

# PTP $\rho$ (AFT20): sc-135673

## 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 $\alpha$ , PTP $\beta$ , PTP $\gamma$ , PTP $\delta$ , PTP $\epsilon$ , PTP $\zeta$ , PTP $\kappa$ , PTP $\mu$  and PTP $\rho$ . Transmembrane PTPs play diverse roles in a variety of cellular processes during development and in adult tissues. PTP $\rho$ , also known as PTPRT, RPTPT or RPTP $\rho$ , 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 $\mu$ ) domain. RPTPs participate in neurite extension, signal transduction and cell adhesion. PTP $\rho$  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 adhesion junctions and it specifically binds and dephosphorylates E-cadherin.

## REFERENCES

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- Besco, J.A., Frosthalm, A., Popesco, M.C., Burghes, A.H. and Rotter, A. 2001. Genomic organization and alternative splicing of the human and mouse RPTP $\rho$  genes. *BMC Genomics* 2: 1.
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## CHROMOSOMAL LOCATION

Genetic locus: PTPRT (human) mapping to 20q12.

## SOURCE

PTP $\rho$  (AFT20) is a mouse monoclonal antibody raised against recombinant PTP $\rho$  protein of human origin.

## PRODUCT

Each vial contains IgG<sub>2a</sub> in 100  $\mu$ l of PBS with < 0.1% sodium azide and 0.1% gelatin.

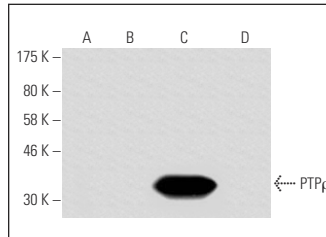
## APPLICATIONS

PTP $\rho$  (AFT20) is recommended for detection of PTP $\rho$  of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2  $\mu$ l per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:5000).

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

Molecular Weight of PTP $\rho$ : 164 kDa.

## DATA



PTP $\rho$  (AFT20): sc-135673. Western blot analysis of PTP $\rho$  expression in non-transfected (A), Tau transfected (B), PTP $\rho$  transfected (C) and GFP-Ub+1 transfected (D) Bosc23 whole cell lysates.

## STORAGE

Store at 4 $^{\circ}$  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](http://www.scbt.com) for detailed protocols and support products.