

SH-PTP1 Polyclonal Antibody
Catalog # AP72475**Specification**

SH-PTP1 Polyclonal Antibody - Product Information

Application	WB
Primary Accession	P29350
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal

SH-PTP1 Polyclonal Antibody - Additional Information**Gene ID** 5777**Other Names**

PTPN6; HCP; PTP1C; Tyrosine-protein phosphatase non-receptor type 6; Hematopoietic cell protein-tyrosine phosphatase; Protein-tyrosine phosphatase 1C; PTP-1C; Protein-tyrosine phosphatase SHP-1; SH-PTP1

Dilution

WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications.

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions

-20°C

SH-PTP1 Polyclonal Antibody - Protein Information**Name** PTPN6**Synonyms** HCP, PTP1C**Function**

Tyrosine phosphatase enzyme that plays important roles in controlling immune signaling pathways and fundamental physiological processes such as hematopoiesis (PubMed:14739280, PubMed:29925997). Dephosphorylates and negatively regulate several receptor tyrosine kinases (RTKs) such as EGFR, PDGFR and FGFR, thereby modulating their signaling activities (PubMed:21258366, PubMed:9733788). When recruited to immunoreceptor tyrosine-based inhibitory motif (ITIM)-containing receptors such as immunoglobulin-like transcript 2/LILRB1, programmed cell death protein 1/PDCD1, CD3D, CD22, CLEC12A and other receptors involved in immune regulation, initiates their dephosphorylation and subsequently inhibits downstream signaling events (PubMed:<a

[11907092](http://www.uniprot.org/citations/11907092), PubMed: [14739280](http://www.uniprot.org/citations/14739280), PubMed: [37932456](http://www.uniprot.org/citations/37932456), PubMed: [38166031](http://www.uniprot.org/citations/38166031)). Modulates the signaling of several cytokine receptors including IL-4 receptor (PubMed: [9065461](http://www.uniprot.org/citations/9065461)). Additionally, targets multiple cytoplasmic signaling molecules including STING1, LCK or STAT1 among others involved in diverse cellular processes including modulation of T-cell activation or cGAS-STING signaling (PubMed: [34811497](http://www.uniprot.org/citations/34811497), PubMed: [38532423](http://www.uniprot.org/citations/38532423)). Within the nucleus, negatively regulates the activity of some transcription factors such as NFAT5 via direct dephosphorylation. Acts also as a key transcriptional regulator of hepatic gluconeogenesis by controlling recruitment of RNA polymerase II to the PCK1 promoter together with STAT5A (PubMed: [37595871](http://www.uniprot.org/citations/37595871)).

Cellular Location

Cytoplasm. Nucleus Note=In neurons, translocates into the nucleus after treatment with angiotensin II (By similarity). Shuttles between the cytoplasm and nucleus via its association with PDPK1.

Tissue Location

Isoform 1 is expressed in hematopoietic cells. Isoform 2 is expressed in non-hematopoietic cells

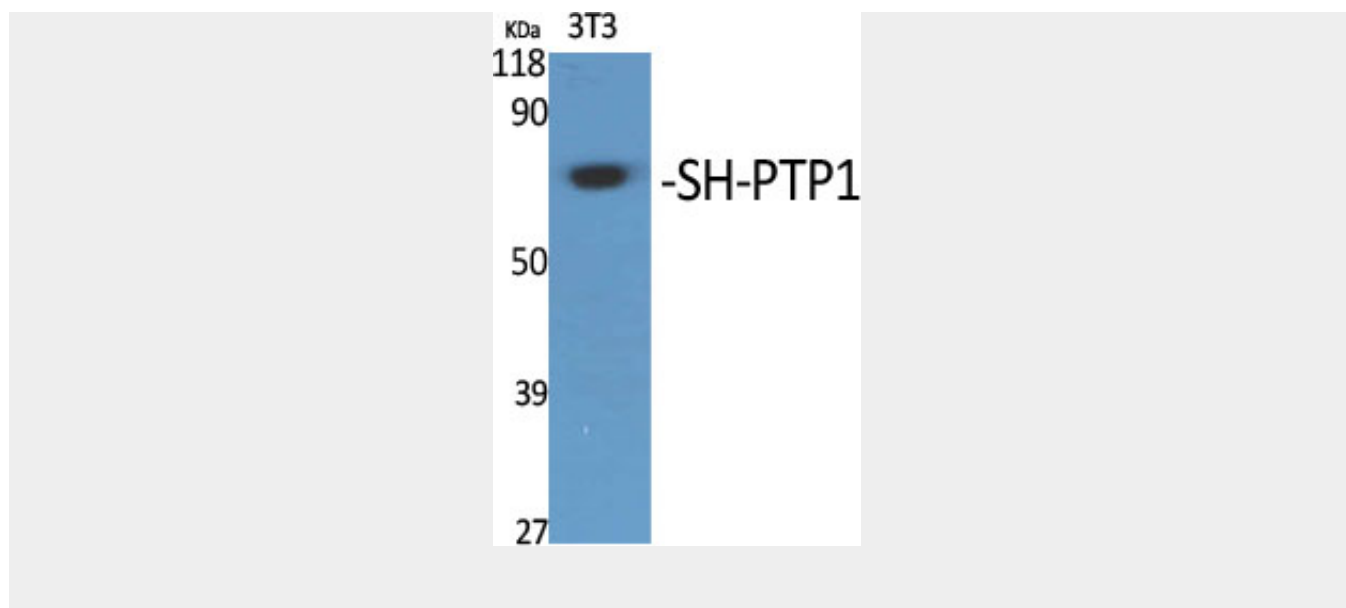
SH-PTP1 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SH-PTP1 Polyclonal Antibody - Images





SH-PTP1 Polyclonal Antibody - Background

Modulates signaling by tyrosine phosphorylated cell surface receptors such as KIT and the EGF receptor/EGFR. The SH2 regions may interact with other cellular components to modulate its own phosphatase activity against interacting substrates. Together with MTUS1, induces UBE2V2 expression upon angiotensin II stimulation. Plays a key role in hematopoiesis.