

Product Information

PTP- β , human recombinant, expressed in *E. coli* K12

Catalog Number **P9864**
Storage Temperature -70°C

Synonym: Protein-tyrosine phosphatase- β

Product Description

PTP- β dephosphorylates tyrosine-phosphorylated peptides and proteins. As a biological target, PTP- β has emerged as playing a critical role in many cell signaling events. The enzyme is a nonreceptor protein tyrosine phosphatase localized to adherens, junctions, and focal adhesion complexes, and regulates both N-cadherin and β 1-integrin-mediated adhesion. PTP- β was found to specifically dephosphorylate STAT5a and STAT5b in transfected COS-7 cells and *in vitro*. Nuclear translocation of STAT5a and STAT5b was largely inhibited upon over expression of PTP- β .

Molecular mass: ~ 64.4 kDa

This recombinant PTP- β product is a full-length intracellular human PTP- β cloned into the *Nhe*I-*Bgl*II sites of a pGEX2T vector and expressed in *E. coli* K12 UT5600. The GST-tagged enzyme is purified from *E. coli* lysate using glutathione-agarose beads. It is supplied in a solution of 40 mM Tris-HCl, pH 8.0, 110 mM NaCl, 2.2 mM KCL, 3 mM DTT, 16 mM glutathione, and 20% glycerol.

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

Specific activity: ≥ 50 nmole/min/ μg

Unit definition: One unit will hydrolyze 1 nanomole of *p*-nitrophenyl phosphate per minute at pH 7.2 at 37°C .

Precautions and Disclaimer

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

Storage/Stability

The product ships on dry ice and storage at -70°C is recommended.

The product remains active for at least 1 year at -70°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. Charbonneau, H., and Tonks, N.K., 1002 protein phosphatases? *Ann. Rev. Cell. Biol.*, **8**, 463-493, (1992).
2. Wagman, A.S., and Nuss, J.M., Current therapies and emerging targets for the treatment of diabetes. *Curr. Pharm. Des.*, **7**, 417-450 (2001).
3. Pathre, P. et al., PTP1B regulates neurite extension mediated by cell-cell and cell-matrix adhesion molecules. *J. Neurosci. Res.*, **63**, 143-150 (2001).
4. 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).

AI,SG,MM,TJ,JWM,MAM,TMS 07/16-1