

(Mouse) Smad1 Blocking Peptide (Center)
Synthetic peptide
Catalog # BP21203c

Specification

(Mouse) Smad1 Blocking Peptide (Center) - Product Information

Primary Accession [P70340](#)

(Mouse) Smad1 Blocking Peptide (Center) - Additional Information

Gene ID 17125

Other Names

Mothers against decapentaplegic homolog 1, MAD homolog 1, Mothers against DPP homolog 1, Dwarf-A, Dwf-A, Mothers-against-DPP-related 1, Mad-related protein 1, mMad1, SMAD family member 1, SMAD 1, Smad1, Smad1, Madh1, Madr1

Target/Specificity

The synthetic peptide sequence is selected from aa 154-167 of HUMAN Smad1

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) Smad1 Blocking Peptide (Center) - Protein Information

Name Smad1

Synonyms Madh1, Madr1

Function

Transcriptional modulator that plays a role in various cellular processes, including embryonic development, cell differentiation, and tissue homeostasis (PubMed:11566864, PubMed:15329343, PubMed:21420501, PubMed:35594155). Upon BMP ligand binding to their receptors at the cell surface, is phosphorylated by activated type I BMP receptors (BMPRI) and associates with SMAD4 to form an heteromeric complex which translocates into the nucleus acting as transcription factor. In turn, the hetero-trimeric complex recognizes cis-regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network. SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300

repressor SNIP1 (By similarity). Positively regulates BMP4-induced expression of odontogenic development regulator MSX1 following IPO7- mediated nuclear import (PubMed:34995814).

Cellular Location

Cytoplasm. Nucleus Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4. Co-localizes with LEMD3 at the nucleus inner membrane (By similarity). Exported from the nucleus to the cytoplasm when dephosphorylated PubMed:25755279. {ECO:0000250|UniProtKB:Q15797, ECO:0000269|PubMed:25755279}

Tissue Location

Ubiquitous.

(Mouse) Smad1 Blocking Peptide (Center) - Protocols

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

- [Blocking Peptides](#)

(Mouse) Smad1 Blocking Peptide (Center) - Images**(Mouse) Smad1 Blocking Peptide (Center) - Background**

Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. SMAD1 is a receptor-regulated SMAD (R-SMAD) (By similarity). May play a role in the initiation and maintenance of spermatogenesis. SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1 (By similarity). May act synergistically with SMAD4 and YY1 in bone morphogenetic protein (BMP)-mediated cardiac-specific gene [removed]PubMed:15329343).

(Mouse) Smad1 Blocking Peptide (Center) - References

Yingling J.M.,et al.Proc. Natl. Acad. Sci. U.S.A. 93:8940-8944(1996).
Zhao G.-Q.,et al.Mech. Dev. 61:63-73(1997).
Huang S.,et al.Gene 258:43-53(2000).
Carninci P.,et al.Science 309:1559-1563(2005).
Miura S.,et al.Mol. Cell. Biol. 20:9346-9355(2000).