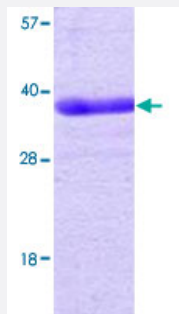


Bioactive

PTPN1 (Human) Recombinant Protein

Catalog # P3444 Size 100 ug

Applications



Specification

Product Description	Human PTPN1 (NP_002818, 1 a.a. - 321 a.a.) partial recombinant protein expressed in <i>Escherichia coli</i> .
Sequence	MEMEKEFEQIDKSGSWAAYQDIRHEASDFPCRVAKLPKNKNRNRVSPFDHSRIKLHQEDND YINASLIKMEEAQRSYLTQGPLPNTCGHFWEMVWEQKSRGVVMLNRVMEKGLKCAQYWPQKE EKEMIFEDTNLKLTLISEDIKSYTVRQLELENLTTQETREILHFHYTTWPDFGVPESPASFLNFLFK VRESGSLSPEHGPVVVHCSAGIGRSGTFCLADTCLLLMDKRKDPSSVDIKKVLLEMRFMRGLIQ TADQLRFSYLAVIEGAKFIMGDSSVQDQWKELSHEDLEPPPEHIPPPRPPKRILEPHN
Host	<i>Escherichia coli</i>
Theoretical MW (kDa)	37.3
Form	Liquid
Preparation Method	<i>Escherichia coli</i> expression system
Purification	Conventional Chromatography
Concentration	1 mg/mL
Purity	> 95% by SDS-PAGE

Activity	Specific activity: 6,000-12,000 units/mg. Enzymatic activity was confirmed by measuring the amount of enzyme hydrolyzing 1 nmole of p-nitrophenyl phosphate (pNPP) per minute at 37°C, pH7.5 using 1 0mM of substrate.
Quality Control Testing	Loading 3 ug protein in 12% SDS-PAGE
Storage Buffer	In 25 mM Tris-HCl, 1 mM EDTA, pH 7.5 (2 mM beta-mercaptoethanol, 1 mM DTT, 20% glycerol).
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study
- SDS-PAGE

Gene Info — PTPN1

Entrez GeneID	5770
Protein Accession#	NP_002818
Gene Name	PTPN1
Gene Alias	PTP1B
Gene Description	protein tyrosine phosphatase, non-receptor type 1
Omim ID	176885 609830
Gene Ontology	Hyperlink
Gene 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. [provided by RefSeq]
Other Designations	OTTHUMP00000031266 non-receptor tyrosine phosphatase 1 protein tyrosine phosphatase 1B protein tyrosine phosphatase, placental

Pathway

- [Adherens junction](#)
- [Insulin signaling pathway](#)

Disease

- [Albuminuria](#)
- [Alzheimer disease](#)
- [Arteriosclerosis](#)
- [Atherosclerosis](#)
- [Atrophy](#)
- [Calcinosis](#)
- [Cardiomyopathy](#)
- [Cardiovascular Diseases](#)
- [Cerebrovascular Disorders](#)
- [Coronary Artery Disease](#)
- [Coronary Disease](#)
- [Diabetes Complications](#)
- [Diabetes Mellitus](#)
- [Diabetic Angiopathies](#)
- [Diabetic Retinopathy](#)
- [Dyslipidemias](#)
- [Genetic Predisposition to Disease](#)
- [Glucose Intolerance](#)
- [Helicobacter Infections](#)

- [Hypertension](#)
- [Insulin Resistance](#)
- [Kidney Failure](#)
- [Lymphoma](#)
- [Metabolic Syndrome X](#)
- [Neoplasms](#)
- [Noonan Syndrome](#)
- [Obesity](#)
- [Osteoporosis](#)
- [Ovarian Neoplasms](#)
- [Peripheral Vascular Diseases](#)
- [Pulmonary Valve Stenosis](#)
- [Stomach Neoplasms](#)
- [Syndrome](#)