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(Mouse) Smad2 Blocking Peptide (Center)

Synthetic peptide
Catalog # BP21006a

Specification

(Mouse) Smad2 Blocking Peptide (Center) - Product Information

Primary Accession	Q62432
Other Accession	P84025, P84024, Q8BUN5, P84022, P84023, O70436, O15796, Q1W668

(Mouse) Smad2 Blocking Peptide (Center) - Additional Information

Gene ID 17126

Other Names
Mothers against decapentaplegic homolog 2, MAD homolog 2, Mothers against DPP homolog 2, Mad-related protein 2, mMad2, SMAD family member 2, SMAD 2, Smad2, Smad2, Madh2, Madr2

Target/Specificity
The synthetic peptide sequence is selected from aa 198-212 of HUMAN Smad2

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

(Mouse) Smad2 Blocking Peptide (Center) - Protein Information

Name Smad2

(Mouse) Smad2 Blocking Peptide (Center) - Background

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 (By similarity).

(Mouse) Smad2 Blocking Peptide (Center) - References

Baker J.C.,et al.Genes Dev. 10:1880-1889(1996).
Devereux T.R.,et al.Carcinogenesis 18:1751-1755(1997).
Bernard D.J.,et al.Mol. Endocrinol. 18:606-623(2004).
Carninci P.,et al.Science 309:1559-1563(2005).
Weinstein M.,et al.Cytokine Growth Factor Rev. 11:49-58(2000).

Synonyms Madh2, Madr2

Function
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 (By similarity).

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 (PubMed:21145499). On dephosphorylation by phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1 (By similarity) Localized mainly to the nucleus in the early stages of embryo development with expression becoming evident in the cytoplasm at the blastocyst and epiblast stages (PubMed:21145499) {ECO:0000250|UniProtKB:Q15796, ECO:0000269|PubMed:21145499}

(Mouse) Smad2 Blocking Peptide (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides