorylates E-cadherin.

REFERENCES

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- Besco, J., et al. 2004. Genomic structure and alternative splicing of murine R2B receptor protein tyrosine phosphatases (PTP κ , μ , ρ and PCP-2). *BMC Genomics* 5: 14.
- Yan, H.X., et al. 2006. Protein tyrosine phosphatase PCP-2 inhibits β -catenin signaling and increases E-cadherin-dependent cell adhesion. *J. Biol. Chem.* 281: 15423-15433.
- Besco, J.A., et al. 2006. Intracellular substrates of brain-enriched receptor protein tyrosine phosphatase ρ (RPTP ρ /PTPRT). *Brain Res.* 1116: 50-57.

CHROMOSOMAL LOCATION

Genetic locus: PTPRT (human) mapping to 20q12; Ptprt (mouse) mapping to 2 H2.

SOURCE

PTP ρ (H-66) is a rabbit polyclonal antibody raised against amino acids 25-90 mapping near the N-terminus of PTP ρ 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 ρ (H-66) is recommended for detection of PTP ρ 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PTP ρ (H-66) is also recommended for detection of PTP ρ in additional species, including canine.

Suitable for use as control antibody for PTP ρ siRNA (h): sc-62908, PTP ρ siRNA (m): sc-62909, PTP ρ shRNA Plasmid (h): sc-62908-SH, PTP ρ shRNA Plasmid (m): sc-62909-SH, PTP ρ shRNA (h) Lentiviral Particles: sc-62908-V and PTP ρ shRNA (m) Lentiviral Particles: sc-62909-V.

Molecular Weight of PTP ρ : 164 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 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.

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.


 MONOS
Satisfaction
Guaranteed

Try **PTP ρ (AFT20): sc-135673**, our highly recommended monoclonal alternative to PTP ρ (H-66).