

# PTP $\kappa$ (H-75): sc-28906

## 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 $\kappa$  and PTP $\mu$ . 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 $\alpha$  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 $\epsilon$  expression. An alternative splicing event leads to a nervous tissue-specific chondroitin sulfate proteoglycan called phosphacan, which represents the amino terminal portion of PTP $\zeta$ . PTP $\kappa$  and PTP $\mu$  share a conserved amino terminal 160 amino acid MAM domain which facilitates homophilic binding. PTP $\mu$  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: PTPRK (human) mapping to 6q22.33; Ptpk (mouse) mapping to 10 A4.

## SOURCE

PTP $\kappa$  (H-75) is a rabbit polyclonal antibody raised against amino acids 27-101 mapping within an N-terminal extracellular domain of PTP $\kappa$  of human origin.

## PRODUCT

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

## APPLICATIONS

PTP $\kappa$  (H-75) is recommended for detection of PTP $\kappa$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 $\kappa$  (H-75) is also recommended for detection of PTP $\kappa$  in additional species, including bovine and porcine.

Suitable for use as control antibody for PTP $\kappa$  siRNA (h): sc-44050, PTP $\kappa$  siRNA (m): sc-155948, PTP $\kappa$  shRNA Plasmid (h): sc-44050-SH, PTP $\kappa$  shRNA Plasmid (m): sc-155948-SH, PTP $\kappa$  shRNA (h) Lentiviral Particles: sc-44050-V and PTP $\kappa$  shRNA (m) Lentiviral Particles: sc-155948-V.

Molecular Weight of PTP $\kappa$  precursor: 210 kDa.

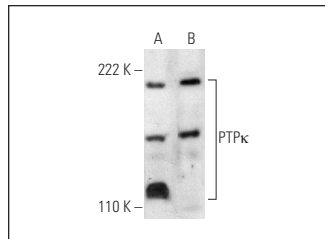
Molecular Weight of PTP $\kappa$  subunits: 110/100 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232 or mouse eye extract: sc-364241.

## 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.

## DATA



PTP $\kappa$  (H-75): sc-28906. Western blot analysis of PTP $\kappa$  expression in MDA-MB-231 whole cell lysate (A) and mouse eye tissue extract (B).

## SELECT PRODUCT CITATIONS

- Sun, P.H., et al. 2013. Protein tyrosine phosphatase  $\kappa$  (PTPR $\kappa$ ) is a negative regulator of adhesion and invasion of breast cancer cells, and associates with poor prognosis of breast cancer. *J. Cancer Res. Clin. Oncol.* 139: 1129-1139.
- Sun, P.H., et al. 2013. Receptor-like protein tyrosine phosphatase  $\kappa$  negatively regulates the apoptosis of prostate cancer cells via the JNK pathway. *Int. J. Oncol.* 43: 1560-1568.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try PTP $\kappa$  (H-3): sc-374315, our highly recommended monoclonal alternative to PTP $\kappa$  (H-75).