SANTA CRUZ BIOTECHNOLOGY, INC.

SH-PTP1 (PTY6): sc-52885



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

- 1. Chernoff, J., et al. 1990. Cloning of a cDNA for a major human proteintyrosine-phosphatase. Proc. Natl. Acad. Sci. USA 87: 2735-2739.
- 2. 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.
- Freeman, R.M., Jr., et al. 1992. Identification of a human Src homology 2containing protein-tyrosine-phosphatase: a putative homolog of *Drosophila* corkscrew. Proc. Natl. Acad. Sci. USA 89: 11239-11243.
- Yi, T., et al. 1992. Protein tyrosine phosphatase containing SH2 domains: characterization, preferential expression in hematopoietic cells, and localization to human chromosome 12p12-p13. Mol. Cell. Biol. 12: 836-846.

CHROMOSOMAL LOCATION

Genetic locus: PTPN6 (human) mapping to 12p13.31.

SOURCE

SH-PTP1 (PTY6) is a mouse monoclonal antibody raised against recombinant full length SH-PTP1 of human origin.

PRODUCT

Each vial contains 100 μg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **D0 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.

APPLICATIONS

SH-PTP1 (PTY6) is recommended for detection of SH-PTP1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 SH-PTP1 siRNA (h): sc-29478, SH-PTP1 shRNA Plasmid (h): sc-29478-SH and SH-PTP1 shRNA (h) Lentiviral Particles: sc-29478-V.

Molecular Weight of SH-PTP1: 68 kDa.

Positive Controls: SH-PTP1 (h): 293T Lysate: sc-176633, HL-60 whole cell lysate: sc-2209 or Jurkat whole cell lysate: sc-2204.

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, UltraCruz[®] Blocking Reagent: sc-516214 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 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



SH-PTP1 (PTY6): sc-52885. Western blot analysis of SH-PTP1 expression in non-transfected 2937: sc-117752 (A), human SH-PTP1 transfected 2937: sc-176633 (B) and HL-60 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

 Wang, J., et al. 2017. Notable roles of EZH2 and DNMT1 in epigenetic dormancy of the SHP1 gene during the progression of chronic myeloid leukaemia. Oncol. Lett. 13: 4979-4985.



See **SH-PTP1 (D-11): sc-7289** for SH-PTP1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.