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Product Information

SMAD1, GST-tagged, human recombinant, expressed in *E. coli* cells

Catalog Number **SRP5130**
Storage Temperature –70 °C

Synonyms: BSP1, JV41, JV4-1, MADH1, MADR1

Product Description

SMAD1 is a member of the SMAD family, which are signal transducers and transcriptional modulators that mediate multiple signaling pathways. The actions of bone morphogenetic proteins (BMPs) are mediated by SMAD1, and SMAD1 can be phosphorylated and activated by the BMP receptor kinase.[1] Phosphorylated SMAD1 forms a complex with SMAD4 that is important for its function in the transcription regulation. The SMAD1-SMAD4 complex is a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1 and SMURF2, and undergoes ubiquitination and proteasome-mediated degradation. The formation of a complex between STAT3 and SMAD1, bridged by p300, is involved in the cooperative signaling of LIF and BMP2 and the subsequent induction of astrocytes from neuronal progenitors.[2]

Recombinant, full-length, human SMAD1 was expressed in *E. coli* cells using an N-terminal GST tag. The gene accession number is NM_005900. Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.2 5 mM DTT, 0.1 mM PMSF, and 25% glycerol.

Molecular mass: ~83 kDa

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

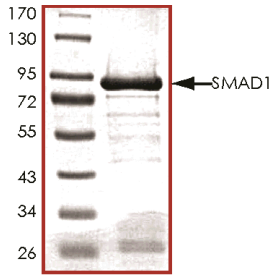
Precautions and Disclaimer

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. Hoodless, P.A. et al., MADR1, a MAD-related protein that functions in BMP2 signaling pathways. Cell, **85**, 489-500 (1996).
2. Nakashima, K. et al., Synergistic signaling in fetal brain by STAT3-Smad1 complex bridged by p300. Science, **284**, 479-482 (1999).

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