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PTPN6 / SHP1 Antibody (clone 14D5)

Mouse Monoclonal Antibody
Catalog # ALS14446

Specification

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

Application	**WB, IHC-P, E**
Primary Accession	P29350
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**68kDa KDa**
Dilution	**WB~~1:1000** **IHC-P~~N/A** **E~~N/A**

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, 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

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 Cytomety
- Cell Culture

PTPN6 / SHP1 Antibody (clone 14D5) - Images

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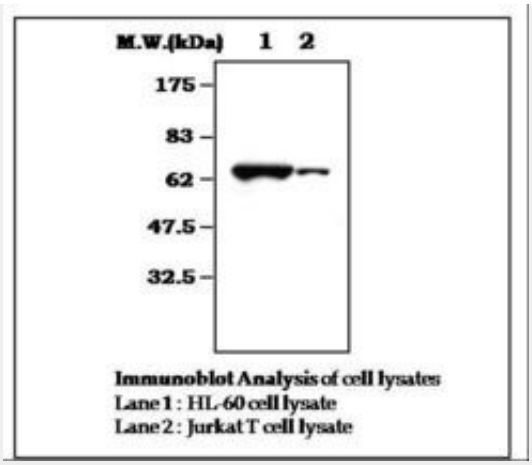

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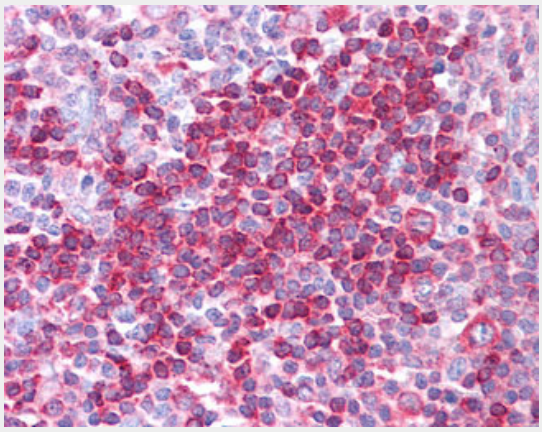

Anti-PTPN6 antibody IHC of human tonsil.

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).
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Banville D.,et al.Genomics 27:165-173(1995).