

Product Information

SMAD2, GST-tagged, human recombinant, expressed in *E. coli* cells

Catalog Number **SRP5131**
Storage Temperature -70°C

Synonyms: JV18, MADH2, MADR2, JV18-1, hMAD-2, hSMAD2, MGC22139, MGC34440

Product Description

SMADs are essential intracellular components for the signal transduction of TGF β family members. SMAD2 is an intracellular mediator of TGF β family and activin type 1 receptor.¹ SMAD2 mediates TGF β signaling to regulate cell growth and differentiation. SMAD2 is released from cytoplasmic retention by TGF β receptor-mediated phosphorylation. The phosphorylated SMAD2 then forms a heterodimeric complex with SMAD4, and this complex translocates from cytoplasm into nucleus. By interacting with DNA-binding proteins, SMAD2 complexes then positively or negatively regulate the transcription of target genes. Inactivating mutations in SMAD2 have been found in various cancers.²

Recombinant, full-length, human SMAD2 was expressed in *E. coli* cells using an N-terminal GST tag. The gene accession number is NM_001003652. Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, and 25% glycerol.

Molecular mass: ~90 kDa

Purity: 70–95% (SDS-PAGE, see Figure 1)

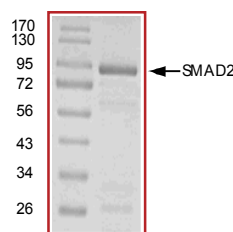
Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at -70°C is recommended. After opening, aliquot into smaller quantities and store at -70°C . Avoid repeated handling and multiple freeze/thaw cycles.

Figure 1.
SDS-PAGE Gel of Typical Lot
70–95% (densitometry)



References

1. Masayuki, F. et al., Identification and Characterization of Constitutively Active Smad2 Mutants: Evaluation of Formation of Smad Complex and Subcellular Distribution. *Molecular Endocrinol.*, **14**(10), 1583-1591 (2000).
2. Eppert, K. et al., MADR2 maps to 18q21 and encodes a TGF-beta-regulated MAD-related protein that is functionally mutated in colorectal carcinoma. *Cell*, **86**, 543-552 (1996).

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