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**Product Data Sheet**


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Product Name: SMAD2 Human  
 Cat. No.: GP24614  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	JV18; MADH2; MADR2; JV18-1; hMAD-2; hSMAD2; MGC22139; MGC34440; SMAD2; Mothers against decapentaplegic homolog 2; Mothers against DPP homolog 2; Mad-related protein 2; SMAD 2; SMAD family member 2.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MSSILPFTPP VVKRLLGWKK SAGGSGGAGG GEQNGQEEKW CEKAVKSLVK KLKKTGRLDE LEKAITTQNC NTKCVTIPSTCSEIWGLSTP NTIDQWDTTG LYSFSEQTRS LDGRLQVSHR KGLPHVIYCR LWRWPDLSH HELKAIENCE YAFNLKKDEV CVNPYHYQRV ETPVLPPVLVPRHTEILTEL PPLDDYTHSI PENTNFPAGI EPQSNIYIPET PPPGYISEDG ETSDQQLNQS MDTGSPAELS PTTLSVPNHS LDLQPVTYSE PAFWCSIAYYELNQRVGETF HASQPSLTVD GFTDPSNSER FCLGLLSNVN RNATVEMTRR HIGRGVRLYY IGGEVFAECL SDSAIFVQSP NCNQRYGWHP ATVCKIPPGCNLKIFNNQEF AALLAQSVNQ GFEAVYQLTR MCTIRMSFVK GWGAEYRRQT VTSTPCWIEL HLNGPLQWLD KVLTMGSPS VRCSSMS.		
Formulation	The SMAD2 protein solution contains 20mM Tris-HCl pH-8, and 100mM NaCl.		

**Introduction**

SMAD2 is part of the SMAD family of proteins that mediate signal transduction by the TGF-beta/BMP-2/4 cytokine superfamily from receptor Ser/Thr protein kinases at the cell surface to the nucleus. Phosphorylated SMAD2 is then able to form a complex with SMAD4 or SARA. These complexes accumulate in the cell nucleus, where they are directly participating in the regulation of gene expression. SMAD2 mediates the signal of the TGF-beta, and therefore regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. SMAD2 is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA)

**Caution: Product has not been fully validated for medical applications. For research use only.**

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protein. TGF-beta 1 acts on adjacent stromal cells to turn on SMAD2 signalling that could lead to stromal decidualization. SMAD2 is the downstream signal transducers of TGF-beta-1 in human dental pulp cells.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

SMAD2 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 487 amino acids (1-467) and having a molecular mass of 54.4 kDa. SMAD2 is fused to 20 amino acid His-Tag at N-Terminus and purified by standard chromatography techniques.

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