

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 NRVMEKGLSK CAQYWPQKEE KEMIFEDTNL KLTLISEDIK
 SYYTVRQLEL ENLTTQETRE ILHFHYTTWP DFGVPESPAS FLNFLFKVRE
 SGSLSPEHGP VVHCSAGIG 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](#)

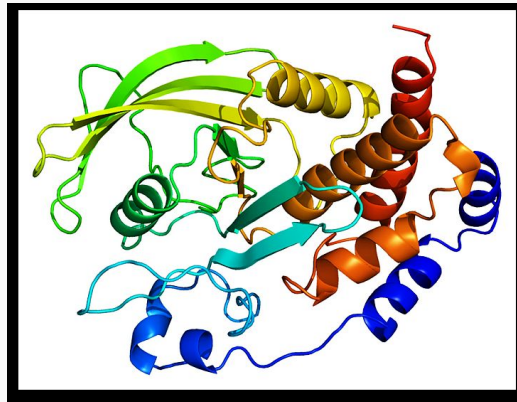
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mRNA Refseq	NM_002827
Protein Refseq	NP_002818
MIM	176885
UniProt ID	P18031
Chromosome Location	20q13.1-q13.2
Pathway	Adherens junction; Insulin signaling pathway; Hemostasis; Integrin cell surface interactions
Function	hydrolase activity; insulin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

PDBrendering based on 1a5y.



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