

SHP-1 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52867**Specification**

SHP-1 Antibody - Product Information

Application	WB
Primary Accession	P29350
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Calculated MW	68 KDa

SHP-1 Antibody - 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

SHP-1 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: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

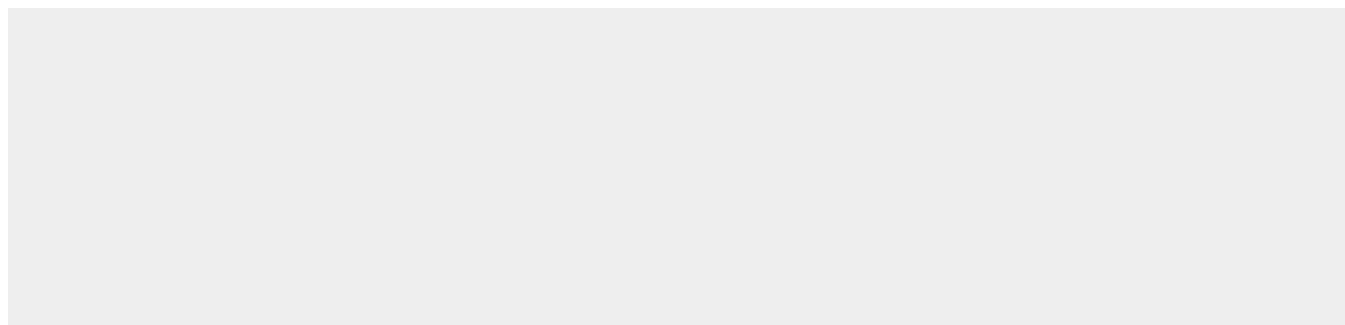
Isoform 1 is expressed in hematopoietic cells. Isoform 2 is expressed in non-hematopoietic cells

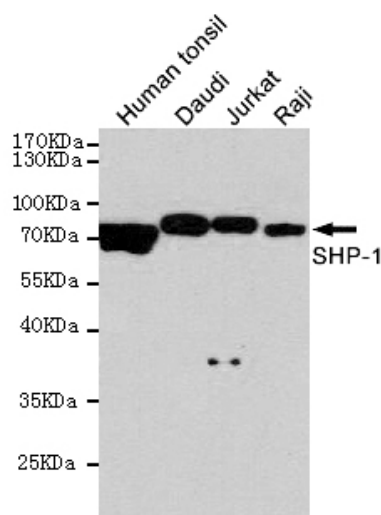
SHP-1 Antibody - Protocols

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](#)

SHP-1 Antibody - 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.

SHP-1 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.

SHP-1 Antibody - 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).