

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

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**(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:<a href="http://www.uniprot.org/citations/11566864" target="\_blank">11566864</a>, PubMed:<a href="http://www.uniprot.org/citations/15329343" target="\_blank">15329343</a>, PubMed:<a href="http://www.uniprot.org/citations/21420501" target="\_blank">21420501</a>, PubMed:<a href="http://www.uniprot.org/citations/35594155" target="\_blank">35594155</a>). 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 a 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:<a href="http://www.uniprot.org/citations/34995814" target="\_blank">34995814</a>).

#### **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).