

Mouse Smad3 Protein (His & GST Tag)

Catalog Number: 50991-M20B



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

HSPC193; HsT17436; JV15-2; LDS1C; LDS3; MADH3; AU022421; Madh3

Protein Construction:

A DNA sequence encoding the mouse SMAD3 (P84025) (Met1-Ser425) was expressed with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

Source: Mouse

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

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 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant mouse SMAD3/GST chimera consists of 662 amino acids and has a calculated molecular mass of 75.9 kDa. The recombinant protein migrates as an approximately 75 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 2mM GSH, 10% glycerol, pH 7.4.

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:

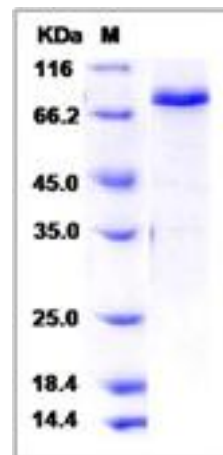
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

SMAD3 belongs to the SMAD family. Members of this family mediate signal transduction by the TGF-beta/activin/BMP-2/4 cytokine superfamily from receptor Ser/Thr protein kinases at the cell surface to the nucleus. SMAD3 is involved in cell signalling. It modulates signals of activin and TGFβ's. Binding of SMAD3 with SMAD4 enables its transmigration into the nucleus where it forms complexes with other proteins and acts as a transcription factor. SMAD3 is a receptor-regulated SMAD (R-SMAD). In mice, mutation of SMAD3 has been linked to colorectal adenocarcinoma, increased systemic inflammation, and accelerated wound healing. Increased SMAD3 activity has been implicated in the pathogenesis of scleroderma. Smad3 is also a multifaceted regulator in adipose physiology and the pathogenesis of obesity and type 2 diabetes.

References

- 1.Tan. et al., 2011, Diabetes. 60 (2): 464-76.
- 2.Yang X. et al., 1999, Nat Cell Biol. 1 (5): 260-6.
- 3.Zhu Y. et al., 1998, Cell. 94 (6): 703-14.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>