

PTP1B Antibody (N-terminal) Blocking Peptide
Synthetic peptide
Catalog # BP8411c**Specification**

PTP1B Antibody (N-terminal) Blocking Peptide - Product Information

Primary Accession [P18031](#)
Other Accession [NP_002818](#)

PTP1B Antibody (N-terminal) Blocking Peptide - Additional Information

Gene ID 5770

Other Names

Tyrosine-protein phosphatase non-receptor type 1, Protein-tyrosine phosphatase 1B, PTP-1B, PTPN1, PTP1B

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8411c](/product/products/AP8411c) was selected from the N-terminal region of human PTP1B. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PTP1B Antibody (N-terminal) Blocking Peptide - Protein Information

Name PTPN1

Synonyms PTP1B

Function

Tyrosine-protein phosphatase which acts as a regulator of endoplasmic reticulum unfolded protein response. Mediates dephosphorylation of EIF2AK3/PERK; inactivating the protein kinase activity of EIF2AK3/PERK. May play an important role in CKII- and p60c- src-induced signal transduction cascades. May regulate the EFNA5-EPHA3 signaling pathway which modulates cell reorganization and cell-cell repulsion. May also regulate the hepatocyte growth factor receptor signaling pathway through dephosphorylation of MET.

Cellular Location

Endoplasmic reticulum membrane; Peripheral membrane protein; Cytoplasmic side Note=Interacts with EPHA3 at the cell membrane

Tissue Location

Expressed in keratinocytes (at protein level).

PTP1B Antibody (N-terminal) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

PTP1B Antibody (N-terminal) Blocking Peptide - Images**PTP1B Antibody (N-terminal) Blocking Peptide - Background**

PTP1B 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.

PTP1B Antibody (N-terminal) Blocking Peptide - References

Xu, J., et al., Biochem. Biophys. Res. Commun. 329(2):538-543 (2005). Palmer, N.D., et al., Diabetes 53(11):3013-3019 (2004). Bento, J.L., et al., Diabetes 53(11):3007-3012 (2004). Wiesmann, C., et al., Nat Struct Mol Biol 11(8):730-737 (2004). Kipfer-Coudreau, S., et al., Diabetologia 47(7):1278-1284 (2004).