

## SMAD2 Human

**Description:** 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.

**Catalog #:** PRPS-698

For research use only.

**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.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHH SSGLVPRGSH MSSILPFTTP VVKRLLGWKK  
SAGGSGGAGG GEQNGQEEKW CEKAVKSLVK KLKKTGRLDE LEKAITTQNC  
NTKCVTIPSTCSEIWGLSTP NTIDQWDTTG LYSFSEQTRS LDGRLQVSHR KGLPHVIYCR  
LWRWPDLSH HELKAIENCE YAFNLKKDEV CVNPYHYQRV ETPVLPVLVPRHTEILTEL  
PPLDDYTHSI PENTNFPAGI EPQS

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

**Formulation:**

The SMAD2 protein solution contains 20mM Tris-HCl pH-8, and 100mM NaCl.

**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.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Introduction:**

SMAD2 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. 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) 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.

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