

## Product datasheet for **AP06412PU-M**

### **SHP1 (PTPN6) Rabbit Polyclonal Antibody**

#### **Product data:**

|                         |   |
|-------------------------|---|
| Product Type:           | Primary Antibodies  |
| Applications:           | IHC, WB   |
| Recommended Dilution:   | <b>Western blot:</b> 1/500-1/1000.<br><b>Immunohistochemistry on Paraffin sections:</b> 1/50-1/200.   |
| Reactivity:             | Human, Mouse, Rat   |
| Host:                   | Rabbit  |
| Clonality:              | Polyclonal  |
| Immunogen:              | Synthetic peptide, corresponding to amino acids 500-550 of Human SHP-1.   |
| Specificity:            | This antibody detects endogenous levels of PTPN6 / SHP-1 protein (region surrounding Lys530).   |
| Formulation:            | Phosphate buffered saline (PBS), approx. pH 7.2.<br>State: Aff - Purified<br>State: Liquid purified Ig fraction<br>Preservative: 15 mM Sodium azide |
| Concentration:          | 1.0 mg/ml   |
| Purification:           | Affinity-chromatography using epitope-specific immunogen (purity > 95% by SDS-PAGE)   |
| Conjugation:            | Unconjugated  |
| Storage:                | Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.<br>Avoid repeated freezing and thawing.                                |
| Stability:              | Shelf life: one year from despatch.   |
| Predicted Protein Size: | ~ 68 kDa  |
| Gene Name:              | protein tyrosine phosphatase, non-receptor type 6   |
| Database Link:          | <a href="#">Entrez Gene 5777 Human P29350</a>   |

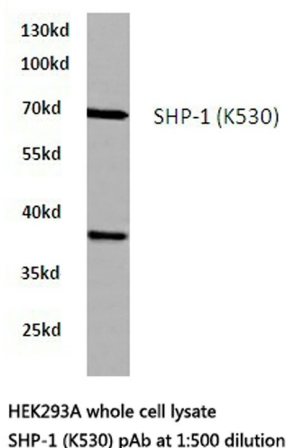
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**Background:**

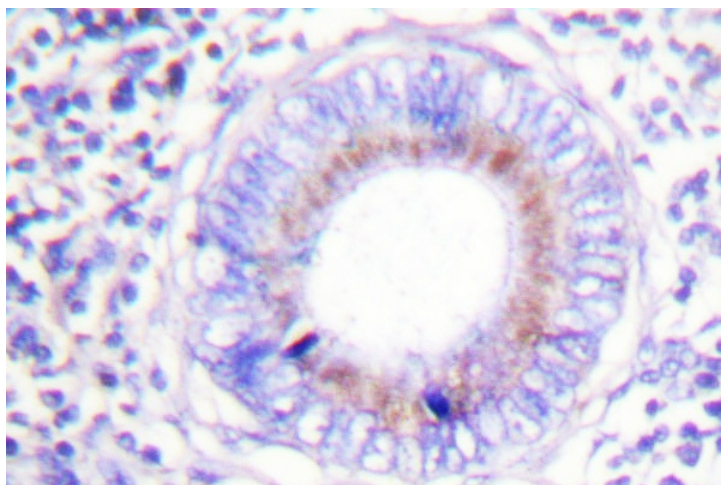
SHP (also designated short heterodimer partner and small heterodimer partner) is an orphan nuclear receptor containing the dimerization and ligandbinding domains found in other nuclear receptors but lacking the conserved DNA binding domain. SHP is specifically expressed in liver and other tissues including fetal liver and adrenal gland, adult spleen and small intestine. In addition, SHP is highly expressed in the murine macrophage cell line RAW 264.7 but suppressed by oxLDL and 13-HODE, which is a ligand for PPAR $\gamma$ . SHP interacts with nuclear receptors including thyroid receptor, retinoic acid receptors (RAR and RXR) and estrogen receptors (ER $\alpha$  and ER $\beta$ ). SHP functions as a negative regulator of these receptors by at least three mechanisms: inhibition of DNA binding via dimerization, direct antagonism of coactivator function via competition and possibly transrepression via recruitment of putative corepressors. In oxLDL-treated, resting macrophage cells, SHP acts as a transcription coactivator of NF- $\kappa$ B, suggesting that SHP is a modulatory component in the regulation of the transcriptional activities of NF- $\kappa$ B. Lastly, negative feedback regulation of a hepatic bile acid transporter NTCP is controlled by bile acid-activated FXR via induction of SHP to protect the hepatocyte from bile acid-mediated damage in cholestatic conditions.

**Synonyms:**

PTPN-6, HCP, PTP1C, Protein-tyrosine phosphatase 1C, PTP-1C, SH-PTP1, Protein-tyrosine phosphatase SHP-1

**Product images:**


Western blot (WB) analysis of SHP-1 antibody in extracts from HEK293A cells.



Immunohistochemical analysis in paraffin-embedded human colon carcinoma tissue using PTPN6 / SHP-1 antibody.