

**Smad4 antibody - middle region**  
**Rabbit Polyclonal Antibody**  
**Catalog # AI10401****Specification****Smad4 antibody - middle region - Product Information**

Application	WB
Primary Accession	<a href="#">P97471</a>
Other Accession	<a href="#">NM_008540</a> , <a href="#">NP_032566</a>
Reactivity	Human, Mouse, Rat, Zebrafish, Goat, Sheep, Horse, Bovine, Dog
Predicted	Human, Mouse, Rat, Pig, Goat, Bovine, Guinea Pig
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60kDa KDa

**Smad4 antibody - middle region - Additional Information****Gene ID** 17128**Alias Symbol** **AW743858, D18Wsu70e, DPC4, Madh4****Other Names**

Mothers against decapentaplegic homolog 4, MAD homolog 4, Mothers against DPP homolog 4, Deletion target in pancreatic carcinoma 4 homolog, SMAD family member 4, SMAD 4, Smad4, Smad4, Dpc4, Madh4

**Format**

Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

**Reconstitution & Storage**

Add 50 ul of distilled water. Final anti-Smad4 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

**Precautions**

Smad4 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

**Smad4 antibody - middle region - Protein Information****Name** Smad4**Synonyms** Dpc4, Madh4**Function**

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. 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 (By similarity). Acts synergistically with SMAD1 and YY1 in bone morphogenetic protein (BMP)-mediated cardiac-specific gene expression (PubMed:<a href="http://www.uniprot.org/citations/15329343" target="\_blank">15329343</a>). Binds to SMAD binding elements (SBEs) (5'-GTCT/AGAC-3') within BMP response element (BMPRE) of cardiac activating regions (PubMed:<a href="http://www.uniprot.org/citations/15329343" target="\_blank">15329343</a>). 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.

### Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q13485}. Nucleus {ECO:0000250|UniProtKB:Q13485}. Note=In the cytoplasm in the absence of ligand. Migration to the nucleus when complexed with R-SMAD. PDPK1 prevents its nuclear translocation. {ECO:0000250|UniProtKB:Q13485}

### Tissue Location

Ubiquitous.

## Smad4 antibody - middle region - 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](#)

