



Protein Tyrosine Phosphatase PTPN11/SHP-2

Product Data Sheet

For Research Use Only, Not for use in diagnostic procedures

## Protein Tyrosine Phosphatase PTPN11/SHP-2 Human, recombinant protein expressed in *E. coli.*, Active

Cat# CY-E1367

Amount: 50µg (1.1µg/ul)

Lot:

### Introduction:

PTPN11/SHP-2 contains N-terminal two SH2 domains, a PTP domain, and C-terminal two tyrosyl phosphorylation sites. Mutations in PTPN11/SHP-2 that result in its constitutive activation cause Noonan syndrome, a developmental disorder characterized by cardiac and skeletal defects. Somatic gain-of-function mutations of PTPN11/SHP-2 are detected in leukemias and rarely in solid tumors, and induce aberrant hyperactivation of the Ras-Erk pathway. PTPN11/SHP-2 may be a novel target for antineoplastic therapy.

### Product Description:

Phosphatase domain of human PTPN11/SHP-2, containing an N-terminal GST tag, expressed in *E. coli.* and purified by GSH agarose chromatography.

### Gene Information:

The gene accession number is NM\_002834.

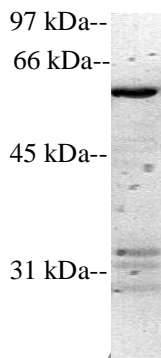
### Gene Aliases:

Protein tyrosine phosphatase non-receptor type 11, PTPN11, SHP-2, PTP2C, PTP-1D

### Formulation:

Recombinant PTPN11/SHP-2 is supplied frozen in a buffer containing 100mM NaCl, 20mM Tris-HCl (pH 7.0), 1mM DTT, 1mM EDTA and 50% glycerol. Use a same buffer for dilution when needed.

### Molecular Weight:



Coomassie blue stain

Recombinant PTPN11/SHP-2 demonstrates approximately 62 kDa band by SDS-PAGE analysis.



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#### **Specific Activity:**

6 units/ $\mu$ g. This unit value is determined at the point of production and may vary with time and various conditions. Specific Activity also varies among production lots.

#### **Unit Definitions:**

One unit is defined as the amount of phosphatase required to release 1 pmol of phosphate from CycLex's PTP substrate-1 per minute at 30°C.

#### **Storage:**

Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, AVOID REPEATED HANDLING AND MULTIPLE FREEZE/THAW CYCLES.

#### **Stability:**

Unopened vial at -70 °C, for 1 year after delivery.

#### **References:**

1. Tartaglia M, Mehler EL, Goldberg R, Zampino G, Brunner HG, Kremer H, van der Burgt I, Crosby AH, Ion A, Jeffery S, Kalidas K, Patton MA, Kucherlapati RS, Gelb BD. Mutations in PTPN11, encoding the protein tyrosine phosphatase SHP-2, cause Noonan syndrome. *Nat Genet.* 2001 Dec;29(4):465-8.
2. Bentires-Alj M, Paez JG, David FS, Keilhack H, Halmos B, Naoki K, Maris JM, Richardson A, Bardelli A, Sugarbaker DJ, Richards WG, Du J, Girard L, Minna JD, Loh ML, Fisher DE, Velculescu VE, Vogelstein B, Meyerson M, Sellers WR, Neel BG. Activating mutations of the noonan syndrome-associated SHP2/PTPN11 gene in human solid tumors and adult acute myelogenous leukemia. *Cancer Res.* 2004 Dec 15;64(24):8816-20.

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