

## Product Information

### **Protein Tyrosine Phosphatase 1B, human recombinant, expressed in *E. coli***

Catalog Number **P6244**  
Storage Temperature  $-70\text{ }^{\circ}\text{C}$

Synonym: PTP-1B

#### **Product Description**

Protein Tyrosine Phosphatase 1B (PTP-1B) is a recombinant, prototype non-transmembrane protein expressed in *E. coli* containing amino acid residues 1–322 of human PTP-1B. It has a molecular mass of 37.4 kDa.<sup>1,2</sup>

Phosphorylation is a reversible mechanism in which proteins can be functionally controlled. PTP1B is an abundant intracellular enzyme that is thought to act as a negative regulator of certain signaling pathways.<sup>1</sup> This enzyme dephosphorylates tyrosine-phosphorylated proteins and peptides, and is usually localized in the cytosolic domain of the ER.<sup>3</sup>

The product is supplied as a solution in 50 mM HEPES, pH 7.2, 1 mM EDTA, 5 mM DTT, and 0.05% NP-40.

Purity:  $\geq 90\%$  (SDS-PAGE)

Specific activity:  $\geq 30$  units/mg protein

Unit definition: One unit will hydrolyze 1  $\mu\text{mole}$  of a phosphopeptide substrate, EGFR fragment 988–998, per minute at pH 7.2 at  $30\text{ }^{\circ}\text{C}$ .

#### **Precautions and Disclaimer**

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### **Storage/Stability**

This product ships on dry ice and it is recommended to store the product at  $-70\text{ }^{\circ}\text{C}$ . PTP-1B remains active for at least 1 year at  $-70\text{ }^{\circ}\text{C}$  from date of shipment. For maximum recovery of product, centrifuge the vial briefly prior to removing the cap. Avoid freeze thaw cycles.

#### **References**

1. Liu, F. et. al., J. Biol. Chem., **271**, 31290-31295 (1996).
2. Puius, Y.A., Proc. Natl. Acad. Sci. USA, **94**, 13420-5 (1997).
3. Aoki, N., and Matsuda, T., A cytosolic protein-tyrosine phosphatase PTP1B specifically dephosphorylates and deactivates prolactin-activated STAT5a and STAT5b. J. Biol. Chem., **275**, 39718-39726 (2000).

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