

## 32-3107: PTPN1 Recombinant Protein

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

### Description

Source : Escherichia Coli. 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. 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 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.

### Product Info

**Amount :** 50 µg  
**Purification :** Greater than 95.0% as determined by SDS-PAGE.  
**Content :** The protein contains 25mM Tris-HCl, pH 7.5, 2mM b-mercaptoethanol, 1mM EDTA, 1mM DTT and 20% Glycerol.  
**Storage condition :** 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.  
**Amino Acid :** MEMEKEFEQI DKSGSWAAIY QDIRHEASDF PCRVAKLPKN KNRNRYRDVS PFDHSRIKLHQEDNDYINAS LIKMEEAQRS YILTQGPLPN TCGHFWEMVW EQKSRGVVML NRVMKGLSKCAQYWPQKEE KEMIFEDTNL KLTLSIEDIK SYITVRQLEL ENLTTQETRE ILHFHYTTWPDFGVPEPAS FLNLFKVR SGSLSPHEGP VVHCSAGIG RSGTFCLADT CLLLMDKRKDPSSVDIKVL LEMRKFRMGL IQTADQLRFS YLAVIEGAKF IMGDSSVQDQ WKELSHEDLE PPPEHIPPPRPPKRILEPHN.

### Application Note

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.

