

Active Recombinant Full Length Human SMAD4 Protein, C-Flag-tagged

Cat. No. SMAD4-288HFL Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Full Length Human SMAD4 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian Cells
Description	This gene encodes a member of the Smad family of signal transduction proteins. Smad proteins are phosphorylated and activated by transmembrane serine-threonine receptor kinases in response to transforming growth factor (TGF)-beta signaling. The product of this gene forms homomeric complexes and heteromeric complexes with other activated Smad proteins, which then accumulate in the nucleus and regulate the transcription of target genes. This protein binds to DNA and recognizes an 8-bp palindromic sequence (GTCTAGAC) called the Smad-binding element (SBE). The protein acts as a tumor suppressor and inhibits epithelial cell proliferation. It may also have an inhibitory effect on tumors by reducing angiogenesis and increasing blood vessel hyperpermeability. The encoded protein is a crucial component of the bone morphogenetic protein signaling pathway. The Smad proteins are subject to complex regulation by post-translational modifications. Mutations or deletions in this gene have been shown to result in pancreatic cancer, juvenile polyposis syndrome, and hereditary hemorrhagic telangiectasia syndrome.
Form	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.

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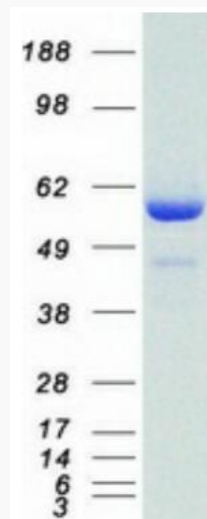
Bio-activity	Co-immunoprecipitation
Molecular Mass	60.3 kDa
AA Sequence	MDNMSITNTPTSNDACLSIVHSLMCHRQGGESETFAKRAIESLVKKLKEKKDELDSL TAITNGAHPSK CVTIQRTLDGRLQVAGRKGFPVHIYARLWRWPD LHKNELKHVKY CQYAFDLKCDSCVNPYHYERVVSPG IDLSGLTLQSNAPSSMMVKDEYVHDFEGQ PSLSTEGHSIQTIQHPPSNRASTETYSTPALLAPSES NATS TANFPNIPVASTSQPAS ILGGSHSEGLLQIASGPQPGQQQNGFTGQPATYHHNSTTTWTGSRTAPYTPNL PH HQNGHLQHHPMPHPGHYWPVHNELAFQPPISNHPAPEYWCSIAYFEMDVQVGE TFKVPSSCPIVTV DGYVDPSGGDRFCLGQLSNVHRTEAIERARLHIGKGVQLECKG EGDVWVRCLSDHAVFVQSYLDREAGR APGDAVHKIYPSAYIKVFDLRQCHRQMQ QQAATAQAAAAAQA AAVAGNIPGPGSVGGIAPAISLSAAAGI GVDDLRLRCILRMSFVKGWGPDYPRQSIKETPCWIEIHLHRA LQLLDEV LHTMPIADP QPLDTRTRPLEQKLISEEDLAANDILDYKDDDDKV
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	Druggable Genome, Transcription Factors

Protein Pathways	Adherens junction, Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway, Wnt signaling pathway
Full Length	Full L.
GENE INFORMATION	
Gene Name	SMAD4 SMAD family member 4 [Homo sapiens (human)]
Official Symbol	SMAD4
Synonyms	JIP; DPC4; MADH4; MYHRS
Gene ID	4089
mRNA Refseq	NM_005359.6
Protein Refseq	NP_005350.1
MIM	600993
UniProt ID	Q13485

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Coomassie blue staining of purified SMAD4 protein.