

PTPN6

Recombinant Human PTPN6 Active GST

Catalog No.	CSI11060	Quantity:	20 µg
Alternate Names:	HCP, HCPH, HPTP1C, PTP-1C, SH-PTP1, SHP-1, SHP-1L, SHP1, hematopoietic cell phosphatase, hematopoietic cell protein-tyrosine phosphatase, protein-tyrosine phosphatase 1C		
Description:	<p>The N-terminal GST-tagged fusion protein was expressed in <i>E. coli</i> and purified by affinity chromatography with GSH-beads. PTPN6, also referred to as 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 ROS-kinase. 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.</p>		
Gene ID:	5777		
Source:	<i>E. coli</i>		
Formulation:	Liquid, supplied in 50 mM Tris-HCl, pH 8.0, 100 mM NaCl and 1 mM DTT.		
Purity:	>90% by SDS-PAGE		
Activity:	<p>150 pmol Pi/min/µg</p> <p>Activity was determined with pNPP as substrate at pH 7.5 and 30 °C. The enzyme was used in final concentrations of 15 and 30 nM.</p>		
Applications:	<p>The GST-tagged catalytic domain of SHP-1 can be used to screen for natural and synthetic substrates or inhibitors and subsequent kinetic studies. The catalytic domain is (in contrast to the full length SHP-1) constitutively active and allows direct studies on the active center, excluding the interaction of interesting compounds with N- or C-terminal SH2-domains. The GST-tag has some effect on 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.</p>		
Storage & Stability:	Product stable for 12 months when stored in working aliquots at -80 °C. Avoid freeze / thaw cycles		

Coomassie-stained SDS-PAGE



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