

## Product datasheet for **TP750046**

### PTP1B (PTPN1) (NM\_002827) Human Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant protein of human protein tyrosine phosphatase, non-receptor type 1 (PTPN1) produced in E. coli.
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	A DNA sequence encoding the region (Glu2-Asn321) of Homo sapiens PTPN1.
Tag:	N-His
Predicted MW:	39.2 KDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 90% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM HEPES, pH 7.5, 50 mM NaCl, 2.5 mM EDTA, 5 mM DTT
Bioactivity:	Specific activity: ~14000 nmol/min/mg. Enzymatic activity was determined by measuring the amount of 4-Nitrophenol hydrolyzed from p-nitrophenyl phosphate (pNPP) at 30C.
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	<a href="#">NP_002818</a>
Locus ID:	5770
UniProt ID:	<a href="#">P18031</a> , <a href="#">A8K3M3</a>
RefSeq Size:	3573
Cytogenetics:	20q13.13
RefSeq ORF:	1305
Synonyms:	PTP1B



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**Summary:**

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. [provided by RefSeq, Jul 2013]

**Protein Families:**

Druggable Genome, Phosphatase, Transmembrane

**Protein Pathways:**

Adherens junction, Insulin signaling pathway

**Product images:**