

## Recombinant SMAD Family Member 3, His-tagged

Cat. No. SMAD3-4599H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** SMAD3 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 445 amino acids (1-425) and having a molecular mass of 50.2 kDa. SMAD3 is fused to 20 amino acid His-Tag at N-Terminus and purified by standard chromatography techniques.

**Species** Human

**Source** Human

**ProteinLength** 1-425 a.a.

**Description** SMAD3 is part of the SMAD family of proteins that 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 has a role as a transcriptional modulator activated by TGF-Beta and is involved in the regulation of carcinogenesis. SMAD3 mutations are related with the pathogenesis of human osteoarthritis. SMAD3 expression take part in tumor suppression in the premature stages of gastric carcinogenesis. SMAD3 is involved in nuclear translocation of beta-catenin.

**Form** The SMAD3 protein solution contains 20mM Tris-HCl pH-8, 0.1M NaCl, 0.1mM DTT and 20% glycerol.

**Purity** Greater than 90.0% as determined by SDS-PAGE.

**Physical Appearance** Sterile Filtered colorless solution.

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**Amino acid sequence**

MGSSHHHHHH SSGLVPRGSH MSSILPFTPP IVKRLLGWKK GEQNGQEEKW  
 CEKAVKSLVK KLKKTGQLDE LEKAITTQNV NTKCITIPRS LDGRLQVSHR  
 KGLPHVIYCR LWRWPDLHSH HELRAMELCE FAFNMKKDEV CVNPYHYQRV  
 ETPVLPPVLV PRHTEIPAEF PPLDDYSHSI PENTNFPAGI EPQSNIPETP  
 PPGYLSEGE TSDHQMNHSM DAGSPNLSPN PMSPAHNLD LQPVTYCEPA  
 FWCSISYYEL NQRVGETFHA SQPSMTVDGF TDPSNSERFC LGLLSNVNRN  
 AAVELTRRHI GRGVRLYYIG GEVFAECLSD SAIFVQSPNC NQRYGWHPAT  
 VCKIPPGCNL KIFNNQEFAA LLAQSVNQQF EAVYQLTRMC TIRMSFVKGW  
 GAERYRQTVT STPCWIELHL NGPLQWLDKV LTQMGSPSIR CSSVS.

**Storage**

SMAD3 although stable 4°C for 4 weeks, should be stored desiccated below -18°C.  
 For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).  
 Please prevent freeze-thaw cycles.

**Pathways**

Adherens junction; Cell cycle; Chronic myeloid leukemia; Colorectal cancer;  
 Pancreatic cancer; Pathways in cancer; TGF-beta signaling pathway; Wnt signaling pathway

## GENE INFORMATION

**Gene Name**

[SMAD3](#) SMAD family member 3 [ Homo sapiens ]

**Official Symbol**

SMAD3

**Synonyms**

SMAD3; SMAD family member 3; MADH3; JV15-2; HSPC193; HsT17436;  
 MGC60396; DKFZp586N0721; DKFZp686J10186; mothers against decapentaplegic  
 homolog 3; mad homolog JV15-2; mad protein homolog; SMA- and MAD-related  
 protein 3; SMAD, mothers against DPP homolog 3; MAD, mothers against  
 decapentaplegic homolog 3; MAD, mothers against decapentaplegic homolog 3  
 (Drosophila); SMAD, mothers against DPP homolog 3 (Drosophila); Mad3; hMAD-3;

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hSMAD3; Mothers against DPP homolog 3; SMAD 3

**Gene ID** [4088](#)

**mRNA Refseq** [NM\\_001145102](#)

**Protein Refseq** [NP\\_001138574](#)

**MIM** [603109](#)

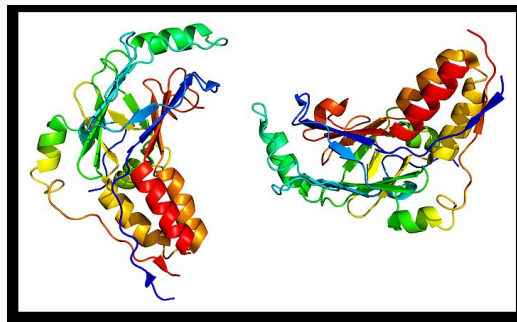
**UniProt ID** [P84022](#)

**Chromosome Location** 15q22.33

**Function**

R-SMAD binding; co-SMAD binding; collagen binding; double-stranded DNA binding; ligand-regulated transcription factor activity; promoter binding; protein homodimerization activity; protein kinase binding; specific transcriptional repressor activity; transcription activator activity; transcription factor activity; transcription factor activity; transcription factor binding; transforming growth factor beta receptor binding; transforming growth factor beta receptor, pathway-specific cytoplasmic mediator activity; ubiquitin protein ligase binding

**PDB rendering based on 1dev.**



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