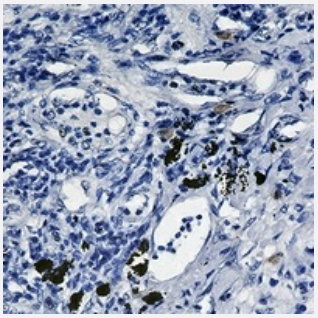
RecomAb™ Sm Size

SMAD2 recombinant monoclonal antibody

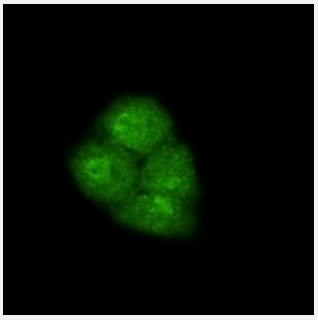
Catalog # RAB09209 Size 50 uL

Applications



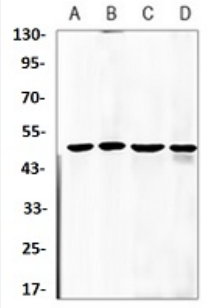
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunohistochemical analysis of human lung cancer formalin fixed paraffin embedded tissue section using SMAD2 recombinant monoclonal antibody (Cat # RAB09209). The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.87). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescence

Immunofluorescent analysis of HeLa cells with SMAD2 recombinant monoclonal antibody (Cat # RAB09209). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark.



Western Blot (Cell lysate)

Western blot analysis of C6 (A), Hela (B), CHOK1 (C), Jurkat (D) whole cell lysates with SMAD2 recombinant monoclonal antibody (Cat # RAB09209).

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Specification

Product Description	Rabbit recombinant monoclonal antibody raised against human SMAD2.
Antibody Species	Rabbit
Immunogen	Original antibody is raised against a synthetic peptide of human SMAD2 .
Theoretical MW (kDa)	52
Reactivity	Hamster, Human, Rat
Specificity	Recognizes endogenous levels of SMAD2 protein.
Form	Liquid
Preparation Method	Mammalian cell (HEK293) expression system
Purification	Immunogen affinity chromatography
Isotype	IgG
Recommend Usage	Immunocytochemistry (1:50-1:100) Immunofluorescence (1:50-1:100) Immunohistochemistry (1:50-1:100) Immunoprecipitation (1:10-1:50) Western Blot (1:500-1:1000)
Storage Buffer	In 50mM Tris-Glycine, pH 7.4 (0.15M NaCl, 50% Glycerol, 0.01% Sodium azide and 0.05% BSA)
Storage Instruction	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only.

Applications

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Gene Info — SMAD2

Entrez GeneID	4087
Protein Accession#	Q15796
Gene Name	SMAD2
Gene Alias	JV18, JV18-1, MADH2, MADR2, MGC22139, MGC34440, hMAD-2, hSMAD2
Gene Description	SMAD family member 2
Omim ID	601366
Gene Ontology	Hyperlink
Gene Summary	The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene pr oducts of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentia tion. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anc hor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosph orylated by the TGF-beta receptors. The phosphorylation induces the dissociation of this protein with SARA and the association with the family member SMAD4. The association with SMAD4 is i mportant for the translocation of this protein into the nucleus, where it binds to target promoters an d forms a transcription repressor complex with other cofactors. This protein can also be phosphor ylated by activin type 1 receptor kinase, and mediates the signal from the activin. Alternatively spli ced transcript variants encoding the same protein have been observed. [provided by RefSeq
Other Designations	MAD, mothers against decapentaplegic homolog 2|Mad protein homolog|Mad, mothers against d ecapentaplegic homolog 2|Mad-related protein 2|SMAD, mothers against DPP homolog 2|Sma- and Mad-related protein 2|mother against DPP homolog 2

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Pathway

- Adherens junction
- Cell cycle
- Colorectal cancer
- Pancreatic cancer
- Pathways in cancer
- TGF-beta signaling pathway
- Wnt signaling pathway

Disease

- Adenocarcinoma
- Cleft Lip
- Cleft Palate
- Colitis
- Colorectal Neoplasms
- Esophageal Neoplasms
- Genetic Predisposition to Disease
- Hypertension
- Inflammatory Bowel Diseases
- Liver Cirrhosis
- Obesity
- Osteoporosis
- Ovarian Failure
- Pancreatic cancer
- Pancreatic Neoplasms

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- Polycystic Ovary Syndrome
- Puberty
- Thrombophilia
- Tobacco Use Disorder

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