Active Recombinant Human PTPN1 / PTP1B Protein, Untagged

Cat. No. PTPN1-1521H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant PTPN1 protein was expressed in E.coli and purified by using conventional chromatography techniques (1-321 aa).
Species	Human
Source	E.coli
ProteinLength	1-321 a.a.
Description	The protein coding region of the catalytic domain of PTPN1 (amino acids 1-321) was cloned into an E. coli expression vector. The catalytic domain of PTP-1B was overexpressed in E. coli as a soluble protein.
Form	Liquid. In 25 mM Tris-HCl buffer (pH 7.5) containing 1 mM DTT, 2 mM beta-mercaptoethanol, 1 mM EDTA, 20%Glycerol
Molecular Weight	37.3 kDa (321 aa)
Purity	> 95% by SDS - PAGE
Concentration	1 mg/ml (determined by Bradford assay)
Biological activity	Specific activity: 6,000-12,000units/mg. Enzymatic activity was confirmed by measuring the amount of enzyme hydrolyzing 1 nmole of p-nitrophenyl phosphate (pNPP) per minute at 37°C, pH7.5 using 10mM of substrate.

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Activity Assay	1. Prepare a 200ul reaction mix into a suitable container: The final concentrations are 10mM Tris(pH7.5), 50mM NaCl, 2mM DTT, 1mM MnCl2, 10mM pNPP. 2. Pre-warm reaction mix in heat block at 37°C 3. Add recombinant PTP1B solution with various concentrations (2ug, 3ug, 4ug) in 200ul reaction buffer. 4. Mix by inversion and Incubate at 37°C for 10minutes. 5. Stop the reaction by adding the 800ul of 0.1N NaOH 6. Record the absorbance at 405nm
Sequences of amino acids	MEMEKEFEQI DKSGSWAAIY QDIRHEASDF PCRVAKLPKN KNRNRYRDVS PFDHSRIKLH QEDNDYINAS LIKMEEAQRS YILTQGPLPN TCGHFWEMVW EQKSRGVVML NRVMEKGSLK CAQYWPQKEE KEMIFEDTNL KLTLISEDIK SYYTVRQLEL ENLTTQETRE ILHFHYTTWP DFGVPESPAS FLNFLFKVRE SGSLSPEHGP VVVHCSAGIG RSGTFCLADT CLLLMDKRKD PSSVDIKKVL LEMRKFRMGL IQTADQLRFS YLAVIEGAKF IMGDSSVQDQ WKELSHEDLE PPPEHIPPPP RPPKRILEPH N
Storage	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles

GENE INFORMATION

Gene Name	PTPN1 protein tyrosine phosphatase, non-receptor type 1 [Homo sapiens]
Official Symbol	PTPN1
Synonyms	PTPN1; protein tyrosine phosphatase, non-receptor type 1; Tyrosine-protein phosphatase non-receptor type 1; EC 3.1.3.48; Protein-tyrosine phosphatase 1B; PTP-1B; PTP1B; OTTHUMP00000031266; protein tyrosine phosphatase 1B; Protein-tyrosine phosphatase 1B; protein tyrosine phosphatase, placental
Gene ID	5770

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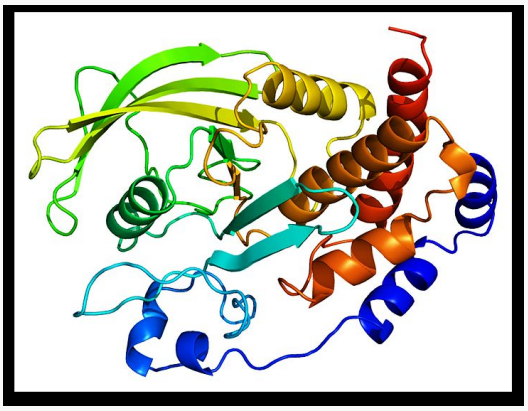
mRNA Refseq	NM_002827
Protein Refseq	NP_002818
MIM	176885
UniProt ID	P18031
Chromosome Location	20q13.1-q13.2
Pathway	Adherens junction; Insulin signaling pathway; Hemostasis; Integrin cell surface interactions
Function	hydrolase activity; insulin receptor binding; protein binding; protein tyrosine phosphatase activity; zinc ion binding
PDBrendering based on 1a5y.	

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