

SH-PTP1 Polyclonal Antibody

Catalog # AP72475

Product Information

Application	WB, IHC-P
Primary Accession	P29350
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	67561

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. IHC-P~~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

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: 11907092 , PubMed: 14739280 , PubMed: 37932456 , PubMed: 38166031). 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.

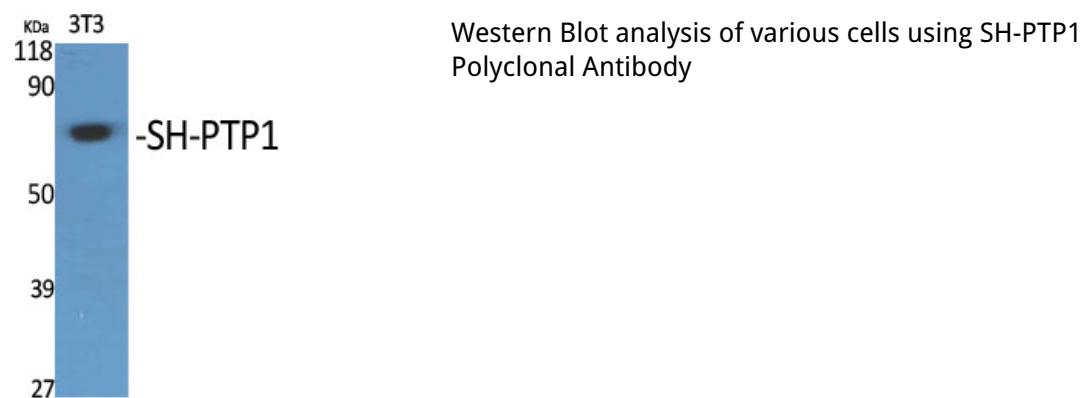
Tissue Location

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



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