

**PTP1B Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP8411b****Specification**

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**PTP1B Antibody (Center) Blocking Peptide - Product Information**Primary Accession [P18031](#)**PTP1B Antibody (Center) 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 [AP8411b](/product/products/AP8411b) was selected from the Center 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 (Center) 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 (Center) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

**PTP1B Antibody (Center) Blocking Peptide - Images****PTP1B Antibody (Center) 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 (Center) Blocking Peptide - References**

J. Cell Biol. 170 (5), 837-845 (2005) J. Biol. Chem. 280 (26), 24857-24863 (2005) Diabetes 54 (6), 1884-1891 (2005) Obes. Res. 13 (5), 829-834 (2005) Biochem. Biophys. Res. Commun. 329 (2), 538-543 (2005)