SANTA CRUZ BIOTECHNOLOGY, INC.

SH-PTP2 (C-18): sc-280

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: PTPN11 (human) mapping to 12q24.13; Ptpn11 (mouse) mapping to 5 F.

SOURCE

SH-PTP2 (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of SH-PTP2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SH-PTP2 (C-18) is available conjugated to agarose (sc-280 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-280 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SH-PTP2 (C-18) is recommended for detection of SH-PTP2 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).

SH-PTP2 (C-18) is also recommended for detection of SH-PTP2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SH-PTP2 siRNA (h): sc-36488, SH-PTP2 siRNA (m): sc-36489, SH-PTP2 shRNA Plasmid (h): sc-36488-SH, SH-PTP2 shRNA Plasmid (m): sc-36489-SH, SH-PTP2 shRNA (h) Lentiviral Particles: sc-36488-V and SH-PTP2 shRNA (m) Lentiviral Particles: sc-36489-V.

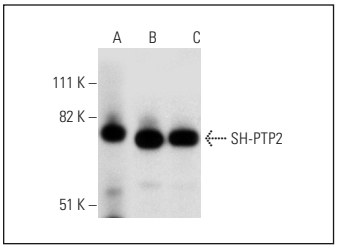
Molecular Weight of SH-PTP2: 70 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, THP-1 cell lysate: sc-2238 or U-87 MG cell lysate: sc-2411.

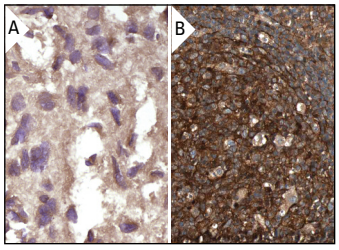
STORAGE

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

DATA



SH-PTP2 (C-18): sc-280. Western blot analysis of SH-PTP2 expression in Jurkat (**A**), THP-1 (**B**) and U-87 MG (**C**) whole cell lysates.



SH-PTP2 (C-18): sc-280. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human brain tumor showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embed-ded human lymph node tissue showing cytoplasmic staining of follicle and non-follicle cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Miao, H., et al. 2000. Activation of EphA2 kinase suppresses integrin function and causes focal-adhesion-kinase dephophorylation. Nat. Cell Biol. 2: 62-69.
2. Itoh, M., et al. 2000. Role of Gab1 in heart, placenta, and skin development and growth factor- and cytokine-induced extracellular signal-regulated kinase mitogen-activated protein kinase activation. Mol. Cell. Biol. 20: 3695-3704.
3. Furcht, C.M., et al. 2012. Diminished functional role and altered localization of SHP2 in non-small cell lung cancer cells with EGFR-activating mutations. Oncogene 32: 1714-1723.
4. Yu, J., et al. 2013. Modulation of fatty acid synthase degradation by concerted action of p38 MAP kinase, E3 ligase COP1, and SH2-tyrosine phosphatase Shp2. J. Biol. Chem. 288: 3823-3830.
5. Yang, L., et al. 2015. C6 ceramide dramatically enhances docetaxel-induced growth inhibition and apoptosis in cultured breast cancer cells: a mechanism study. Exp. Cell Res. 332: 47-59.
6. Machado-Neto, J.A., et al. 2015. ANKHD1 silencing inhibits Stathmin 1 activity, cell proliferation and migration of leukemia cells. Biochim. Biophys. Acta 1853: 583-593.

RESEARCH USE

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