

p-SH-PTP1 (5.Tyr 536): sc-135781

BACKGROUND

The steady state of protein tyrosyl phosphorylation in cells is regulated by the opposing action of tyrosine kinases and protein tyrosine phosphatases (PTPs). Several groups have independently identified a non-transmembrane PTP, designated SH-PTP1 (also known as PTP1C, HCP and SHP), which is primarily expressed in hematopoietic cells and characterized by the presence of two SH2 domains N-terminal to the PTP domain. SH2 domains generally mediate the association of regulatory molecules with specific phosphotyrosine-containing sites on autophosphorylated receptors, thereby controlling the initial interaction of receptors with these substrates. A second and much more widely expressed PTP with SH2 domains, SH-PTP2 (also designated PTP1D and Syp), has been identified. Strong sequence similarity between SH-PTP2 and the *Drosophila* gene corkscrew (CSW) and their similar patterns of expression suggest that SH-PTP2 is the human corkscrew homolog.

REFERENCES

- Chernoff, J., et al. 1990. Cloning of a cDNA for a major human protein tyrosine phosphatase. *Proc. Natl. Acad. Sci. USA* 87: 2735-2739.
- Shen, S.H., et al. 1991. A protein tyrosine phosphatase with sequence similarity to the SH2 domain of the protein tyrosine kinases. *Nature* 352: 736-739.
- Plutzky, J., et al. 1992. Isolation of a Src homology 2-containing tyrosine phosphatase. *Proc. Natl. Acad. Sci. USA* 89: 1123-1127.
- Yi, T., et al. 1992. Protein tyrosine phosphatase containing SH2 domains: characterization, preferential expression in hemato-poietic cells, and localization to human chromosome 12p12-p13. *Mol. Cell. Biol.* 12: 836-846.
- Matthews, R.J., et al. 1992. Characterization of hematopoietic intracellular protein tyrosine phosphatases: description of a phosphatase containing an SH2 domain and another enriched in proline-, glutamic acid-, serine-, and threonine-rich sequences. *Mol. Cell. Biol.* 12: 2396-2405.
- Freeman, R.M., Jr., et al. 1992. Identification of a human Src homology 2-containing protein tyrosine phosphatase: a putative homolog of *Drosophila* corkscrew. *Proc. Natl. Acad. Sci. USA* 89: 11239-11243.
- Feng, G., et al. 1993. SH2-containing phosphotyrosine phosphatase as a target of protein tyrosine kinases. *Science* 259: 1607-1611.
- Vogel, W., et al. 1993. Activation of a phosphotyrosine phosphatase by tyrosine phosphorylation. *Science* 259: 1611-1614.

CHROMOSOMAL LOCATION

Genetic locus: PTPN6 (human) mapping to 12p13.31; Ptpn6 (mouse) mapping to 6 F2.

SOURCE

p-SH-PTP1 (5.Tyr 536) is a mouse monoclonal antibody raised against a short amino acid sequence containing Tyr 536 phosphorylated SH-PTP1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-SH-PTP1 (5.Tyr 536) is recommended for detection of Tyr 536 phosphorylated SH-PTP1 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), 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).

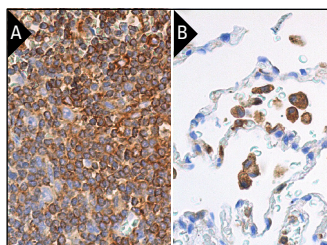
Suitable for use as control antibody for SH-PTP1 siRNA (h): sc-29478, SH-PTP1 siRNA (m): sc-29479, SH-PTP1 siRNA (r): sc-270044, SH-PTP1 shRNA Plasmid (h): sc-29478-SH, SH-PTP1 shRNA Plasmid (m): sc-29479-SH, SH-PTP1 shRNA Plasmid (r): sc-270044-SH, SH-PTP1 shRNA (h) Lentiviral Particles: sc-29478-V, SH-PTP1 shRNA (m) Lentiviral Particles: sc-29479-V and SH-PTP1 shRNA (r) Lentiviral Particles: sc-270044-V.

Molecular Weight of p-SH-PTP1: 68 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



p-SH-PTP1 (5.Tyr 536): sc-135781. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of lymphoid cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages (B).

STORAGE

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