
Product Data Sheet

Product Name: PTPN1 Human
 Cat. No.: GP22617
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Tyrosine-protein phosphatase non-receptor type 1; EC 3.1.3.48; Protein-tyrosine phosphatase 1B; PTP-1B; PTPN1; PTP1B.		
Amino Acid Sequence	MEMEKEFEQI DKSGSWAAIY QDIRHEASDF PCRVAKLPKN KNRNRYRDVS PFDHSRIKLHQEDNDYINAS LIKMEEAQRS YILTQGPLPN TCGHFWEMVW EQKSRGVVML NRVMEKGLKCAQYWPQKEE KEMIFEDTNL KLTLISEDIK SYYTVRQLEL ENLTTQETRE ILHFHYTTWPDFGVPEPAS FLNFLFKVRE SGLSPEHGP VVVHCSAGIG RSGTFCLADT CLLLMDKRKDPSSVDIKKVL LEMRKFRMGL IQTADQLRFS YLAVIEGAKF IMGDSSVQDQ WKELSHEDLE PPPEHIPPPRPPKRILEPHN.		
Formulation	The protein (1mg/ml) contains 25mM Tris-HCl, pH 7.5, 2mM beta-mercaptoethanol, 1mM EDTA, 1mM DTT and 20% Glycerol.		

Introduction

Protein Tyrosine Phosphatase 1B 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 INS signaling by dephosphorylating the phosphotyrosine residues of INS 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 IFN stimulation.

Caution: Product has not been fully validated for medical applications. For research use only.

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Biological Activity

Specific activity is > 10,000 units/mg, and is defined as the amount of enzyme that hydrolyze 1.0 nmole of p-nitrophenyl phosphate (pNPP) per minute at pH 7.5 at 37°C .

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

Protein Tyrosine Phosphatase Non Receptor Type-1 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 321 amino acids and having a molecular mass of 37.3 kDa.

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