

# SHP-1 Antibody

Purified Mouse Monoclonal Antibody (Mab)

Catalog # AP52867

## Product Information

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Application	WB
Primary Accession	<a href="#">P29350</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Calculated MW	67561

## Additional Information

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Gene ID	5777
Other Names	70 kda SHP1L protein ; 70Z-SHP ; EC 3.1.3.48 ; HCP ; HCPH ; Hematopoietic cell phosphatase ; Hematopoietic cell protein tyrosine phosphatase ; Hematopoietic cell protein-tyrosine phosphatase ; HPTP1C ; Protein tyrosine phosphatase 1C ; Protein tyrosine phosphatase non receptor type 6 ; Protein tyrosine phosphatase SHP1 ; Protein-tyrosine phosphatase 1C ; protein-tyrosine phosphatase SHP 1 ; Protein-tyrosine phosphatase SHP-1 ; PTN6_HUMAN ; PTP 1C ; PTP-1C ; PTP1C ; PTPN6 ; SH PTP 1 ; SH PTP1 ; SH-PTP1 ; SHP 1 ; SHP 1L ; SHP1 ; SHP1L ; tyrosine protein phosphatase non receptor type 6 ; Tyrosine-protein phosphatase non-receptor type 6.
Dilution	WB~~1:1000
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## 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:[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

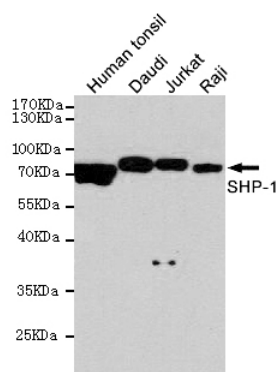
## Background

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.

## References

Yi T.,et al.Mol. Cell. Biol. 12:836-846(1992).  
Shen S.H.,et al.Nature 352:736-739(1991).  
Shen S.H.,et al.Nature 353:868-868(1991).  
Plutzky J.,et al.Proc. Natl. Acad. Sci. U.S.A. 89:1123-1127(1992).  
Banville D.,et al.Genomics 27:165-173(1995).

## Images



Western blot detection of SHP-1 in Human tonsil, Daudi, Jurkat and Raji cell lysates using SHP-1 mouse mAb (1:1000 diluted). Predicted band size: 67kDa. Observed band size: 67kDa.