

Active Recombinant Full Length Human Protein Tyrosine Phosphatase, Non-Receptor Type 1 / PTPN1 / PTP1B Protein, GST-tagged

Cat. No. PTPN1-1908H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human PTPN1, full length, (aa 1-435) with N-terminal GST tag.
Species	Human
Source	E.coli
Protein Length	1-436 a.a.
Description	PTPN1 (PTP1B) is an enzyme that is the founding member of the protein tyrosine phosphatase (PTP) family. In humans it is encoded by the PTPN1 gene. PTPN1 is a negative regulator of the insulin signaling pathway and is considered a promising potential therapeutic target, in particular for treatment of type 2 diabetes.
Form	Liquid in 25 mM Tris-HCl, pH 8.0 + 100 mM NaCl + 0.05% Tween-20 + 50% glycerol + 3 mM DTT.
Molecular Weight	76 kDa
Purity	> 70%
Specific Activity	10 U/ug. One unit will hydrolyze 1 nmol p-nitrophenyl phosphate per minute at pH 7.4 and 30°C. Assay buffer: 50 mM HEPES, pH 7.4 + 2 mM EDTA + 3 mM DTT + 100 mM NaCl + 50 mM Pnpp.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Applications	Useful for the study of enzyme kinetics, regulation, to dephosphorylate target substrates and for screening inhibitors.
Storage	Stable for 6 months at -80°C. Avoid repeated freeze-thaw cycles.
Pathways	Adherens junction; Calcineurin-regulated NFAT-dependent transcription in lymphocytes; Cytokine Signaling in Immune system; EGF receptor (ErbB1) signaling pathway; Growth hormone receptor signaling; Hemostasis; IGF1 pathway; Immune System; Insulin Pathway; Insulin signaling pathway; Integrin alphaIIb beta3 signaling; Interferon alpha/beta signaling; N-cadherin signaling events; PDGFR-beta signaling pathway; Regulation of IFN signaling
Full Length	Full L.
GENE INFORMATION	
Gene Name	PTPN1 protein tyrosine phosphatase, non-receptor type 1 [Homo sapiens]
Official Symbol	PTPN1
Synonyms	PTPN1; protein tyrosine phosphatase, non-receptor type 1; PTP1B; tyrosine-protein phosphatase non-receptor type 1; OTTHUMP00000031266; protein tyrosine phosphatase 1B; protein-tyrosine phosphatase 1B; protein tyrosine phosphatase, placental
Gene ID	5770
mRNA Refseq	NM_002827
Protein Refseq	NP_002818

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MIM	176885
UniProt ID	P18031
Chromosome Location	20q13.1-q13.2
Function	ephrinreceptor binding; hydrolase activity; insulin receptor binding; proteinbinding; protein tyrosine phosphatase activity; zinc ion binding
PDB rendering based on 1a5y.	

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