

SH-PTP1 (D-7): sc-271329

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 protein tyrosine 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.

CHROMOSOMAL LOCATION

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

SOURCE

SH-PTP1 (D-7) is a mouse monoclonal antibody raised against amino acids 356-420 mapping within an internal region of SH-PTP1 of human origin.

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

SH-PTP1 (D-7) is recommended for detection of SH-PTP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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

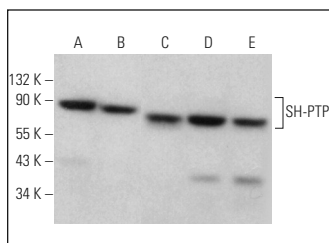
Molecular Weight of SH-PTP1: 68 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, Raji whole cell lysate: sc-364236 or J774.A1 cell lysate: sc-3802.

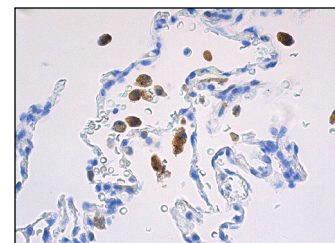
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SH-PTP1 (D-7): sc-271329. Western blot analysis of SH-PTP1 expression in HL-60 (A), Raji (B), J774.A1 (C), U-698-M (D) and ALL-SIL (E) whole cell lysates.



SH-PTP1 (D-7): sc-271329. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages.

SELECT PRODUCT CITATIONS

1. Yang, G.L., et al. 2017. TNFSF15 inhibits VEGF-stimulated vascular hyperpermeability by inducing VEGFR2 dephosphorylation. *FASEB J.* 31: 2001-2012.

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.

PROTOCOLS

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

CONJUGATES

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.