

## Recombinant Human SMAD2 protein, His/MBP-tagged

**Cat. No.** SMAD2-324H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human SMAD2(19-254 aa) fused with His/MBP tag was expressed in E. coli. |
|-------------------------|-------------------------------------------------------------------------------------|

|                |       |
|----------------|-------|
| <b>Species</b> | Human |
|----------------|-------|

|               |        |
|---------------|--------|
| <b>Source</b> | E.coli |
|---------------|--------|

|                      |           |
|----------------------|-----------|
| <b>ProteinLength</b> | 19-254 aa |
|----------------------|-----------|

#### Description

The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated by the TGF-beta receptors. The phosphorylation induces the dissociation of this protein with SARA and the association with the family member SMAD4. The association with SMAD4 is important for the translocation of this protein into the nucleus, where it binds to target promoters and forms a transcription repressor complex with other cofactors. This protein can also be phosphorylated by activin type 1 receptor kinase, and mediates the signal from the activin. Alternatively spliced transcript variants have been observed for this gene.

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|                     |                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>         | Liquid in PBS                                                                                                                                             |
| <b>Purity</b>       | SDS-PAGE >90%                                                                                                                                             |
| <b>Applications</b> | WB Positive Control                                                                                                                                       |
| <b>Stability</b>    | Samples are stable for up to twelve months from date of receipt at -70°C.                                                                                 |
| <b>Storage</b>      | Store it under sterile conditions at -20°C~-70°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | SMAD2 SMAD family member 2 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                              |
| <b>Official Symbol</b> | SMAD2                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Synonyms</b>        | SMAD2; SMAD family member 2; MAD, mothers against decapentaplegic homolog 2 (Drosophila) , MADH2, SMAD, mothers against DPP homolog 2 (Drosophila); mothers against decapentaplegic homolog 2; JV18 1; MADR2; MAD homolog 2; mother against DPP homolog 2; Sma- and Mad-related protein 2; SMAD, mothers against DPP homolog 2; JV18; MADH2; JV18-1; hMAD-2; hSMAD2; MGC22139; MGC34440; |
| <b>Gene ID</b>         | 4087                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>mRNA Refseq</b>     | NM_001003652                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Protein Refseq</b>  | NP_001003652                                                                                                                                                                                                                                                                                                                                                                             |
| <b>MIM</b>             | 601366                                                                                                                                                                                                                                                                                                                                                                                   |

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**UniProt ID**

Q15796

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