Recombinant PTPN1 (1-321) protein

Catalog No: 81035
Lot No: 24217001
Expressed In: *E. coli*

Quantity: 50, 1000 µg
Concentration: 0.6 µg/µl
Source: Human

Buffer Contents: Recombinant PTPN1 (1-321) protein is supplied at a concentration of 0.6 µg/µl in 25 mM Tris pH 8.0, 300 mM NaCl, 10% glycerol, 0.5 mM TCEP.

Background: PTPN1 (protein tyrosine phosphatase, non-receptor type 1, also known as PTP1B) is a member of the protein tyrosine phosphatase (PTP) family. PTPs catalyze the hydrolysis of the phosphate monoesters specifically on tyrosine residues. Members of the PTP family have a highly conserved catalytic motif, which is essential for the catalytic activity. PTPs regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation as signaling molecules. Epidermal growth factor receptor (EGFR) and the adaptor protein Shc were reported to be substrates of this PTP, which suggested the roles in growth factor mediated cell signaling. PTPN1 acts as a negative regulator of insulin signaling by dephosphorylating the phosphotryosine residues of insulin receptor kinase. PTPN1 dephosphorylates epidermal growth factor receptor kinase, as well as JAK2 and TYK2 kinases.

Protein Details: Recombinant PTPN1 (1-321) protein corresponding to amino acids 1-321 of PTPN1 protein accession number NP_002818.1) was expressed in *E. coli* cells and contains an N-terminal GST tag with a molecular weight of 63.6 kDa. Recombinant PTPN1 (1-321) protein contains the catalytic domain of PTPN1.

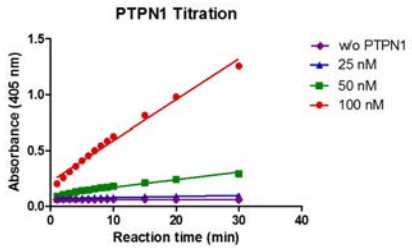
Application Notes: Recombinant PTPN1 (1-321) is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

HMT Assay Conditions: 1 mM pNPP was incubated with different concentrations of PTPN1 protein in 100 µl reaction system including 50 mM HEPES pH 7.5, 2 mM EDTA, 3 mM DTT, 100 mM NaCl at room temperature. The absorbance at 405 nm was continuously monitored for 30 minutes.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

Recombinant PTPN1 (1-321) protein gel
10% SDS-PAGE Coomassie staining

MW: 63.6 kDa
Purity: > 80%



Recombinant PTPN1 (1-321) activity assay.
1 mM pNPP was incubated with different concentrations of PTPN1 protein in 100 µl reaction system including 50 mM HEPES pH 7.5, 2 mM EDTA, 3 mM DTT, 100 mM NaCl at room temperature. The absorbance at 405 nm was continuously monitored for 30 minutes.