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Goat Anti-PTPN6 / SHP1 (internal region) Antibody

Peptide-affinity purified goat antibody
Catalog # AF1882a

Specification

Goat Anti-PTPN6 / SHP1 (internal region) Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P29350
Other Accession	NP_002822, 5777, 15170 (mouse), 116689 (rat)
Reactivity	**Human, Mouse, Rat**
Predicted	**Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**67561**

Goat Anti-PTPN6 / SHP1 (internal region) Antibody - 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

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-PTPN6 / SHP1 (internal region) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-PTPN6 / SHP1 (internal region) 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:<a

href="http://www.uniprot.org/citations/14739280" target="_blank">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. 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

Goat Anti-PTPN6 / SHP1 (internal region) 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 Cytomety
- Cell Culture

Goat Anti-PTPN6 / SHP1 (internal region) Antibody - Images

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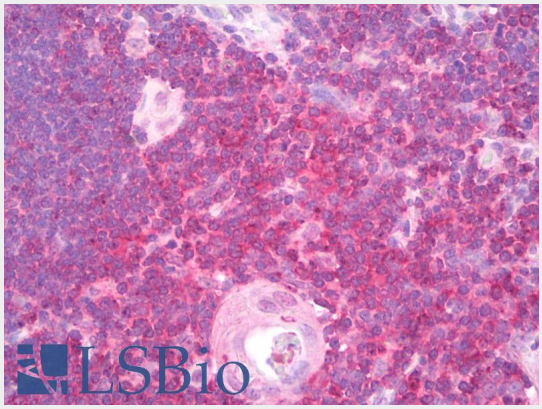
AF1882a (0.1 µg/ml) staining of Human Liver lysate (35 µg protein in RIPA buffer). Detected by chemiluminescence.



AF1882a (5 µg/ml) staining of paraffin embedded Human Thyroid. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

Goat Anti-PTPN6 / SHP1 (internal region) Antibody - Background

The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. N-terminal part of this PTP contains two tandem Src homolog (SH2) domains, which act as protein phospho-tyrosine binding domains, and mediate the interaction of this PTP with its substrates. This PTP is expressed primarily in hematopoietic cells, and functions as an important regulator of multiple signaling pathways in hematopoietic cells. This PTP has been shown to interact with, and dephosphorylate a wide spectrum of phospho-proteins involved in hematopoietic cell signaling. Multiple alternatively spliced variants of this gene, which encode distinct isoforms, have been reported.

Goat Anti-PTPN6 / SHP1 (internal region) Antibody - References

The tyrosine 343 residue of nucleophosmin (NPM)-anaplastic lymphoma kinase (ALK) is important for its interaction with SHP1, a cytoplasmic tyrosine phosphatase with tumor suppressor functions. Hegazy SA, et al. J Biol Chem, 2010 Jun 25. PMID 20424160.
Calpain-dependent cleavage of SHP-1 and SHP-2 is involved in the dephosphorylation of Jurkat T cells induced by Entamoeba histolytica. Kim KA, et al. Parasite Immunol, 2010 Mar. PMID 20398180.
Contribution of SHP-1 protein tyrosine phosphatase to osmotic regulation of the transcription factor TonEBP/OREBP. Zhou X, et al. Proc Natl Acad Sci U S A, 2010 Apr 13. PMID 20351292.
Deficient SOCS3 and SHP-1 expression in psoriatic T cells. Eriksen KW, et al. J Invest Dermatol, 2010 Jun. PMID 20130595.

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Jang MK, et al. Biochem Biophys Res Commun, 2010 Feb 26. PMID 20117097.