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PTPN1 Human

Description: 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.

Synonyms: Tyrosine-protein phosphatase non-receptor type 1, EC 3.1.3.48, Protein-tyrosine phosphatase 1B, PTP-1B, PTPN1, PTP1B.

Source: Escherichia Coli.

Physical Appearance: Sterile filtered colorless solution.

Amino Acid Sequence:memekefeqi dksgswaaiy qdirheasdf pcrvaklpkn knrnryrdvs pfdhsriklhqedndyinas likmeeaqrs yiltqgplpn tcghfwemvw eqksrgvvml nrvmekgslkcaqywpqkee kemifedtnl kltlisedik syytvrqlel enlttqetre ilhfhyttwpdfgvpespas flnflfkvre sgslspehgp vvvhcsagig rsgtfcladt clllm

Purity: Greater than 95.0% as determined by SDS-PAGE.

Formulation:
The protein contains 25mM Tris-HCl, pH 7.5, 2mM b-mercaptoethanol, 1mM EDTA, 1mM DTT and 20% Glycerol.

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.

Usage:
NeoBiolab's products are furnished for LABORATORY ESEARCH USE ONLY. The product may not be used as drµgs, agricultural or pesticidal products, food additives or household chemicals.

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 insulin signaling by dephosphorylating the phosphotryosine 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.

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 37C, pH7.5 using 10mM of substrate.

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