

Recombinant Human PTPN1 Protein

Cat. No. PTPN1-32H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant human PTPN1(1-321) protein without tag was expressed in E. coli.

Species Human

Source E.coli

ProteinLength 1-321

Description

The protein encoded by this gene is the founding member of the protein tyrosine phosphatase (PTP) family, which was isolated and identified based on its enzymatic activity and amino acid sequence. PTPs catalyze the hydrolysis of the phosphate monoesters specifically on tyrosine residues. Members of the PTP family share a highly conserved catalytic motif, which is essential for the catalytic activity. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP has been shown to act as a negative regulator of insulin signaling by dephosphorylating the phosphotyrosine residues of insulin receptor kinase. This PTP was also reported to dephosphorylate epidermal growth factor receptor kinase, as well as JAK2 and TYK2 kinases, which implicated the role of this PTP in cell growth control, and cell response to interferon stimulation. Two transcript variants encoding different isoforms have been found for this gene.

Molecular Mass 37.3 kDa

Purity ≥95% estimated by SDS-PAGE

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Unit Definition	One unit of enzyme produces 1 μ M of p-nitrophenol/min at 25 centigrade in 100 mM sodium citrate, pH 6.0, containing 10 mM p-nitrophenyl phosphate.
Stability	\geq 1 year
Storage	Store it at -80 centigrade
Storage Buffer	100 mM Tris, pH 7.2, with 100 mM sodium chloride, 1 mM EDTA, and 25% glycerol

GENE INFORMATION

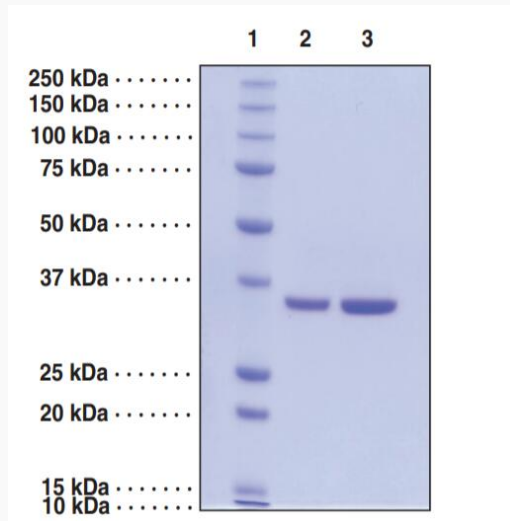
Gene Name	PTPN1 protein tyrosine phosphatase non-receptor type 1 [Homo sapiens (human)]
Official Symbol	PTPN1
Synonyms	PTPN1; protein tyrosine phosphatase non-receptor type 1; PTP1B; tyrosine-protein phosphatase non-receptor type 1; protein tyrosine phosphatase, placental; protein-tyrosine phosphatase 1B
Gene ID	5770
mRNA Refseq	NM_001278618
Protein Refseq	NP_001265547
MIM	176885
UniProt ID	P18031

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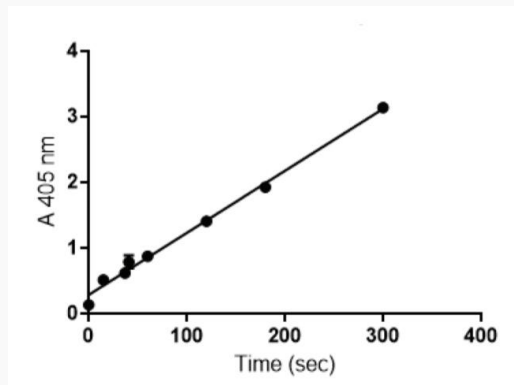
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SDS-PAGE Analysis of PTPN1



Lane 1: MW Markers; Lane 2: PTP1b (2 µg); Lane 3: PTP1b (4 µg). Representative gel image shown; actual purity may vary between each batch.

Activity of PTPN1



PTP1b activity was determined using using 300 ng PTP1b and 10 mM pNPP at 25 centigrade IN 100 mM sodium citrate, pH 6.0.

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