

**Smad4 Blocking Peptide**  
**Catalog # PBV10196b****Specification**

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**Smad4 Blocking Peptide - Product Information**

Primary Accession	<a href="#">Q13485</a>
Other Accession	<a href="#">BAB40977</a>
Gene ID	<b>4089</b>
Calculated MW	<b>60439</b>

**Smad4 Blocking Peptide - Additional Information****Gene ID** 4089**Application & Usage**

The peptide is used for blocking the antibody activity of Smad4. It usually blocks the antibody activity completely in Western blot analysis by incubating the peptide with equal volume of antibody for 30-60 minutes at 37°C.

**Other Names**

Mothers against decapentaplegic homolog 4, MAD homolog 4, Mothers against DPP homolog 4, Deletion target in pancreatic carcinoma 4, SMAD family member 4, SMAD 4, Smad4, hSMAD4, SMAD4, DPC4, MADH4

**Target/Specificity**

Smad4

**Formulation**

50 µg(0.5 mg/ml) in phosphate buffered saline (PBS), pH 7.2, containing 0.1% BSA and 0.02% thimerosal.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

Smad4 Blocking Peptide is for research use only and not for use in diagnostic or therapeutic procedures.

**Smad4 Blocking Peptide - Protein Information****Name** SMAD4**Synonyms** DPC4, MADH4

**Function**

In muscle physiology, plays a central role in the balance between atrophy and hypertrophy. When recruited by MSTN, promotes atrophy response via phosphorylated SMAD2/4. MSTN decrease causes SMAD4 release and subsequent recruitment by the BMP pathway to promote hypertrophy via phosphorylated SMAD1/5/8. Acts synergistically with SMAD1 and YY1 in bone morphogenetic protein (BMP)-mediated cardiac- specific gene expression. Binds to SMAD binding elements (SBEs) (5'- GTCT/AGAC-3') within BMP response element (BMPRE) of cardiac activating regions (By similarity). Common SMAD (co-SMAD) is the coactivator and mediator of signal transduction by TGF-beta (transforming growth factor). Component of the heterotrimeric SMAD2/SMAD3-SMAD4 complex that forms in the nucleus and is required for the TGF-mediated signaling (PubMed:<a href="http://www.uniprot.org/citations/25514493" target="\_blank">25514493</a>). Promotes binding of the SMAD2/SMAD4/FAST-1 complex to DNA and provides an activation function required for SMAD1 or SMAD2 to stimulate transcription. Component of the multimeric SMAD3/SMAD4/JUN/FOS complex which forms at the AP1 promoter site; required for synergistic transcriptional activity in response to TGF- beta. May act as a tumor suppressor. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.

**Cellular Location**

Cytoplasm. Nucleus Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with R-SMAD (PubMed:15799969). PDPK1 prevents its nuclear translocation in response to TGF-beta (PubMed:17327236)

**Smad4 Blocking Peptide - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Smad4 Blocking Peptide - Images**