Smad3 Blocking Peptide (Center) Blocking Peptide

PRODUCT OVERVIEW

Product Name	Smad3, Blocking Peptide
Full Product Name	Smad3 Blocking Peptide (Center)
Product Gene Name	Smad3 blocking peptide
Product Synonym Gene Name	Madh3
Product Synonym Names	Mothers against decapentaplegic homolog 3; MAD homolog 3; Mad3; Mothers against DPP homolog 3; mMad3; SMAD family member 3; SMAD 3; Smad3; Smad3; Madh3
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Specificity	The synthetic peptide sequence is selected from aa 188-202 of HUMAN Smad3
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	Smad3 peptide (MBS9229835) is used for blocking the activity of Smad3 antibody (MBS9214692)
Molecular Weight	48,081 Da
Cellular Location	Cytoplasm. Nucleus. Note: Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4. Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1. Co-localizes with LEMD3 at the nucleus inner membrane MAPK-mediated phosphorylation appears to have no effect on nuclear import. PDPK1 prevents its nuclear translocation in response to TGF-beta (By similarity).
Tissue Location	Highly expressed in the brain and ovary. Detected in the pyramidal cells of the hippocampus, granule cells of the dentate gyrus, granular cells of the cerebral cortex and the granulosa cells of the ovary.
Related Product Information for Smad3 blocking peptide	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 SMAD3/SMAD4 complex, activates transcription. Also can form a SMAD3/SMAD4/JUN/FOS complex at the AP-1/SMAD site to regulate TGF-beta-mediated transcription. Has an inhibitory effect on wound healing probably by modulating both growth and migration of primary keratinocytes and by altering the TGF- mediated chemotaxis of monocytes. This effect on wound healing appears to be hormone-sensitive. Regulator of chondrogenesis and osteogenesis and inhibits early healing of bone fractures. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator (By similarity).
Other Notes	Small volumes of Smad3 blocking peptide 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 Smad3 purchase	MBS9229835 is a blocking peptide targeting Smad3. Also known as Smad3 Blocking Peptide (Center).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Smad3. It may not necessarily be applicable to this product.

NCBI GI #	60414856
NCBI GeneID	17127
NCBI Accession #	Q8BUN5.2
UniProt Primary Accession #	Q8BUN5

UniProt Secondary Accession #	O09064; O09144; O14510; O35273; Q8BX84; Q92940; Q93002; Q9GKR4
UniProt Related Accession #	Q8BUN5
NCBI Official Full Name	Mothers against decapentaplegic homolog 3
NCBI Official Synonym Full Names	SMAD family member 3
NCBI Official Symbol	Smad3
NCBI Official Synonym Symbols	Madh3; AU022421
UniProt Protein Name	Mothers against decapentaplegic homolog 3
UniProt Synonym Protein Names	SMAD family member 3; SMAD 3; Smad3
Protein Family	Mothers against decapentaplegic
UniProt Gene Name	Smad3
UniProt Synonym Gene Names	Madh3; MAD homolog 3; Mad3; Mothers against DPP homolog 3; mMad3; SMAD 3; Smad3
UniProt Entry Name	SMAD3_MOUSE
NCBI Protein Information	mothers against decapentaplegic homolog 3
UniProt Comments for Smad3	SMAD3: transcription factor phosphorylated and activated by TGF-beta-type receptors. A receptor-regulated Smad (R-smad). Binds directly to consensus DNA-binding elements in the promoters of target genes. In mouse required for establishemnt of the mucosal immune response and proper development of skeleton. Protein type: DNA-binding; Transcription factor; Nuclear receptor co-regulator Cellular Component: cytoplasm; nuclear chromatin; nuclear inner membrane; nucleoplasm; nucleus; plasma membrane; protein complex; receptor complex; transcription factor complex Molecular Function: beta-catenin binding; bHLH transcription factor binding; chromatin binding; chromatin DNA binding; collagen binding; DNA binding; double-stranded DNA binding; enzyme binding; identical protein binding; phosphatase binding; protein binding; protein heterodimerization activity; protein homodimerization activity; protein kinase binding; sequence-specific DNA binding; SMAD binding; transcription factor activity; transcription factor binding; transforming growth factor beta receptor binding; transforming growth factor beta receptor, pathway-specific cytoplasmic mediator activity; ubiquitin binding; ubiquitin protein ligase binding; zinc ion binding Biological Process: activin receptor signaling pathway; caspase activation; cell cycle arrest; developmental growth; embryonic cranial skeleton morphogenesis; embryonic foregut morphogenesis; embryonic pattern specification; endoderm development; evasion of host defenses by virus; gastrulation; heart looping; immune response; immune system development; in utero embryonic development; intercellular junction assembly and maintenance; liver development; mesoderm formation; negative regulation of apoptosis; negative regulation of cell growth; negative regulation of cell proliferation; negative regulation of fat cell differentiation; negative regulation of inflammatory response; negative regulation of mitotic cell cycle; negative regulation of osteoblast differentiation; negative regulation of osteoblast proliferation; negative regulation of protein catabolic process; negative regulation of transcription from RNA polymerase II promoter; osteoblast development; osteoblast differentiation; paraxial mesoderm morphogenesis; pericardium development; positive regulation of bone mineralization; positive regulation of cell migration; positive regulation of chondrocyte differentiation; positive regulation of focal adhesion formation; positive regulation of interleukin-1 beta production; positive regulation of positive chemotaxis; positive regulation of stress fiber formation; positive regulation of transcription factor import into nucleus; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription, DNA-dependent; positive regulation of transforming growth factor-beta3 production; protein stabilization; regulation of binding; regulation of epithelial cell proliferation; regulation of immune response; regulation of striated muscle development; regulation of transcription from RNA polymerase II promoter; regulation of transforming growth factor beta receptor signaling pathway; regulation of transforming growth factor-beta2 production; response to hypoxia; skeletal development; SMAD protein complex assembly; somitogenesis; T cell activation; thyroid gland development; transcription from RNA polymerase II promoter; transforming growth factor beta receptor signaling pathway; transport; Wnt receptor signaling pathway through beta-catenin
Research Articles on Smad3	**1.** Suggest that hyperoxia-increased high-tidal-volume ventilation-induced acute lung injury partially depends on the Src and Smad3 pathways.

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.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.
Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/blocking-peptide/smad3/9229835