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# SHP-1 (Phospho-Tyr564) Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52495

## Product Information

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| **Application** | WB |
| **Primary Accession** | P29350 |
| **Reactivity** | Human, Mouse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 67561 |

## Additional Information

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| **Gene ID** | 5777 |
| **Other Names** | Tyrosine-protein phosphatase non-receptor type 6, Hematopoietic cell protein-tyrosine phosphatase, Protein-tyrosine phosphatase 1C, PTP-1C, Protein-tyrosine phosphatase SHP-1, SH-PTP1, PTPN6, HCP, PTP1C |
| **Dilution** | WB~~1:1000 |
| **Format** | Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol. |
| **Storage Conditions** | -20℃ |

## Protein Information

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| **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 |

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| | 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).
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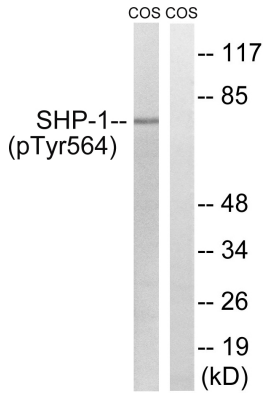
Shen S.H.,et al.Nature 353:868-868(1991).
Plutzky J.,et al.Proc. Natl. Acad. Sci. U.S.A. 89:1123-1127(1992).
Banville D.,et al.Genomics 27:165-173(1995).


## Images




Western blot analysis of extracts from COS7 cells, treated with EGF (200ng/ml, 30mins), using SHP-1 (Phospho-Tyr564) antibody.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