

Recombinant Human SMAD1

Cat. No. SMAD1-30445TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant full length Human Smad1 with N-terminal proprietary tag; amino acids 1-465, 83kDa.

Species Human

Source E.coli

ProteinLength 1-465 a.a.

Description

The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene mothers against decapentaplegic (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signals of the bone morphogenetic proteins (BMPs), which are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. In response to BMP ligands, this protein can be phosphorylated and activated by the BMP receptor kinase. The phosphorylated form of this protein forms a complex with SMAD4, which is important for its function in the transcription regulation. This protein is a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1 and SMURF2, and undergoes ubiquitination and proteasome-mediated degradation. Alternatively spliced transcript variants encoding the same protein have been observed.

Tissue specificity Ubiquitous. Highest expression seen in the heart and skeletal muscle.

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Form	Liquid
Storage buffer	Preservative: None Constituents: 25% Glycerol, 50mM Tris HCl, 150mM Sodium chloride, 0.25mM DTT, 0.1mM PMSF, pH 7.5
Storage	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequence Similarities	Belongs to the dwarfin/SMAD family. Contains 1 MH1 (MAD homology 1) domain. Contains 1 MH2 (MAD homology 2) domain.
Full Length	Full L.
GENE INFORMATION	
Gene Name	SMAD1 SMAD family member 1 [Homo sapiens]
Official Symbol	SMAD1
Synonyms	SMAD1; SMAD family member 1; MAD, mothers against decapentaplegic homolog 1 (Drosophila) , MADH1, SMAD, mothers against DPP homolog 1 (Drosophila); mothers against decapentaplegic homolog 1; JV4 1; MADR1;
Gene ID	4086
mRNA Refseq	NM_001003688
Protein Refseq	NP_001003688
MIM	601595

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Uniprot ID	Q15797
Chromosome Location	4q31.21
Pathway	ALK1 signaling events, organism-specific biosystem; ALK2 signaling events, organism-specific biosystem; BMP receptor signaling, organism-specific biosystem; Delta-Notch Signaling Pathway, organism-specific biosystem; ErbB1 downstream signaling, organism-specific biosystem;
Function	I-SMAD binding; co-SMAD binding; identical protein binding; protein binding; protein kinase binding;

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