

SHP-1 Antibody

Purified Mouse Monoclonal Antibody (Mab)

Catalog # AP52867

Product Information

Application	WB
Primary Accession	P29350
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Calculated MW	67561

Additional Information

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	Purified mouse monoclonal antibody in PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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

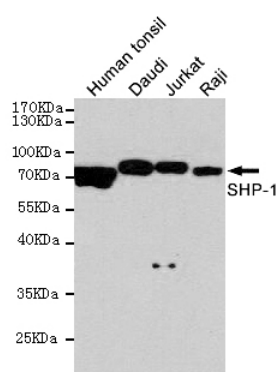
Background

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.

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.

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