Mouse SHP2 / PTPN11 Protein (His Tag)

Catalog Number: **50462-M08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

2700084A17Rik; AW536184; PTP1D; PTP2C; SAP-2; SH-PTP2; SH-PTP3; SHP-2; Shp2; Syp

Protein Construction:

A DNA sequence encoding the mouse PTPN11 (P35235-2) (Met1-Arg593) was expressed with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to dephosphorylate a tyrosine residue in a peptide containing the EGFR Y992 phosphorylation site (Catalog # ES006). The specific activity is > 1 pmoles/min/μg.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Met

Molecular Mass:

The recombinant mouse PTPN11 comprises 604 amino acids and has a predicted molecular mass of 69.5 kDa. The apparent molecular mass of the protein is approximately 65 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile 20mM Tris, 0.1M NaCl, 10% Glycerol, 1mM TCEP, pH 7.8.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

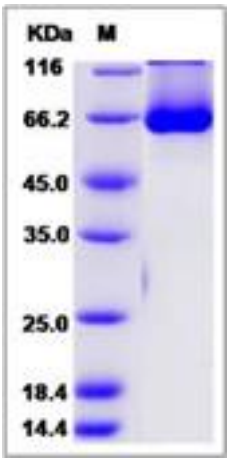
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 stimulatation of its RhoA binding activity.

References

1.Ganju R K, *et al.* (2000) Beta-chemokine receptor CCR5 signals through SHP1, SHP2, and Syk. J Biol Chem. 275(23):17263-8. 2.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. 3.Kontaridis MI, *et al.* (2006) PTPN11 (Shp2) mutations in LEOPARD syndrome have dominant negative, not activating, effects. J Biol Chem. 281(10):6785-92.