

# Smad4 antibody - middle region

Rabbit Polyclonal Antibody

Catalog # AI10401

## Product Information

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<b>Application</b>	WB
<b>Primary Accession</b>	<a href="#">P97471</a>
<b>Other Accession</b>	<a href="#">NM_008540</a> , <a href="#">NP_032566</a>
<b>Reactivity</b>	Human, Mouse, Rat, Zebrafish, Dog, Bovine
<b>Predicted</b>	Human, Mouse, Rat, Pig, Bovine
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	60342

## Additional Information

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<b>Gene ID</b>	17128
<b>Alias Symbol</b>	AW743858, D18Wsu70e, DPC4, Madh4
<b>Other Names</b>	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
<b>Format</b>	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
<b>Reconstitution &amp; Storage</b>	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.
<b>Precautions</b>	Smad4 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	Smad4
<b>Synonyms</b>	Dpc4, Madh4
<b>Function</b>	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:[15329343](#)). Binds to SMAD binding elements (SBEs) (5'-GTCT/AGAC-3') within BMP response element (BMPRE) of cardiac activating regions (PubMed:[15329343](#)). 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

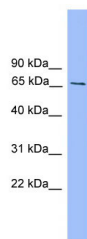
Cytoplasm {ECO:0000250|UniProtKB:Q13485}. Nucleus {ECO:0000250|UniProtKB:Q13485}. Note=In the cytoplasm in the absence of ligand. Migration to the nucleus when complexed with R-SMAD. PDPK1 prevents its nuclear translocation. {ECO:0000250|UniProtKB:Q13485}

#### Tissue Location

Ubiquitous.

## Images

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WB Suggested Anti-Smad4 Antibody Titration: .2-1 ug/ml  
ELISA Titer: 1:3125  
Positive Control: Mouse Brain

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.