

## Recombinant Human SMAD4, GST-tagged

**Cat. No.** DCP1A-7053H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Product Overview</b> | Recombinant full-length human SMAD4 was expressed in E. coli cells using an N-terminal GST tag.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>ProteinLength</b>    | Full length                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Description</b>      | <p>SMAD4 is a member of the SMAD family and mediates signaling by the transforming growth factor-beta (TGF<math>\beta</math>) superfamily and related ligands. TGF<math>\beta</math> stimulation leads to phosphorylation and activation of SMAD1, SMAD2 and SMAD3, which form complexes with SMAD4 that accumulate in the nucleus and regulate transcription of target genes. SMAD signaling is negatively regulated by inhibitory SMADs and ubiquitin-mediated processes and proteasomal degradation of SMADs depend on the direct interaction of specific E3 ligases with SMADs. SMAD4 is targeted for degradation by multiple ubiquitin ligases that can simultaneously act on R-SMADs and signaling receptors. Such mechanisms of down-regulation of TGF<math>\beta</math> signaling via degradation of SMADs may be critical for proper physiological response to this pathway.</p> |
| <b>Form</b>             | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Molecular Mass</b>   | ~95 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|                         |                                                                                                                                                                                                                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>           | >80%                                                                                                                                                                                                                                                                                  |
| <b>Applications</b>     | Kinase Assay, Western Blot                                                                                                                                                                                                                                                            |
| <b>Storage</b>          | Store at –70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. Avoid freeze/thaw cycles.                                                                                                                      |
| <b>Concentration</b>    | 0.2 µg/µl                                                                                                                                                                                                                                                                             |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                                                       |
| <b>Gene Name</b>        | DCP1A DCP1 decapping enzyme homolog A ( <i>S. cerevisiae</i> ) [ <i>Homo sapiens</i> ]                                                                                                                                                                                                |
| <b>Official Symbol</b>  | DCP1A                                                                                                                                                                                                                                                                                 |
| <b>Synonyms</b>         | DCP1A; DCP1 decapping enzyme homolog A ( <i>S. cerevisiae</i> ); mRNA-decapping enzyme 1A; HSA275986; SMAD4IP1; SMIF; decapping enzyme hDcp1a; transcription factor SMIF; putative protein product of Nbla00360; Smad4-interacting transcriptional co-activator; Nbla00360; FLJ21691; |
| <b>Gene ID</b>          | 55802                                                                                                                                                                                                                                                                                 |
| <b>mRNA Refseq</b>      | NM_018403                                                                                                                                                                                                                                                                             |
| <b>Protein Refseq</b>   | NP_060873                                                                                                                                                                                                                                                                             |
| <b>MIM</b>              | 607010                                                                                                                                                                                                                                                                                |
| <b>UniProt ID</b>       | Q9NPI6                                                                                                                                                                                                                                                                                |
| <b>Chromosome</b>       | 3p21.1                                                                                                                                                                                                                                                                                |

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| Location |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pathway  | Deadenylation-dependent mRNA decay, organism-specific biosystem; Decapping complex, organism-specific biosystem; Decapping complex, conserved biosystem; Destabilization of mRNA by Butyrate Response Factor 1 (BRF1), organism-specific biosystem; Destabilization of mRNA by Tristetraprolin (TTP), organism-specific biosystem; Gene Expression, organism-specific biosystem; RNA degradation, organism-specific biosystem; |
| Function | hydrolase activity; identical protein binding; protein binding;                                                                                                                                                                                                                                                                                                                                                                |

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