

# SH-PTP2 (N-16): sc-424

## 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 (N-16) is a rabbit polyclonal antibody raised against amino acids 6-213 mapping within the amino terminal domain of SH-PTP2 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.

Available as agarose (sc-424 AC) conjugate for immunoprecipitation, 500 µg/0.25 ml agarose in 1 ml.

Available as HRP (sc-424 HRP) conjugate for Western blotting, 200 µg/1 ml.

## APPLICATIONS

SH-PTP2 (N-16) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SH-PTP2 (N-16) 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: A-431 whole cell lysate: sc-2201, Jurkat whole cell lysate: sc-2204 or U-87 MG cell lysate: sc-2411.

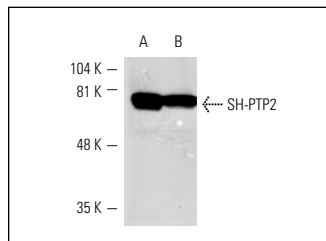
## RESEARCH USE

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



SH-PTP2 (N-16): sc-424. Western blot analysis of SH-PTP2 expression in Jurkat (A) and A-431 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Sengupta, T., et al. 1996. Inhibition of cytokines and JAK/Stat activation by distinct signaling pathways. *Proc. Natl. Acad. Sci. USA* 93: 9499-9504.
- Fukada, T., et al. 1996. Two signals are necessary for cell proliferation induced by a cytokine receptor gp130: involvement of STAT3 in anti-apoptosis. *Immunity* 5: 449-460.
- Lam, N.T., et al. 2006. Leptin resistance following over-expression of protein tyrosine phosphatase 1B in liver. *J. Mol. Endocrinol.* 36: 163-174.
- Leung, K.C., et al. 2007. Regulation of growth hormone signaling by selective estrogen receptor modulators occurs through suppression of protein tyrosine phosphatases. *Endocrinology* 148: 2417-2423.
- Coyne, C.B., et al. 2007. Poliovirus entry into human brain microvascular cells requires receptor-induced activation of SHP-2. *EMBO J.* 26: 4016-4028.
- Müller, J.P., et al. 2008. Role of SHP2 for FLT3-dependent proliferation and transformation in 32D cells. *Leukemia* 22: 1945-1948.
- Girasol, A., et al. 2009. Fyn mediates leptin actions in the thymus of rodents. *PLoS ONE* 4: e7707.
- Lee, S.W., et al. 2011. Angiotensin II protects heart against ischemia/reperfusion injury through VE-cadherin dephosphorylation and myocardial integrin-β<sub>1</sub>/ERK/caspase-9 phosphorylation cascade. *Mol. Med.* 17: 1095-1106.
- Rejmanek, D., et al. 2012. Molecular characterization reveals distinct genospecies of *Anaplasma phagocytophilum* from diverse North American hosts. *J. Med. Microbiol.* 61: 204-212.

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