# **Recombinant Human SMAD4 Protein (His Tag)**

Catalog Number: PKSH033066



Note: Centrifuge before opening to ensure complete recovery of vial contents.

### **Description**

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

Species Human
Expression Host E.coli

Sequence Met 1-Asp552

Accession Q13485
Calculated Molecular Weight 61.5 kDa
Observed molecular weight 62 kDa
Tag C-His

### **Properties**

**Purity** > 80 % as determined by reducing SDS-PAGE.

**Endotoxin** < 1.0 EU per ug of the protein as determined by the LAL method.

**Storage** Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to

-80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots

of reconstituted samples are stable at < -20°C for 3 months.

**Shipping** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation** Lyophilized from a 0.2 μm filtered solution of 20mM Tris-HCl, pH 8.0.

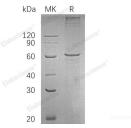
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as

protectants before lyophilization.

Please refer to the specific buffer information in the printed manual.

**Reconstitution** Please refer to the printed manual for detailed information.

#### Data



> 80 % as determined by reducing SDS-PAGE.

## **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

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regulator. Mutations or deletions in SMAD4 have been shown to result in pancreatic cancer, juvenile polyposis syndrome, and hereditary hemorrhagic telangiectasia syndrome.

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