

LAR (T-15): sc-30799

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. PTP μ localizes to points of cell contact and may be involved in regulating the assembly and disassembly of cadherin/catenin complexes *in vivo*. PTP μ and PTP κ 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 ζ .

REFERENCES

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- Zondag, G.C., et al. 1995. Homophilic interactions mediated by receptor tyrosine phosphatases μ and κ . A critical role for the novel extracellular MAM domain. *J. Biol. Chem.* 270: 14247-14250.
- Milev, P., et al. 1995. Complex-type asparagine-linked oligosaccharides on phosphacan and protein-tyrosine phosphatase- ζ/β mediate their binding to neural cell adhesion molecules and tenascin. *J. Biol. Chem.* 270: 24650-24653.
- Elson, A., et al. 1995. Protein-tyrosine phosphatase epsilon. An isoform specifically expressed in mouse mammary tumors initiated by v-Ha-Ras or neu. *J. Biol. Chem.* 270: 26116-26122.
- Brady-Kalnay, S.M., et al. 1995. Receptor protein tyrosine phosphatase PTP μ associates with cadherins and catenins *in vivo*. *J. Cell Biol.* 130: 977-986.

CHROMOSOMAL LOCATION

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

SOURCE

LAR (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal cytoplasmic domain of LAR 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-30797 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LAR (T-15) is recommended for detection of precursor and mature LAR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

LAR (T-15) is also recommended for detection of precursor and mature LAR in additional species, including equine, canine, bovine and porcine.

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: 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 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) 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.

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.



Try **LAR (7): sc-135969**, our highly recommended monoclonal alternative to LAR (T-15).