

# LAR (H-70): sc-25434

## 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. PTP $\mu$  localizes to points of cell contact and may be involved in regulating the assembly and disassembly of cadherin/catenin complexes *in vivo*. PTP $\mu$  and PTP $\kappa$  share a conserved amino-terminal 160 amino acid MAM domain which facilitates homophilic binding. An alternative splicing event leads to a nervous tissue-specific chondroitin sulfate proteoglycan called phosphacan, which represents the amino-terminal portion of PTP $\zeta$ .

## CHROMOSOMAL LOCATION

Genetic locus: PTPRF (human) mapping to 1p34.2; Ptprf (mouse) mapping to 4 D2.1.

## SOURCE

LAR (H-70) is a rabbit polyclonal antibody raised against amino acids 1081-1150 mapping within an internal region of LAR 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.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

LAR (H-70) is recommended for detection of LAR 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).

Suitable for use as control antibody for LAR siRNA (h): sc-35793, LAR siRNA (m): sc-35794, LAR shRNA Plasmid (h): sc-35793-SH, LAR shRNA Plasmid (m): sc-35794-SH, LAR shRNA (h) Lentiviral Particles: sc-35793-V and LAR shRNA (m) Lentiviral Particles: sc-35794-V.

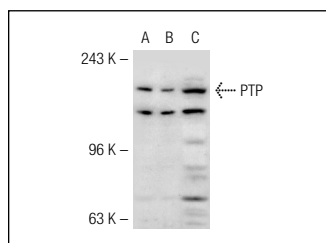
Molecular Weight of LAR: 240/150/85 kDa.

Positive Controls: LAR (h): 293T Lysate: sc-115786, NIH/3T3 whole cell lysate: sc-2210 or NRK whole cell lysate: sc-364197.

## 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



LAR (H-70): sc-25434. Western blot analysis of PTP expression in non-transfected 293T: sc-117752 (A), human PTP transfected 293T: sc-115786 (B) and NIH/3T3 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Monteleone, G., et al. 2006. Silencing of SH-PTP2 defines a crucial role in the inactivation of epidermal growth factor receptor by 5-aminosalicylic acid in colon cancer cells. *Cell Death Differ.* 13: 202-211
- Boivin, B., et al. 2008. A modified cysteinyl-labeling assay reveals reversible oxidation of protein tyrosine phosphatases in angiomyolipoma cells. *Proc. Natl. Acad. Sci. USA* 105: 9959-9964.
- Ketschek, A.R., et al. 2012. The roles of neuronal and glial precursors in overcoming chondroitin sulfate proteoglycan inhibition. *Exp. Neurol.* 235: 627-637.
- Caricilli, A.M., et al. 2012. Topiramate treatment improves hypothalamic Insulin and leptin signaling and action and reduces obesity in mice. *Endocrinology* 153: 4401-4411.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **LAR (7): sc-135969**, our highly recommended monoclonal alternative to LAR (H-70).