

PTPN6 / SHP1 Antibody (clone 14D5)
Mouse Monoclonal Antibody
Catalog # ALS14446**Specification**

PTPN6 / SHP1 Antibody (clone 14D5) - Product Information

Application	WB, IHC
Primary Accession	P29350
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	68kDa KDa

PTPN6 / SHP1 Antibody (clone 14D5) - Additional Information**Gene ID** 5777**Other Names**

Tyrosine-protein phosphatase non-receptor type 6, 3.1.3.48, Hematopoietic cell protein-tyrosine phosphatase, Protein-tyrosine phosphatase 1C, PTP-1C, Protein-tyrosine phosphatase SHP-1, SH-PTP1, PTPN6, HCP, PTP1C

Reconstitution & Storage

Long term: -20°C; Short term: +4°C; Avoid freeze-thaw cycles.

Precautions

PTPN6 / SHP1 Antibody (clone 14D5) is for research use only and not for use in diagnostic or therapeutic procedures.

PTPN6 / SHP1 Antibody (clone 14D5) - 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](http://www.uniprot.org/citations/14739280)), PubMed:[29925997](http://www.uniprot.org/citations/29925997)). Dephosphorylates and negatively regulate several receptor tyrosine kinases (RTKs) such as EGFR, PDGFR and FGFR, thereby modulating their signaling activities (PubMed:[21258366](http://www.uniprot.org/citations/21258366)), PubMed:[9733788](http://www.uniprot.org/citations/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:

<http://www.uniprot.org/citations/11907092> target="_blank">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. Acts also 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

Volume

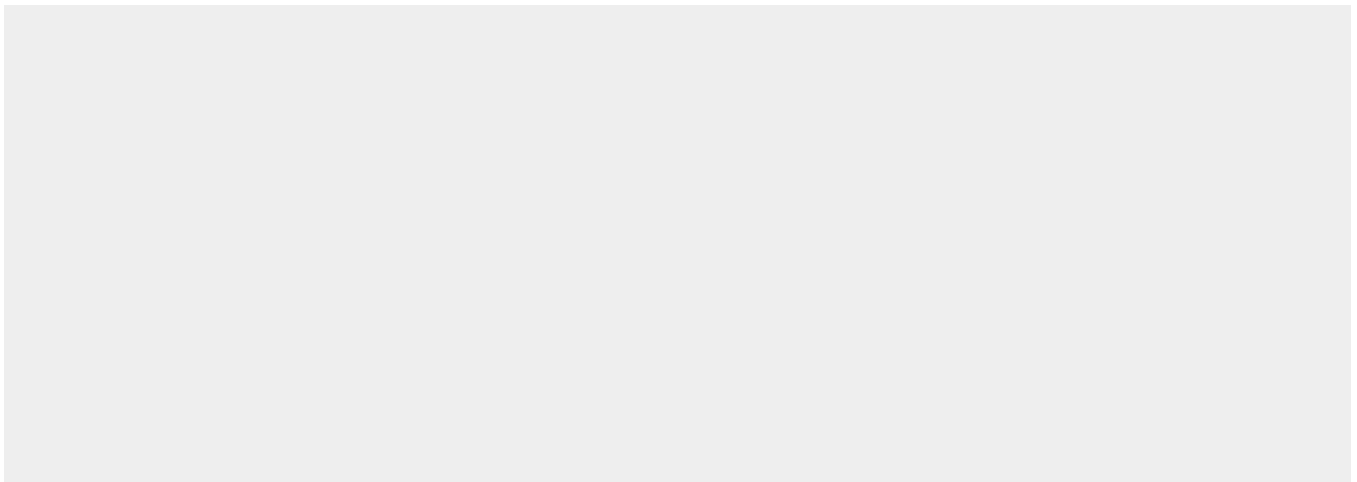
50 µl

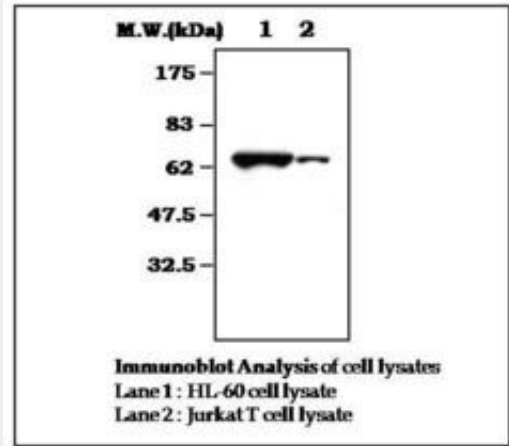
PTPN6 / SHP1 Antibody (clone 14D5) - Protocols

Provided below are standard protocols that you may find useful for product applications.

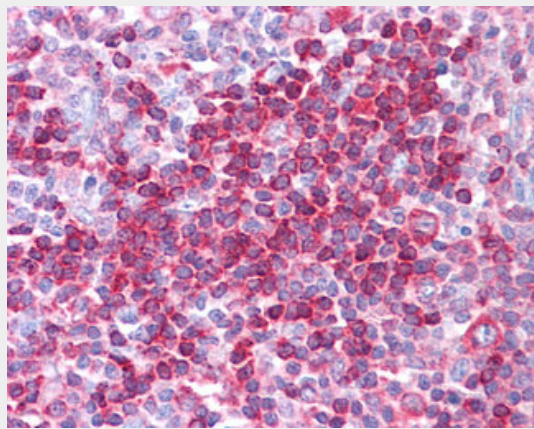
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

PTPN6 / SHP1 Antibody (clone 14D5) - Images





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Anti-PTPN6 antibody IHC of human tonsil.

PTPN6 / SHP1 Antibody (clone 14D5) - 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.

PTPN6 / SHP1 Antibody (clone 14D5) - 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).