

## Recombinant Human SMAD2 Protein, Myc/DDK-tagged, C13 and N15-labeled

**Cat. No.** SMAD2-6129H    **Lot. No.** (See product label)

### SPECIFICATION

#### Product Overview

SMAD2 MS Standard C13 and N15-labeled recombinant protein (NP\_005892) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.

#### Species

Human

#### Source

HEK293

#### 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>Molecular Mass</b> | 52.1 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>AA Sequence</b>    | MSSILPFTPPVVKRLLGWKKSAGGSGGAGGGEQNGQEEKWCEKAVKSLVKKLKKT<br>GRLELEKAITTQNCNTKCVTIPSTCSEIWGLSTPNTIDQWDTTGLYSFSEQTRSLDG<br>RLQVSHRKGLPHVIYCRLWRWPDHLHSHHELKAIENCEYAFNLKKDEVCVNPHYHYQR<br>VETPVLPPVLVPRHTEILTELPPLDDYTHSIPENTNFPAGIEPQSNYIPETPPPGYISED<br>GETSDQQLNQSMGTGSPAELSPTTLSPVNHSLDLQPVTYSEPAFWCSIAYYELNQNR<br>VGETFHASQPSLTVDGFTDPSNSERFCLGLLSNVNRNATVEMTRRHIGRGVRLYYIG<br>GEVFAECLSDSAIFVQSPNCNQRYGWHPATVCKIPPGCNLKIFNNQEFAALLAQSVN<br>QGFEAVYQLTRMCTIRMSFVKGWGAEYRRQTVTSTPCWIELHLNGLPLQWLDKVL<br>TQMGSPSVRCSSMSTRTRPLEQKLISEEDLAANDILDYKDDDDKV |
| <b>Purity</b>         | > 80% as determined by SDS-PAGE and Coomassie blue staining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Stability</b>      | Stable for 3 months from receipt of products under proper storage and handling conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Storage</b>        | Store at -80 centigrade. Avoid repeated freeze-thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Concentration</b>  | 50 µg/mL as determined by BCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage Buffer</b> | 100 mM glycine, 25 mM Tris-HCl, pH 7.3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## GENE INFORMATION

|                        |                                                                                                                                                            |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | SMAD2 SMAD family member 2 [ Homo sapiens (human) ]                                                                                                        |
| <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 |

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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;

**Gene ID** 4087

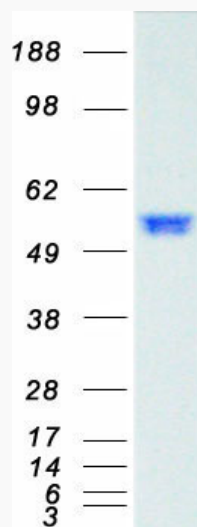
**mRNA Refseq** NM\_005901

**Protein Refseq** NP\_005892

**MIM** 601366

**UniProt ID** Q15796

**SDS-PAGE**



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