Data Sheet (Cat.No.TMPY-03125)

TargetMol

SHP-2 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	SAP-2;Syp;PTP1D;SH-PTP2;SH-PTP3;SHP-2;PTP2C;2700084A17Rik;AW536184;Shp2;protein tyrosine phosphatase, non-receptor type 11
Protein Construction:	A DNA sequence encoding the mouse PTPN11 (P35235-2) (Met1-Arg593) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Met
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P35235-2
Molecular Weight:	69.5 kDa (predicted); 65 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to dephosphorylate a tyrosine residue in a peptide containing the EGFR Y992 phosphorylation site . The specific activity is > 1 pmoles/min/μg.
Purity:	> 90 % 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, 0.1M NaCl, 10% Glycerol, 1 mM TCEP, pH 7.8. 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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

SHP2, also known as PTPN11, belongs to the protein-tyrosine phosphatase(PTP) family, non-receptor class 2 subfamily. PTPs catalyze the removal of phosphate groups from tyrosine residues by the hydrolysis of phosphoric acid monoesters. They dephosphorylate EGFR, JAK2 and TYK2 kinases, promoting oncogenic transformation. SHP2 is widely expressed, with highest levels in heart, brain, and skeletal muscle. SHP2 acts downstream of various

receptor and cytoplasmic protein tyrosine kinases to participate in the signal transduction from the cell surface to the nucleus. It also dephosphorylates ROCK2 at Tyr-722 resulting in stimulation of its RhoA binding activity.

Reference

Ganju R K, et al. (2000) Beta-chemokine receptor CCR5 signals through SHP1, SHP2, and Syk. J Biol Chem. 275(23): 17263-8.

Yin T, et al. (1997) Molecular characterization of specific interactions between SHP-2 phosphatase and JAK tyrosine kinases. J Biol Chem. 272(2):1032-7.

Kontaridis MI, et al. (2006) PTPN11 (Shp2) mutations in LEOPARD syndrome have dominant negative, not activating, effects. J Biol Chem. 281(10):6785-92.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481