

Rabbit Smad4 Monoclonal Antibody | anti-Smad4 antibody

Anti-Smad4 Rabbit Monoclonal Antibody

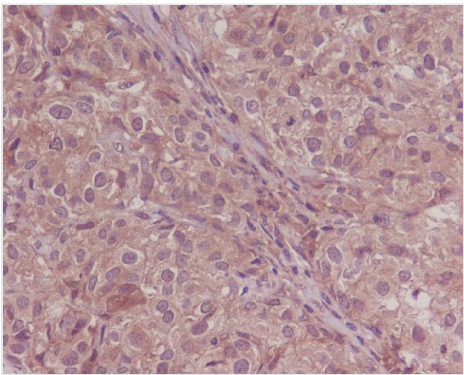
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA46863	Rabbit	Human, Mouse, Rat	Western Blot, Immunocytochemistry, Immunohistochemistry, Immunofluorescence, Flow Cytometry, Functional Assay

PRODUCT SYNONYMS

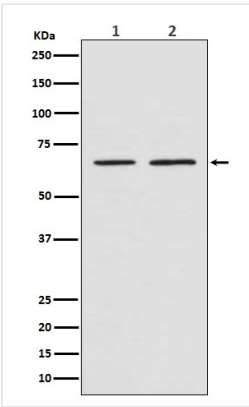
Smad4; Monoclonal Antibody; Anti-Smad4 Rabbit Monoclonal Antibody; Mothers against decapentaplegic homolog 4; MAD homolog 4; Mothers against DPP homolog 4; Deletion target in pancreatic carcinoma 4; SMAD family member 4; SMAD 4; hSMAD4; SMAD4; DPC4; MADH4; anti-Smad4 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Purity/Purification	Affinity-chromatography
Form/Format	Liquid
Sequence Length	552
Applicable Applications for anti-Smad4 antibody	WB (Western Blot), ICC (Immunocytochemistry), IHC (Immunohistochemistry), IF (Immunofluorescence), FCM/FACS (Flow Cytometry)
Immunogen	A synthesized peptide derived from human Smad4
Subcellular Localization	Cytoplasm. Nucleus. Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with R- SMAD. PDPK1 prevents its nuclear translocation in response to TGF- beta.
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



IHC (Immunohistochemistry)
Immunohistochemical analysis of paraffin-embedded human breast cancer, using Smad4 Antibody(AAA46863)SMAD4 was detected in paraffin-embedded tissue section. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-SMAD4 Antibody (AAA46863)overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)
Western blot analysis of SMAD4 expression in (1) SH-SY5Y cell lysate; (2) NIH/3T3 cell lysate (AAA46863).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SMAD4 monoclonal antibody overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for SMAD4

ADDITIONAL INFORMATION

Related Product Information for anti-Smad4 antibody	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.
Product Categories/Family for anti-Smad4 antibody	Signal Transduction; Signaling Pathway; Nuclear Signaling; smads; Epigenetics and Nuclear Signaling; Nuclear Signaling Pathways; Stem Cells; TGF Beta; Cytoplasmic; Cancer; Oncoproteins/Suppressors; Tumor Suppressors; Cardiovascular; Heart; Apoptosis; Card

NCBI AND UNIPROT INFORMATION

NCBI GI #	4885457
NCBI GeneID	4089
NCBI Accession #	NP_005350.1
NCBI GenBank Nucleotide #	NM_005359.5
UniProt Accession #	Q13485; A8K405
Molecular Weight	60439 MW
NCBI Official Full Name	mothers against decapentaplegic homolog 4

NCBI Official Synonym Full Names	SMAD family member 4
NCBI Official Symbol	SMAD4
NCBI Official Synonym Symbols	JIP; DPC4; MADH4; MYHRS
NCBI Protein Information	mothers against decapentaplegic homolog 4
UniProt Protein Name	Mothers against decapentaplegic homolog 4
UniProt Gene Name	SMAD4
UniProt Synonym Gene Names	DPC4; MADH4; MAD homolog 4; Mothers against DPP homolog 4; SMAD 4; Smad4; hSMAD4

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/monoclonal/smad4-antibody-western-blot-immunocytochemistry-immunohistochemistry-immunofluorescence-flow-cytometry-elisa/46863>