SMAD2 Antibody – Polyclonal

PRODUCT OVERVIEW

Product Name	Smad2, Polyclonal Antibody
Full Product Name	Smad2 (phospho Thr220) Polyclonal Antibody
Product Gene Name	anti-Smad2 antibody
Clonality	Polyclonal
Molecular Weight	48,956 Da
OMIM	601366
3D Structure	ModBase 3D Structure for Q15796
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for anti-Smad2 antibody	MBS8520959 is an antibody targeting Smad2. Also known as Smad2 (phospho Thr220) Polyclonal Antibody.
Other Notes	Small volumes of anti-Smad2 antibody 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Smad2. It may not necessarily be applicable to this product.

NCBI GI #	51173730
NCBI GeneID	4087
NCBI Accession #	NP_001003652.1
UniProt Primary Accession #	Q15796
UniProt Related Accession #	Q15796
GenBank Nucleotide #	NM_001003652.3
NCBI Official Full Name	mothers against decapentaplegic homolog 2 isoform 1
NCBI Official Synonym Full Names	SMAD family member 2
NCBI Official Symbol	SMAD2
NCBI Official Synonym Symbols	JV18; MADH2; MADR2; JV18-1; hMAD-2; hSMAD2
UniProt Protein Name	Mothers against decapentaplegic homolog 2
UniProt Synonym Protein Names	JV18-1; Mad-related protein 2; hMAD-2; SMAD family member 2; SMAD 2; Smad2; hSMAD2
Protein Family	Mothers against decapentaplegic
UniProt Gene Name	SMAD2
UniProt Synonym Gene Names	MADH2; MADR2; MAD homolog 2; Mothers against DPP homolog 2; hMAD-2; SMAD 2; Smad2; hSMAD2
NCBI Protein Information	mothers against decapentaplegic homolog 2

NCBI Summary for Smad2	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. [provided by RefSeq, May 2012]
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.** Kidney samples from patients with advanced stages of diabetic nephropathy showed elevated pSmad2 staining.
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