

Datasheet for ABIN5557399
anti-SMAD4 antibody



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3 Images

Overview

Quantity:	100 µL
Target:	SMAD4
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Monoclonal
Conjugate:	This SMAD4 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunofluorescence (Cultured Cells) (IF (cc))

Product Details

Immunogen:	Recombinant human Smad4 protein, around N-terminal 1-200aa.
Clone:	3A1
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Purification:	Purified by Protein A.

Target Details

Target:	SMAD4
Alternative Name:	Smad4 (SMAD4 Products)
Background:	Synonyms: JIP, DPC4, MADH4, MYHRS, Mothers against decapentaplegic homolog 4, MAD

Target Details

homolog 4, Mothers against DPP homolog 4, Deletion target in pancreatic carcinoma 4, SMAD family member 4, SMAD 4, Smad4, hSMAD4

Background: 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. 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.

Gene ID: 4089

UniProt: [Q13485](#)

Pathways: [Cell Division Cycle](#), [Chromatin Binding](#), [Autophagy](#)

Application Details

Application Notes: WB 1:300-5000
IHC-P 1:200-400
IF(ICC) 1:50-200

Restrictions: For Research Use only

Handling

Format: Liquid

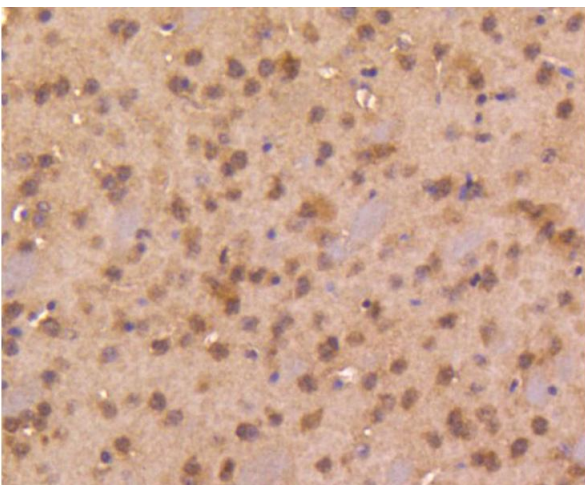
Concentration: 1 µg/µL

Buffer: Aqueous buffered solution containing 1xTBS (pH 7.4), 1 % BSA, 40 %Glycerol and 0.05 % Sodium Azide.

Handling

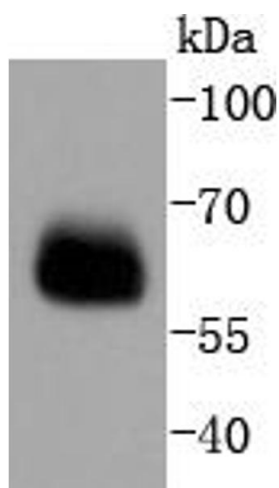
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.
Expiry Date:	12 months

Images



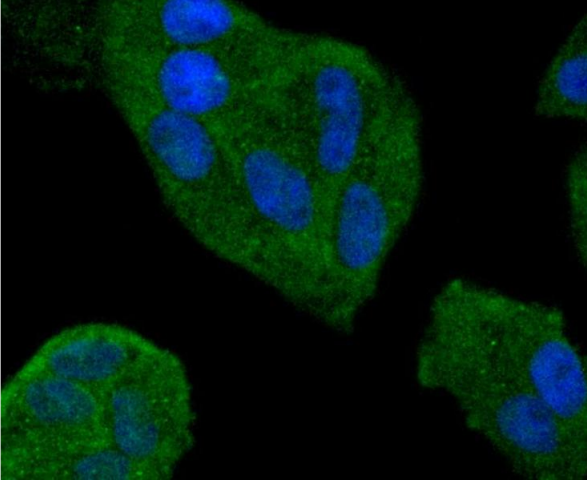
Western Blotting

Image 1. Paraformaldehyde-fixed, paraffin embedded mouse brain, Antigen retrieval by boiling in sodium citrate buffer (pH6) for 15min, Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes, Blocking buffer at 37°C for 20min, Antibody incubation with Smad4 (3A1) Monoclonal Antibody, at 1:50 overnight at 4°C, followed by a conjugated secondary and DAB staining.



Western Blotting

Image 2. Lane 1: PC-12 lysates probed with Smad4 (3A1) Monoclonal Antibody at 1:1000 overnight at 4°C. Followed by a conjugated secondary antibody.



Immunofluorescence (Cultured Cells)

Image 3. HeLa cells were stained with Smad4 (3A1) Monoclonal Antibody at [1:200] incubated overnight at 4C followed by secondary antibody incubation, DAPI staining of the nuclei and detection.