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SMAD4 antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI10038

Product Information

Application	WB
Primary Accession	Q13485
Other Accession	Q13485, NP_005350, NM_005359
Reactivity	Human, Mouse, Rat, Rabbit, Goat, Dog, Guinea Pig, Horse, Bovine, Sheep
Predicted	Human, Mouse, Rat, Pig, Goat, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60439

Additional Information

Gene ID	4089
Alias Symbol	JIP, DPC4, MADH4, MYHRS
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 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
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	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.
Precautions	SMAD4 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

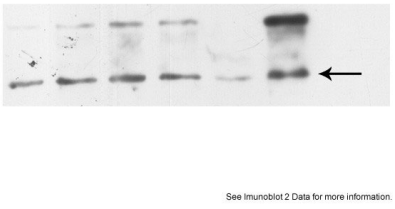
Name	SMAD4 (HGNC:6770)

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).

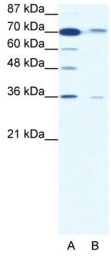
Images



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.



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'.