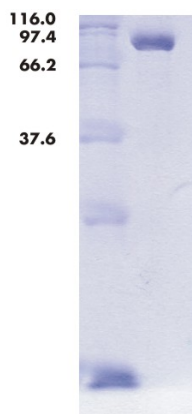


SHP-1^{GST}, full length Src homology 2 domain Phosphatase-1 human, recombinant, *E.coli*

Cat. No.	Amount
PR-947	20 µg



For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 50 mM Tris-HCl pH 8.0, 100 mM NaCl and 1 mM DTT.

Molecular Weight

92 kDa

Activity

Basal activity (unstimulated): 130 pmol Pi/min/µg
Phosphatase activity was determined with pNPP as substrate at pH 7.5 and 30°C. (see PR-944) The enzyme was used in final concentrations of 15 and 30 nM.

Purity

>90% by SDS-PAGE

Description

The N-terminal GST-tagged fusion protein was expressed in *E.coli* and purified by affinity chromatography with GSH-beads.

The GST-tag influences to some degree the stimulation by ligands of the N-terminal SH2-domain can dimerize and even be phosphorylated. The enzyme should only be used in diluted solutions or by adding 10% glycerol.

SHP-1 (Src homology-2 containing protein tyrosine phosphatase-1) is a non-receptor protein tyrosine phosphatase with two phosphotyrosine binding domains. N- and C-terminal tandem SH2 domains lie N-terminal to the catalytic domain (PTP). In the unstimulated state interaction of the N-terminal SH2 domain with the catalytic domain leads to self inhibition. Natural ligand sequences from cytosolic parts of receptors, signal and scaffold proteins or synthetic phosphotyrosine peptides stimulate the phosphatase activity. Thus, SHP-1 acts as negative regulator in the signaling of various receptors, including erythropoietin receptor, IL3-receptor, CSF-1 receptor, B-cell receptor and c-Ros. SHP-1 prefers as substrate such proteins which are phosphorylated from the SRC-kinase. SHP-1 can act as tumor suppressor or can inhibit the processing of some immune cells.

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