

# SH-PTP1 Polyclonal Antibody

Catalog # AP72474

## Product Information

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Application	WB, IHC-P, IF, ICC, E
Primary Accession	<a href="#">P29350</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	67561

## Additional Information

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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. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications. IHC-P~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications. IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

## Protein Information

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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: <a href="#">14739280</a> , PubMed: <a href="#">29925997</a> ). Dephosphorylates and negatively regulate several receptor tyrosine kinases (RTKs) such as EGFR, PDGFR and FGFR, thereby modulating their signaling activities (PubMed: <a href="#">21258366</a> , PubMed: <a href="#">9733788</a> ). 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 href="#">11907092</a> , PubMed: <a href="#">14739280</a> , PubMed: <a href="#">37932456</a> , PubMed: <a href="#">38166031</a> ). Modulates the signaling of several

cytokine receptors including IL-4 receptor (PubMed:[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](#), PubMed:[38532423](#)). Within the nucleus, negatively regulates the activity of some transcription factors such as NFAT5 via direct dephosphorylation. Also acts as a key transcriptional regulator of hepatic gluconeogenesis by controlling recruitment of RNA polymerase II to the PCK1 promoter together with STAT5A (PubMed:[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.

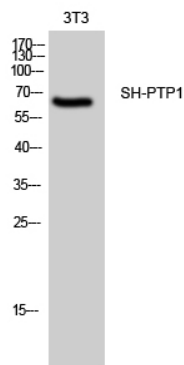
#### Tissue Location

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

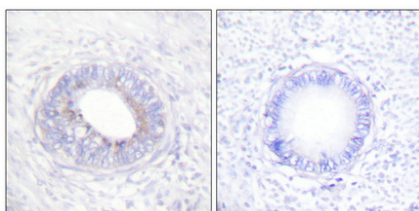
## Background

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.

## Images



Western Blot analysis of 3T3 cells using SH-PTP1 Polyclonal Antibody



Immunohistochemical analysis of paraffin-embedded Human colon cancer. Antibody was diluted at 1:100(4°,overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtained from antibody was pre-absorbed by immunogen peptide.

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