

PTP1B Protein, Human (His)

Cat. No.:	HY-P73685
Synonyms:	PTP-1B; PTPN1; Tyrosine-protein phosphatase non-receptor type 1
Species:	Human
Source:	E. coli
Accession:	P18031 (E2-N321)
Gene ID:	5770
Molecular Weight:	Approximately 38.1 kDa

PROPERTIES

Biological Activity	Measured by its ability to dephosphorylate a phosphotyrosine residue in an EGF receptor (aa988-998) phosphopeptide substrate and the specific activity is > 15 nmoles/min/μg.
Appearance	Solution
Formulation	Supplied as a 0.2 μm filtered solution of 10 mM HEPES, 150 mM NaCl, 1 mM DTT, pH 7.5.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year from date of receipt. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	PTP1B, a tyrosine-protein phosphatase, serves as a key regulator of the endoplasmic reticulum unfolded protein response. It acts by mediating the dephosphorylation of EIF2AK3/PERK, thereby inactivating the protein kinase activity of EIF2AK3/PERK. PTP1B is implicated in potential roles within CKII- and p60c-src-induced signal transduction cascades. Moreover, it may exert regulatory influence over the EFNA5-EPHA3 signaling pathway, involved in cell reorganization and cell-cell repulsion. Additionally, PTP1B is suggested to modulate the hepatocyte growth factor receptor signaling pathway through its ability to dephosphorylate MET. These multifaceted functions underscore the versatility of PTP1B in orchestrating diverse cellular processes and signaling pathways.
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Caution: Product has not been fully validated for medical applications. For research use only.

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