

**SHP-1 (Phospho-Tyr564) Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP52495**

**Specification**

---

**SHP-1 (Phospho-Tyr564) Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | WB                     |
| Primary Accession | <a href="#">P29350</a> |
| Reactivity        | Human, Mouse           |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Calculated MW     | 67561                  |

**SHP-1 (Phospho-Tyr564) Antibody - Additional Information**

**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 Mg<sup>2+</sup> and Ca<sup>2+</sup>), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.

**Storage Conditions**

-20°C

**SHP-1 (Phospho-Tyr564) 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/29925997" target="\_blank">29925997</a>). Dephosphorylates and negatively regulate several receptor tyrosine kinases (RTKs) such as EGFR, PDGFR and FGFR, thereby modulating their signaling activities (PubMed:<a href="http://www.uniprot.org/citations/9733788" target="\_blank">9733788</a>, PubMed:<a href="http://www.uniprot.org/citations/21258366" target="\_blank">21258366</a>). 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

and other receptors involved in immune regulation, initiates their dephosphorylation and subsequently inhibits downstream signaling events (PubMed:<a href="http://www.uniprot.org/citations/11907092" target="\_blank">11907092</a>, PubMed:<a href="http://www.uniprot.org/citations/37932456" target="\_blank">37932456</a>, PubMed:<a href="http://www.uniprot.org/citations/38166031" target="\_blank">38166031</a>). Modulates the signaling of several cytokine receptors including IL-4 receptor (PubMed:<a href="http://www.uniprot.org/citations/9065461" target="\_blank">9065461</a>). 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:<a href="http://www.uniprot.org/citations/34811497" target="\_blank">34811497</a>, PubMed:<a href="http://www.uniprot.org/citations/38532423" target="\_blank">38532423</a>). 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:<a href="http://www.uniprot.org/citations/37595871" target="\_blank">37595871</a>).

#### 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

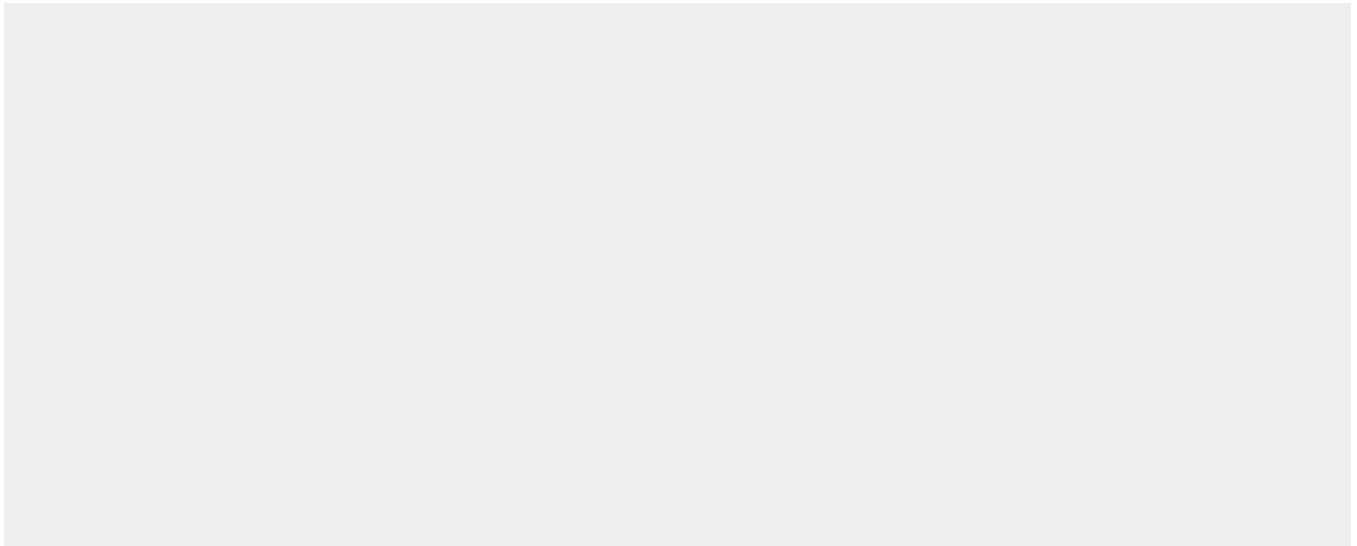
Isoform 1 is expressed in hematopoietic cells. Isoform 2 is expressed in non-hematopoietic cells

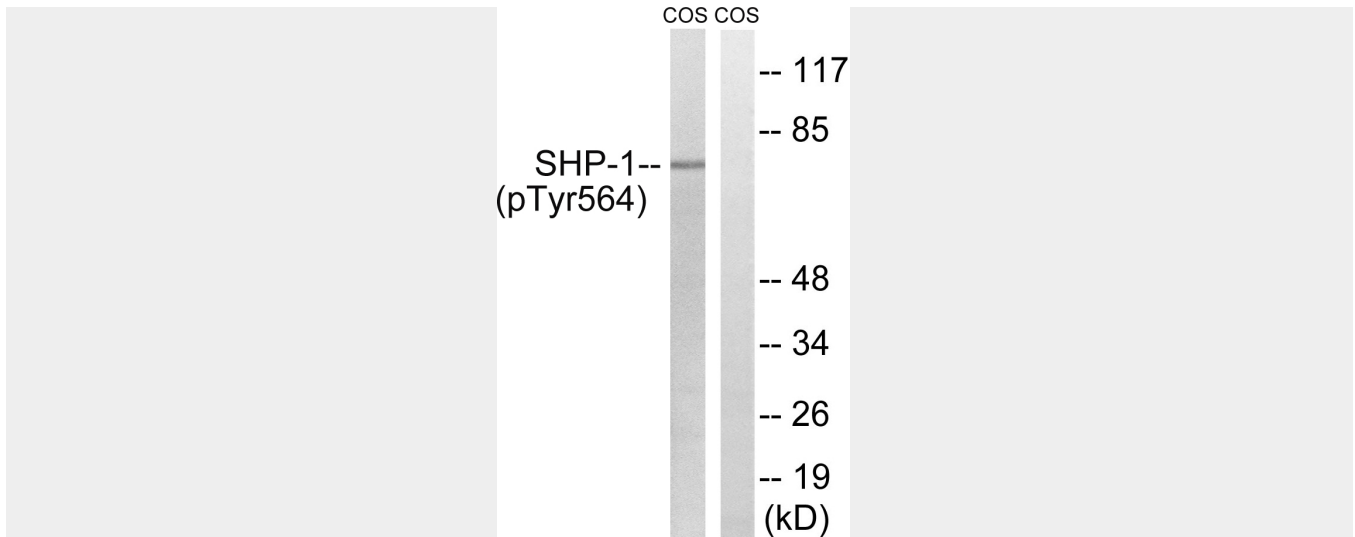
### SHP-1 (Phospho-Tyr564) Antibody - Protocols

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 (Phospho-Tyr564) Antibody - Images





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

### **SHP-1 (Phospho-Tyr564) 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 (Phospho-Tyr564) 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).