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, PTPα, PTPβ, PTPγ, PTPδ, PTPζ, PTPκ, and PTPµ. Transmembrane PTPs play diverse roles during development and in adult tissues. Immunodepletion studies have suggested LAR to be a regulator of Insulin receptor phosphorylation. PTPα 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 PTPε expression. An alternative splicing event leads to a nervous tissue-specific chondroitin sulfate proteoglycan called phosphacan, which represents the amino-terminal portion of PTPζ. PTPκ and PTPµ share a conserved amino-terminal 160 amino acid MAM domain which facilitates homophilic binding. PTPµ localizes to points of cell contact and may be involved in regulating the assembly and disassembly of cadherin/catenin complexes in vivo.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: PTPRM (human) mapping to 18p11.23; Ptprm (mouse) mapping to 17 E1.1.

SOURCE

PTPµ (3D7) is a mouse monoclonal antibody raised against the extracellular domain of PTPµ of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG₂a in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.
PTPµ (3D7) is available conjugated to either phycoerythrin (sc-56958 PE) or fluorescein (sc-56958 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

APPLICATIONS

PTPµ (3D7) is recommended for detection of PTPµ of mouse, rat, human and porcine origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).
PTPµ (3D7) is also recommended for detection of PTPµ in additional species, including porcine.

Suitable for use as control antibody for PTPµ siRNA (h): sc-44055, PTPµ siRNA (m): sc-45947, PTPµ shRNA Plasmid (h): sc-44055-SH, PTPµ shRNA Plasmid (m): sc-45947-SH, PTPµ shRNA (h) Lentiviral Particles: sc-44055-V and PTPµ shRNA (m) Lentiviral Particles: sc-45947-V.

Molecular Weight of PTPµ precursor: 200 kDa.
Molecular Weight of PTPµ subunits: 100 kDa.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.