Data Sheet (Cat.No.TMPY-03296)

TargetMol

SHP-1/PTPN6 Protein, Mouse, Recombinant (aa 207-597, His & GST)

General Information

Synonyms:	SH-PTP1;Hcph;70Z-SHP;Ptp1C;protein tyrosine phosphatase, non-receptor type 6;me;hcp;PTPTY-42;SHP-1
Protein Construction:	A DNA sequence encoding the mouse PTPN6 (P29351-2) (Ala207-Lys597) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Mouse
Expression Host:	Baculovirus Insect Cells
Accession:	P29351-2
Molecular Weight:	72.7 kDa (predicted); 63 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, pH 7.0, 10% glycerol. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

PTPN6 is an enzyme that belongs to the protein tyrosine phosphatase (PTP) family. PTPs are signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. N-terminal part of PTPN6 contains two tandem Src homolog (SH2) domains, which act as protein phospho-tyrosine binding domains, and mediate the interaction of PTPN6 with its substrates. PTPN6 is expressed

primarily in hematopoietic cells, and functions as an important regulator of multiple signaling pathways in hematopoietic cells. It has been shown that PTPN6 interacts with, and dephosphorylate a wide spectrum of phospho-proteins involved in hematopoietic cell signaling.

Reference

Yu CL,et al.(2000) Cytosolic tyrosine dephosphorylation of STAT5. Potential role of SHP-2 in STAT5 regulation. J Biol Chem. 275(1):599-604.

Wu DW,et al.(2000) SH2-Containing protein tyrosine phosphatase-1 (SHP-1) association with Jak2 in UT-7/Epo cells. Blood Cells Mol Dis. 26(1):15-24.

Jiao H,et al.(1996) Direct association with and dephosphorylation of Jak2 kinase by the SH2-domain-containing protein tyrosine phosphatase SHP-1. Mol Cell Biol. 16(12):6985-92.