

**PTP1B Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM8411b**

**Specification**

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**PTP1B Antibody - Product Information**

Application	WB,E
Primary Accession	<a href="#">P18031</a>
Reactivity	Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1

**PTP1B Antibody - Additional Information**

**Gene ID** 5770

**Other Names**

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

**Target/Specificity**

This monoclonal antibody is generated from mice immunized with a recombinant protein human PTP1b.

**Dilution**

WB~~1:2000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

PTP1B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**PTP1B Antibody - 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

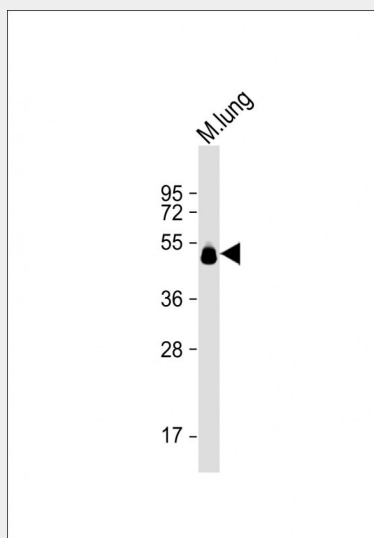
Expressed in keratinocytes (at protein level).

### PTP1B Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### PTP1B Antibody - Images



Anti-PTP1B Antibody at 1:2000 dilution + mouse lung lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 50 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

### PTP1B Antibody - Background

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.

### **PTP1B Antibody - References**

COMMON VARIANTS IN 40 GENES ASSESSED FOR DIABETES INCIDENCE AND RESPONSE TO METFORMIN AND LIFESTYLE INTERVENTIONS IN THE DIABETES PREVENTION PROGRAM. Jablonski KA, et al. Diabetes, 2010 Aug 3. PMID 20682687. Evaluation of candidate stromal epithelial cross-talk genes identifies association between risk of serous ovarian cancer and TERT, a cancer susceptibility hot-spot. Johnatty SE, et al. PLoS Genet, 2010 Jul 8. PMID 20628624. PTPN11 and KRAS gene analysis in patients with Noonan and Noonan-like syndromes. Brasil AS, et al. Genet Test Mol Biomarkers, 2010 Jun. PMID 20578946. PTP1B targets the endosomal sorting machinery: dephosphorylation of regulatory sites on the endosomal sorting complex required for transport component STAM2. Stuible M, et al. J Biol Chem, 2010 Jul 30. PMID 20504764. Phosphatase-dependent and -independent functions of Shp2 in neural crest cells underlie LEOPARD syndrome pathogenesis. Stewart RA, et al. Dev Cell, 2010 May 18. PMID 20493809.