

SMAD1 Protein

Full-length recombinant protein expressed in E. coli cells

Catalog # S10-30G

Lot # E347-4

Product Description

Recombinant full-length human SMAD1 was expressed in E. coli cells using an N-terminal GST tag. The gene accession number is [NM_005900](#).

Gene Aliases

BSP1, JV41, JV4-1, MADH1, MADR1

Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.

Storage and Stability

Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

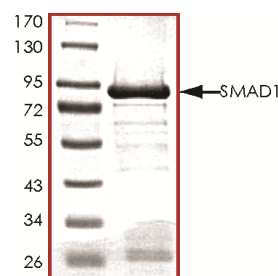
Scientific Background

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).

References

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

Purity



The purity of SMAD1 was determined to be **>90%** by densitometry. Approx. MW **83kDa**.

SMAD1 Protein

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Catalog Number	S10-30G
Specific Lot Number	E347-4
Purity	>90%
Concentration	0.2 µg/µl
Stability	1yr at -70°C from date of shipment
Storage & Shipping	Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on dry ice.

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