Active Recombinant Full Length Human SMAD2 Protein, C-Flag-tagged

Cat. No. SMAD2-350HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Full Length Human SMAD2 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian Cells
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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Form	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.
Bio-activity	Co-immunoprecipitation
Molecular Mass	52.1 kDa
AA Sequence	MSSILPFTPPVVKRLLGWKKSAGGSGGAGGGEQNGQEEKWCEKAVKSLVKKLKKT GRLDELEKAITTQNC NTKCVTIPSTCSEIWGLSTPNTIDQWDTTGLYSFSEQTRSLD GRLQVSHRKGLPHVIYCRLWRWPDLHSH HELKAIENCEYAFNLKKDEVCVNPYHY QRVETPVLPPVLVPRHTEILTELPPLDDYTHSIPENTNFPAGI EPQSNYIPETPPPGYI SEDGETSDQQLNQSMDTGSPAELSPTTLSPVNHSLDLQPVTYSEPAFWCSIAYY EL NQRVGETFHASQPSLTVDGFTDPSNSERFCLGLLSNVNRNATVEMTRRHIGRGVRL YYIGGEVFAECL SDSAIFVQSPNCNQRYGWHPATVCKIPPGCNLKIFNNQEFAALLA QSVNQGFEAVYQLTRMCTIRMSFVK GWGAEYRRQTVTSTPCWIELHLNGPLQWLDKVLTQMGSPSVRCSSMSTRTRPLEQ KLISEEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining.
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade.
Concentration	>50 ug/mL as determined by microplate BCA method.
Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Protein Families	Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell

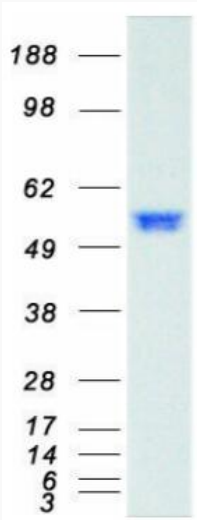
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	Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transcription Factors
Protein Pathways	Adherens junction, Cell cycle, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway, Wnt signaling pathway
Full Length	Full L.

GENE INFORMATION

Gene Name	SMAD2 SMAD family member 2 [Homo sapiens (human)]
Official Symbol	SMAD2
Synonyms	JV18; LDS6; CHTD8; MADH2; MADR2; JV18-1; hMAD-2; hSMAD2
Gene ID	4087
mRNA Refseq	NM_005901.6
Protein Refseq	NP_005892.1
MIM	601366
UniProt ID	Q15796

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Coomassie blue staining of purified SMAD2 protein.

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