

Recombinant Human SMAD7 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50905

Size: 10ug, 100ug

Protein Name: SMAD family member 7 (SMAD 7) (hSMAD7) (Mothers against decapentaplegic homolog 7) (MAD homolog 7) (Mothers against DPP homolog 7) (Mothers against decapentaplegic homolog 8) (MAD homolog 8) (Mothers against DPP homolog 8)

Synonym: SMAD7, MADH7, MADH8

UniProt ID: O15105

UniProt Link: www.uniprot.org/uniprotkb/O15105/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 426 AA

Molecular Weight: 46 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MFRTKRSALVRRLWRSRAPGGEDEEEGAGGGGGGGGELRGEGATDSRAHGAGGGGGPGRAGCCLG
KAVRGAKGHHHPHPAAGAGAAGGAEADLKALTHSVLKKLKERQLELLLQAVESRGGTRTACLLLP
GRLDCLRGPGAPAGAQAQPPSSYSPLLLCKVFRWPDRLHSSEVKRLCCCESYGKINPELVCCNP
HHL SRLCELESPPPYPSPMDFLKPTADCPDAVPSSAETGGTNYLAPGGLSDSQLLLEPGDRSHW
CVVAYWEEKTRVGRLYCVQEPSLDIFYDLPQGNGFCLGQLNSDNKSQLVQKVR SKIGCGIQLTREV
DGVWVYNRSSYPIFIKSATLDNPDSRTLLVHKVFPGF SIKAFDYEKAYSLQRPNDHEFMQQPWTGFT
VQISFVKGWGQC YTRQFISSCPCWLEVIFNSR

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant SMAD family member 7 (SMAD 7) (hSMAD7) (Mothers against decapentaplegic homolog 7) (MAD homolog 7) (Mothers against DPP homolog 7) (Mothers against decapentaplegic homolog 8) (MAD homolog 8) (Mothers against DPP homolog 8) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Antagonist of signaling by TGF-beta (transforming growth factor) type 1 receptor superfamily members; has been shown to inhibit TGF-beta (Transforming growth factor) and activin signaling by associating with their receptors thus preventing SMAD2 access (PubMed:21791611). Functions as an adapter to recruit SMURF2 to the TGF-beta receptor complex. Also acts by recruiting the PPP1R15A-PP1 complex to TGFBR1, which promotes its dephosphorylation. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.

Subcellular Localization: Nucleus . Cytoplasm . Note=Interaction with NEDD4L or RNF111 induces translocation from the nucleus to the cytoplasm (PubMed:16601693). TGF-beta stimulates its translocation from the nucleus to the cytoplasm. PDPK1 inhibits its translocation from the nucleus to the cytoplasm in response to TGF-beta (PubMed:17327236).

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.