

# 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, MYHR5   |
| <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 |
|-------------|-------|

## 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.

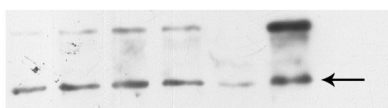
## Cellular Location

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

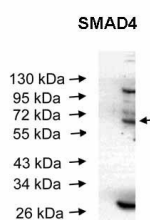
Secondary Antibody: anti-Rabbit HRP

Secondary Dilution: 1:20000

Image

Submitted by: Katarina Luciakova

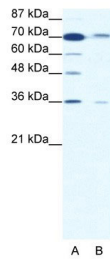
Cancer Research Institute See Customer Feedback tab for detailed information.



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'.