

Product Information

SMAD4, GST-tagged, human recombinant, expressed in *E. coli* cells

Catalog Number **SRP5133**
Storage Temperature -70°C

Synonyms: JIP, DPC4, MADH4

Product Description

SMAD4 is a member of the SMAD family and mediates signaling by the transforming growth factor-beta (TGF β) superfamily and related ligands.¹ TGF β stimulation leads to phosphorylation and activation of SMAD1, SMAD2, and SMAD3, which form complexes with SMAD4 that accumulate in the nucleus and regulate transcription of target genes. SMAD signaling is negatively regulated by inhibitory SMADs, and ubiquitin-mediated processes and proteasomal degradation of SMADs depend on the direct interaction of specific E3 ligases with SMADs. SMAD4 is targeted for degradation by multiple ubiquitin ligases that can simultaneously act on R-SMADs and signaling receptors. Such mechanisms of down-regulation of TGF β signaling via degradation of SMADs may be critical for proper physiological response to this pathway.²

Recombinant, full-length, human SMAD4 was expressed in *E. coli* cells using an N-terminal GST tag. The gene accession number is NM_005359. 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: ~95 kDa

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

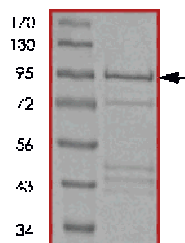
Precautions and Disclaimer

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. Heldin, C.H. et al., TGF-beta signalling from cell membrane to nucleus through SMAD proteins. *Nature*, **390**(6659), 465–71 (1997).
2. Attisano, L. et al., Mads and Smads in TGF beta signalling. *Curr. Opin. Cell Biol.*, **10**(2), 188–94 (1998).

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