

# SMAD4 antibody - middle region

Rabbit Polyclonal Antibody

Catalog # AI10038

## Product Information

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<b>Application</b>	WB
<b>Primary Accession</b>	<a href="#">Q13485</a>
<b>Other Accession</b>	<a href="#">Q13485</a> , <a href="#">NP_005350</a> , <a href="#">NM_005359</a>
<b>Reactivity</b>	Human, Mouse, Rat, Rabbit, Goat, Dog, Guinea Pig, Horse, Bovine, Sheep
<b>Predicted</b>	Human, Mouse, Rat, Pig, Goat, Guinea Pig, Horse, Bovine
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	60439

## Additional Information

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<b>Gene ID</b>	4089
<b>Alias Symbol</b>	JIP, DPC4, MADH4, MYHRS
<b>Other Names</b>	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
<b>Target/Specificity</b>	SMAD4 is one of the Smad family members, which are essential intracellular signalling components of the transforming growth factor-beta (TGF-beta) superfamily. Smad2 and Smad3 are structurally highly similar and mediate TGF-beta signals. Smad4 is distantly related to Smads 2 and 3, and forms a heteromeric complex with Smad2 after TGF-beta or activin stimulation. TGF-beta induces heteromeric complexes of Smads 2, 3 and 4, and their concomitant translocation to the nucleus, which is required for efficient TGF-beta signal transduction
<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 100 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 ( <a href="#">HGNC:6770</a> )
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## 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:[25514493](#)). 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.

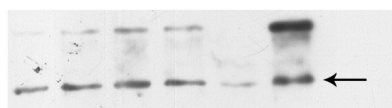
## Cellular Location

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)

## Background

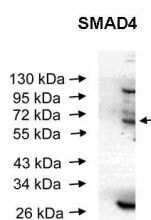
This is a rabbit polyclonal antibody against SMAD4. It was validated on Western Blot using a cell lysate as a positive control. Abgent strives to provide antibodies covering each member of a whole protein family of your interest. We also use our best efforts to provide you antibodies recognize various epitopes of a target protein. For availability of antibody needed for your experiment, please inquire ([sales@abgent.com](mailto:sales@abgent.com)).

## Images



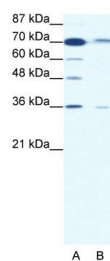
See Immunoblot 2 Data for more information.

SMAD4 antibody - middle region (AI10038) in Human U2OS cells using Western Blot  
Sample Type: Human nuclear cell extracts (30ug)  
Primary Dilution: 1:1000  
Secondary Antibody: anti-Rabbit HRP  
Secondary Dilution: 1:20000  
Image  
Submitted by: Katarina Luciakova  
Cancer Research Institute See Customer Feedback tab for detailed information.



See Immunoblot 2 Data for more information.

SMAD4 antibody - middle region (AI10038) in Human U2OS cells using Western Blot  
SMAD4 antibody - middle region (AI10038) validated by WB using U2OS nuclear extracts



SMAD4 antibody - middle region (AI10038) in Human  
HepG2 cells using Western Blot  
WB Suggested Anti-SMAD4 Antibody Titration: 1.25 µg/ml  
ELISA Titer: 1:312500  
Positive Control: HepG2 cell lysate

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