

Recombinant Human SMAD4 protein

Catalog No.: RP03180 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	4089	Q13485

Tags

C-His

Synonyms

Mothers Against Decapentaplegic Homolog 4; MAD Homolog 4; Mothers Against DPP Homolog 4; Deletion Target in Pancreatic Carcinoma 4; SMAD Family Member 4; SMAD 4; Smad4; hSMAD4; SMAD4; DPC4; MADH4

Product Information

Source	Purification
<i>E. coli</i>	≥ 85 % as determined by SDS-PAGE.

Calculated MW	Observed MW
61.5 KDa	62 KDa

Endotoxin

< 1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of 20mM Tris-HCl, pH 8.0. Contact us for customized product form or formulation.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

SMAD Family Member 4 (SMAD4) is a cytoplasmic protein that belongs to the Dwarfin/SMAD family. SMAD4 contains one MH1 (MAD homology 1) domain and one MH2 (MAD homology 2) domain. It is the component of the heterotrimeric SMAD2/SMAD3-SMAD4 complex that forms in the nucleus and is required for the TGF-mediated signaling. SMAD4 promotes binding of the SMAD2/SMAD4/FAST-1 complex to DNA and provides an activation function required for SMAD1 or SMAD2 to stimulate transcription. SMAD4 may act as a tumor suppressor. It positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator. Mutations or deletions in SMAD4 have been shown to result in pancreatic cancer, juvenile polyposis syndrome, and hereditary hemorrhagic telangiectasia syndrome.

Basic Information

Description

Recombinant Human SMAD4 Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Met1-Asp552) of Human SMAD4 (Accession #NP_005350.1) fused with a 6×His tag at the C-terminus.

Bio-Activity

Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

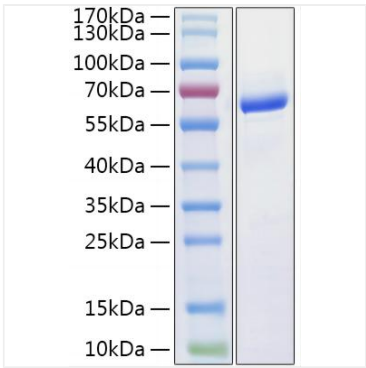
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Validation Data



Recombinant Human SMAD4 protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.