

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 MSSILPFTTP IVKRLLGWKK GEQNGQEEKW
CEKAVKSLVK KLKKTGQLDE LEKAITTQNV NTKCITIPRS LDGRLQVSHR
KGLPHVIYCR LWRWPDLHSH HELRAMELCE FAFNMKKDEV CVNPYHYQRV
ETPVLPPVLV PRHTEIPAEF PPLDDYSHSI PENTNFPAGI EPQSNIPETP
PPGYLSEGE TSDHQMNHSM DAGSPNLSPN PMSPAHHNLD LQPVTYCEPA
FWCSISYYEL NQRVGETFHA SQPSMTVDGF TDPSNSERFC LGLLSNVNRN
AAVELTRRHI GRGVRLYYIG GEVFAECLSD SAIFVQSPNC NQRYGWHPAT
VCKIPPGCNL KIFNNQEFAA LLAQSVNQGF EAVYQLTRMC TIRMSFVKGW
GAEYRRQTVT 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.	