

**SMAD1 Blocking Peptide (Center)**  
**Synthetic peptide**  
**Catalog # BP20642c****Specification**

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**SMAD1 Blocking Peptide (Center) - Product Information**

Primary Accession [Q15797](#)  
Other Accession [P97588](#), [P70340](#), [Q1JQA2](#)

**SMAD1 Blocking Peptide (Center) - Additional Information**

**Gene ID** 4086

**Other Names**

Mothers against decapentaplegic homolog 1, MAD homolog 1, Mothers against DPP homolog 1, JV4-1, Mad-related protein 1, SMAD family member 1, SMAD 1, Smad1, hSMAD1, Transforming growth factor-beta-signaling protein 1, BSP-1, SMAD1, BSP1, MADH1, MADR1

**Target/Specificity**

The synthetic peptide sequence is selected from aa 163-176 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.

**SMAD1 Blocking Peptide (Center) - Protein Information**

**Name** SMAD1

**Synonyms** BSP1, 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/9335504" target="\_blank">9335504</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 an heteromeric complex which translocates into the nucleus acting as transcription factor (PubMed:<a href="http://www.uniprot.org/citations/33667543" target="\_blank">33667543</a>). In turn, the hetero-trimeric complex recognizes cis-regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network (PubMed:<a href="http://www.uniprot.org/citations/33667543" target="\_blank">33667543</a>).

SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1. Positively regulates BMP4-induced expression of odontogenic development regulator MSX1 following IPO7-mediated nuclear import (By similarity).

**Cellular Location**

Cytoplasm. Nucleus Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4 (PubMed:15647271). Co-localizes with LEMD3 at the nucleus inner membrane (PubMed:15647271). Exported from the nucleus to the cytoplasm when dephosphorylated (By similarity) {ECO:0000250|UniProtKB:P70340, ECO:0000269|PubMed:15647271}

**Tissue Location**

Ubiquitous. Highest expression seen in the heart and skeletal muscle

**SMAD1 Blocking Peptide (Center) - Protocols**

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

- [Blocking Peptides](#)

**SMAD1 Blocking Peptide (Center) - Images****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). SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1.

**SMAD1 Blocking Peptide (Center) - References**

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Liu F.,et al.Nature 381:620-623(1996).  
Hoodless P.A.,et al.Cell 85:489-500(1996).  
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Zhang Y.,et al.Nature 383:168-172(1996).