

Recombinant PTPN2 protein

Catalog No: 31592, 31992

Expressed In: *E. coli*

Quantity: 50, 1000 µg

Concentration: 0.5 µg/µl

Source: Human

Buffer Contents: Recombinant PTPN2 protein is supplied at a concentration of 0.5 µg/µl in 25 mM Tris pH 8.0, 300 mM NaCl, 5% glycerol.

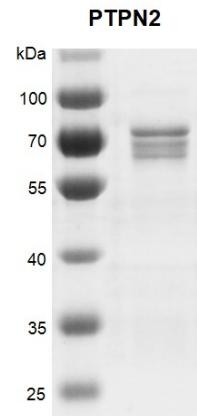
Background: PTPN2 (Protein Tyrosine Phosphatase, Non-Receptor Type 2, also known as TCELLPTP, TCPTP, TC-PTP, PTPT, PTN2) is a member of the protein tyrosine phosphatase (PTP) family. Members of the PTP family have a highly conserved catalytic motif, which is essential for the catalytic activity. PTPs 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. PTPN2 dephosphorylates multiple substrates including receptor protein tyrosine kinases INSR, EGFR, CSF1R, PDGFR and non-receptor protein tyrosine kinases like JAK1, JAK2, JAK3, Src family kinases, STAT1, STAT3, STAT5A, STAT5B and STAT6 either in the nucleus or the cytoplasm.

Protein Details: Recombinant PTPN2 was expressed in *E. coli* cells as the full length protein (accession number NP_002819.2) with an N-terminal GST tag. The molecular weight of the protein is 75.7 kDa.

Application Notes: This protein is useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

Activity Assay Conditions: 1 mM pNPP was incubated with different concentrations of PTPN2 protein in reaction buffer 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.

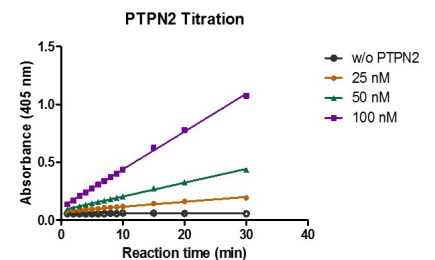


Recombinant PTPN2 protein gel.

Recombinant PTPN2 protein was run on a 10% SDS-PAGE gel and stained with Coomassie Blue.

MW: 75.7 kDa

Purity: > 50%



Recombinant PTPN2 protein activity assay.

1 mM pNPP was incubated with different concentrations of PTPN2 protein in reaction buffer 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.