



Recombinant Protein Technical Manual

Recombinant Human SMAD4 Protein (His Tag)

RPES5146

Product Data:

Product SKU: RPES5146

Size: 10µg

Species: Human

Expression host: E. coli

Uniprot: Q13485

Protein Information:

Molecular Mass: 61.5 kDa

AP Molecular Mass: 62 kDa

Tag: C-6His

Bio-activity:

Purity: > 85 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: 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 TrisHCl, pH8.0.

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

Application:

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

Immunogen Information:

Sequence: Met 1-Asp552

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 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.