SMAD4 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	SMAD4, Monoclonal Antibody
Full Product Name	SMAD4 (SMAD Family Member 4, DPC4, JIP, MADH4) (APC)
Product Gene Name	anti-SMAD4 antibody
Product Synonym Names	SMAD Family Member 4; DPC4; JIP; MADH4
Clonality	Monoclonal
Isotype	IgG2a,k
Clone Number	4A6
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Allophycocyanin (APC).
Purity/Purification	Purified
Specificity	Recognizes SMAD4.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amo to immediate use. Further dilutions can be made in assay buffer. Caution: APC conjugates are sensitive to light. For maximum recovery of product, cen original vial prior to removing the cap.
Molecular Weight	62.6 kDa (572 aa)
OMIM	114500
3D Structure	ModBase 3D Structure for Q13485
Immunogen	SMAD4 (NP_005350, 56aa-165aa) partial recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	SLITAITTNGAHPSKCVTIQRTLDGRLQVAGRKGFPHVIYARLWRWPDLHKNELKHVKYCQYAFDLKCDSVCVNPYHYERVVSPGIDLSGLTLQSNAPSSM
Conjugate	APC
Product Categories/Family for anti-SMAD4 antibody	Antibodies; Smad Proteins
Applications Tested/Suitable for anti-SMAD4 antibody	ELISA (EIA), Western Blot (WB)
Application Notes for anti-SMAD4 antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-SMAD4 antibody	MBS6167566 is an antibody targeting SMAD4. Also known as SMAD4 (SMAD Family Member 4, DPC4, JIP, MADH4) (APC). Host: Mouse. Mouse mo antibody raised against a partial recombinant SMAD4.

Other Notes	Small volumes of anti-SMAD4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If neces 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 may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SMAD4. It may not necessarily be applicable to this product.

NCBI GI #	4885457
NCBI GeneID	4089
NCBI Accession #	NP_005350
UniProt Primary Accession #	Q13485
UniProt Secondary Accession #	A8K405
UniProt Related Accession #	Q13485
GenBank Nucleotide #	NM_005359.5
NCBI Official Full Name	mothers against decapentaplegic homolog 4
NCBI Official Synonym Full Names	SMAD family member 4
NCBI Official Symbol	SMAD4
NCBI Official Synonym Symbols	JIP; DPC4; MADH4; MYHRS
UniProt Protein Name	Mothers against decapentaplegic homolog 4
UniProt Synonym Protein Names	Deletion target in pancreatic carcinoma 4; SMAD family member 4
Protein Family	Mothers against decapentaplegic
UniProt Gene Name	SMAD4
UniProt Synonym Gene Names	DPC4; MADH4; MAD homolog 4; Mothers against DPP homolog 4; SMAD 4; Smad4; hSMAD4
UniProt Entry Name	SMAD4_HUMAN
NCBI Protein Information	mothers against decapentaplegic homolog 4
NCBI Summary for SMAD4	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 increasng 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. [provided by RefSeq, Aug 2017]

UniProt Comments for SMAD4	SMAD4: transcription factor that mediates signal transduction by the transforming growth factor superfamily. The common smad (co-smad). Binds directly to consensus DNA-binding elements in the promoters of target genes. Promotes binding of the Smad2/Smad4/Fast-1 complex to DNA and provides an activation function required for Smad1 or Smad2 to stimulate transcription. Protein type: Nuclear receptor co-regulator; Transcription, coactivator/corepressor; DNA-binding Chromosomal Location of Human Ortholog: 18q21.1 Cellular Component: nucleoplasm; centrosome; transcription factor complex; cytoplasm; nuclear chromatin; nucleus; cytosol Molecular Function: collagen binding; identical protein binding; protein binding; protein homodimerization activity; transforming growth factor beta receptor, common-partner cytoplasmic mediator activity; DNA binding; sequence-specific DNA binding; metal ion binding; chromatin binding; transcription factor activity Biological Process: developmental growth; axon guidance; somatic stem cell maintenance; positive regulation of transcription, DNA-dependent; sebaceous gland development; negative regulation of transcription from RNA polymerase II promoter; palate development; BMP signaling pathway; negative regulation of cell proliferation; regulation of transforming growth factor beta receptor signaling pathway; transforming growth factor beta receptor signaling pathway; mesoderm development; neural crest cell differentiation; positive regulation of BMP signaling pathway; transcription initiation from RNA polymerase II promoter; regulation of transforming growth factor-beta2 production; transcription, DNA-dependent; regulation of binding; in utero embryonic development; neuron fate commitment; positive regulation of transforming growth factor beta receptor signaling pathway; gastrulation with mouth forming second; somite rostral/caudal axis specification; formation of anatomical boundary; SMAD protein complex assembly; endothelial cell activation; cell proliferation; ureteric bud branching; response to hypoxia; positive regulation of transcription from RNA polymerase II promoter; gene expression; regulation of hair follicle development; negative regulation of cell growth; negative regulation of transcription, DNA-dependent; negative regulation of protein catabolic process; endoderm development Disease: Pancreatic Cancer; Juvenile Polyposis Syndrome; Myhre Syndrome; Juvenile Polyposis/hereditary Hemorrhagic Telangiectasia Syndrome
Research Articles on SMAD4	**1.** miR-20a-5p, as an onco-miRNA, promoted the invasion and metastasis ability by suppressing Smad4 expression in colorectal cancer cells.
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