Mothers Against Decapentaplegic Homolog 2 (SMAD2) Bovine Recombinant Protein

PRODUCT OVERVIEW

Product Name	Mothers against decapentaplegic homolog 2 (SMAD2), Recombinant Protein
Full Product Name	Recombinant Bovine Mothers against decapentaplegic homolog 2 (SMAD2)
Product Gene Name	SMAD2 recombinant protein
Product Synonym Gene Name	SMAD2
Sequence	SSILPFTPPV VKRLLGWKKS AGGSGGAGGG EQNGQEEKWC EKAVKSLVKK LKKTGRLDEL EKAITTQNCN TKCVTIPSTC SEIWGLSTPN TIDQWDTTGL YSFSEQTRSL DGRLQVSHRK GLPHVIYCRL WRWPDLHSHH ELKAIENCEY AFNLKKDEVC VNPYHYQRVE TPVLPPVLVP RHTEILTELP PLDDYTHSIP ENTNFPAGIE PQSNYIPETP PPGYISEDGE TSDQQLNQSM DTGSPAELSP TTLSPVNHSL DLQPVTYSEP AFWCSIAYYE LNQRVGETFH ASQPSLTVDG FTDPSNSERF CLGLLSNVNR NATVEMTRRH IGRGVRLYYI GGEVFAECLS DSAIFVQSPN CNQRYGWHPA TVCKIPPGCN LKIFNNQGFA ALLAQSVNQG FEAVYQLTRM CTIRMSFVKG WGAEYRRQTV TSTPCWIELH LNGPLQWLDK VLTQMGSPSV RCSSMS
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	52,234 Da
Sequence Positions	2-467, full length protein
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q1W668
Species	Bovine
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for SMAD2 recombinant protein	This protein 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 encoding the same protein have been observed.
Other Notes	Small volumes of SMAD2 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for SMAD2 purchase	MBS1330389 is a recombinant protein targeting SMAD2. Also known as Recombinant Bovine Mothers against decapentaplegic homolog 2 (SMAD2). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SMAD2. It may not necessarily be applicable to this product.

NCBI GI #	114051079
NCBI GeneID	516010
NCBI Accession #	NP_001039683.1
UniProt Primary Accession #	Q1W668
UniProt Related Accession #	Q1W668
GenBank Nucleotide #	NM_001046218.1
NCBI Official Full Name	mothers against decapentaplegic homolog 2
NCBI Official Synonym Full Names	SMAD family member 2
NCBI Official Symbol	SMAD2
UniProt Protein Name	Mothers against decapentaplegic homolog 2
UniProt Synonym Protein Names	SMAD family member 2; SMAD 2; Smad2
Protein Family	Mothers against decapentaplegic
UniProt Gene Name	SMAD2
UniProt Synonym Gene Names	MAD homolog 2; Mothers against DPP homolog 2; SMAD 2; Smad2
NCBI Protein Information	mothers against decapentaplegic homolog 2
UniProt Comments for SMAD2	Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD2/SMAD4 complex, activates transcription. May act as a tumor suppressor in colorectal carcinoma. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator ().
Research Articles on SMAD2	**1.** the present work provides evidence supporting a functional role of SMAD2/3 in bovine early embryogenesis
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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