SANTA CRUZ BIOTECHNOLOGY, INC.

PTPγ (C-18): sc-1111

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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, PTPε, 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*.

CHROMOSOMAL LOCATION

Genetic locus: PTPRG (human) mapping to 3p14.2; Ptprg (mouse) mapping to 14 A1.

SOURCE

PTPγ (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PTPγ of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1111 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PTPγ (C-18) is recommended for detection of PTPγ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PTPγ (C-18) is also recommended for detection of PTPγ in additional species, including equine, canine and porcine.

Suitable for use as control antibody for PTPγ siRNA (h): sc-44049, PTPγ siRNA (m): sc-155950, PTPγ shRNA Plasmid (h): sc-44049-SH, PTPγ shRNA Plasmid (m): sc-155950-SH, PTPγ shRNA (h) Lentiviral Particles: sc-44049-V and PTPγ shRNA (m) Lentiviral Particles: sc-155950-V.

Positive Controls: IMR-32 cell lysate: sc-2409.

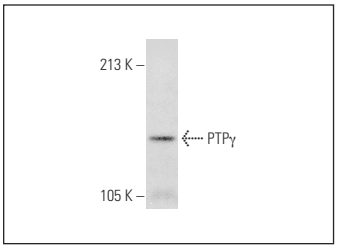
RESEARCH USE

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

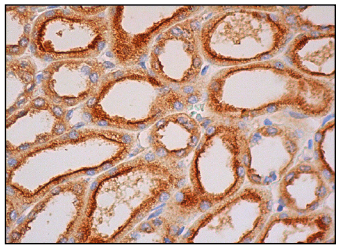
STORAGE

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

DATA



PTPγ (C-18): sc-1111. Western blot analysis of PTPγ expression in IMR-32 whole cell lysate.



PTPγ (C-18): sc-1111. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Robert, M. 1975. Oxygen affinity of haemoglobin (author's transl). Bull. Physiopathol. Respir. 11: 79-170.
2. Kittlick, P.D., et al. 1976. Acid mucopolysaccharides in fibroblast cultures. 1. Influence of cell density, pH-value and lactate concentration on the MPS distribution pattern. Exp. Pathol. 12: 149-158.
3. van Niekerk, C.C. and Poels, L.G. 1999. Reduced expression of protein tyrosine phosphatase γ in lung and ovarian tumors. Cancer Lett. 137: 61-73.
4. Trapasso, F., et al. 2000. Rat protein tyrosine phosphatase η suppresses the neoplastic phenotype of retrovirally transformed thyroid cells through the stabilization of $p27^{Kip1}$. Mol. Cell. Biol. 20: 9236-9246.
5. Liu, S., et al. 2002. Involvement of breast epithelial-stromal interactions in the regulation of protein tyrosine phosphatase γ (PTPγ) mRNA expression by estrogenically active agents. Breast Cancer Res. Treat. 71: 21-35.
6. Lissandrini, D., et al. 2006. Receptor-type protein tyrosine phosphatase γ (PTPγ), a new identifier for myeloid dendritic cells and specialized macrophages. Blood 108: 4223-4231.
7. Wu, C.W., et al. 2006. Protein tyrosine-phosphatase expression profiling in gastric cancer tissues. Cancer Lett. 242: 95-103.
8. Zhang, S., et al. 2007. Centrosomal localization of DNA damage checkpoint proteins. J. Cell. Biochem. 101: 451-465.
9. Pessac, B., et al. 2011. Hematopoietic progenitors express embryonic stem cell and germ layer genes. C. R. Biol. 334: 300-306.

PROTOCOLS

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