

Smad2 Polyclonal Antibody

Catalog # AP72512

Product Information

Application	WB, IHC-P, IF
Primary Accession	Q15796
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52306

Additional Information

Gene ID	4087
Other Names	SMAD2; MADH2; MADR2; Mothers against decapentaplegic homolog 2; MAD homolog 2; Mothers against DPP homolog 2; JV18-1; Mad-related protein 2; hMAD-2; SMAD family member 2; SMAD 2; Smad2; hSMAD2
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

Protein Information

Name	SMAD2
Synonyms	MADH2, MADR2
Function	Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD2/SMAD4 complex, activates transcription. Promotes TGFB1-mediated transcription of odontoblastic differentiation genes in dental papilla cells (By similarity). Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator. May act as a tumor suppressor in colorectal carcinoma (PubMed: 8752209).
Cellular Location	Cytoplasm. Nucleus. Note=Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed

with SMAD4 or with IPO7 (PubMed:21145499, PubMed:9865696). On dephosphorylation by phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1 (PubMed:16751101, PubMed:19289081). Localized mainly to the nucleus in the early stages of embryo development with expression becoming evident in the cytoplasm at the blastocyst and epiblast stages (By similarity). {ECO:0000250|UniProtKB:Q62432, ECO:0000269|PubMed:16751101, ECO:0000269|PubMed:19289081, ECO:0000269|PubMed:21145499, ECO:0000269|PubMed:9865696}

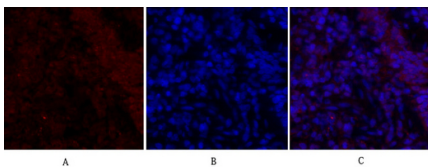
Tissue Location

Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta.

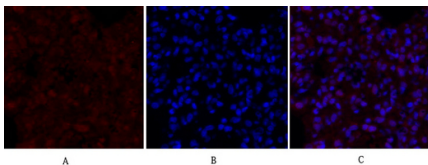
Background

Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD2/SMAD4 complex, activates transcription. May act as a tumor suppressor in colorectal carcinoma. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.

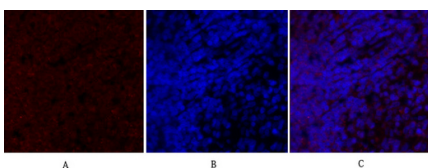
Images



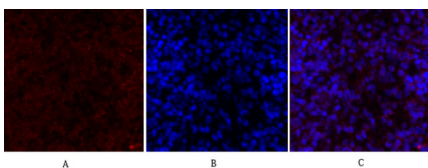
Immunofluorescence analysis of rat-lung tissue. 1, Smad2 Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



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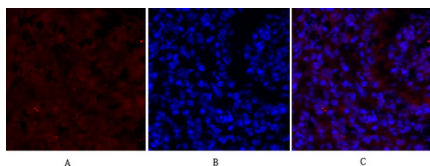


Immunofluorescence analysis of rat-spleen tissue. 1, Smad2 Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

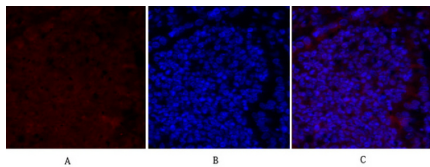


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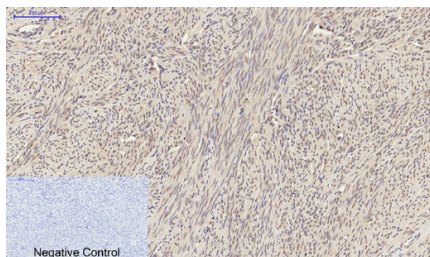
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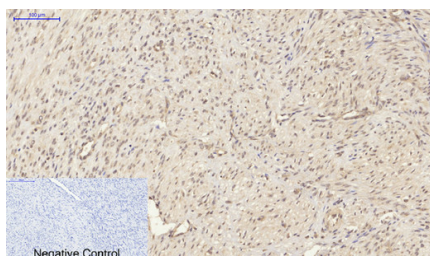
B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



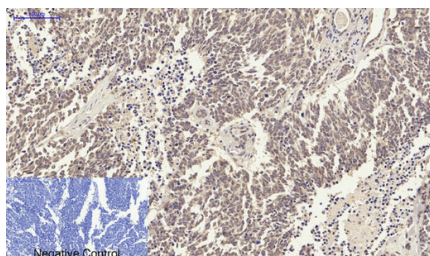
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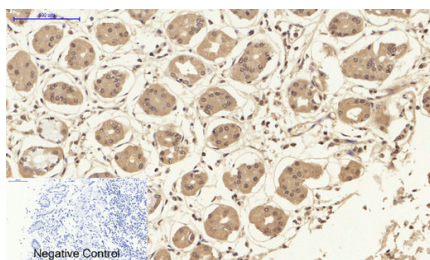
Immunohistochemical analysis of paraffin-embedded Human-uterus tissue. 1,Smad2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



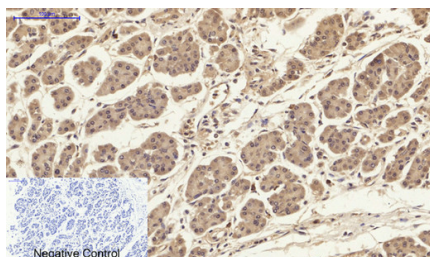
Immunohistochemical analysis of paraffin-embedded Human-uterus-cancer tissue. 1,Smad2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Human-lung-cancer tissue. 1,Smad2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

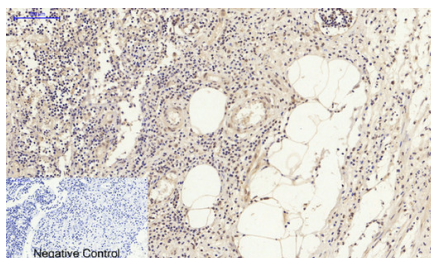


Immunohistochemical analysis of paraffin-embedded Human-stomach tissue. 1,Smad2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

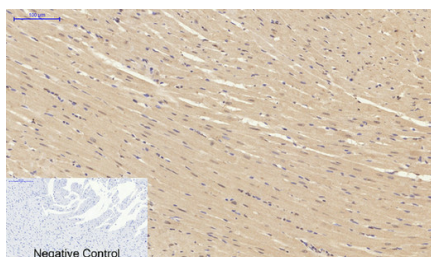


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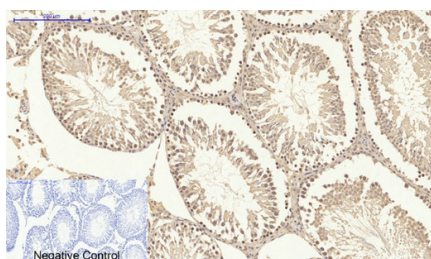
Immunohistochemical analysis of paraffin-embedded Human-Appendix tissue. 1,Smad2 Polyclonal Antibody



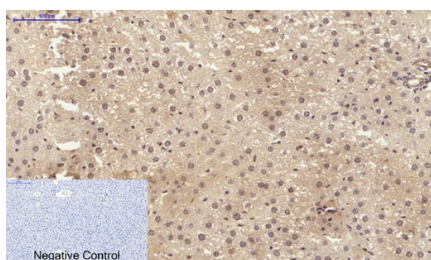
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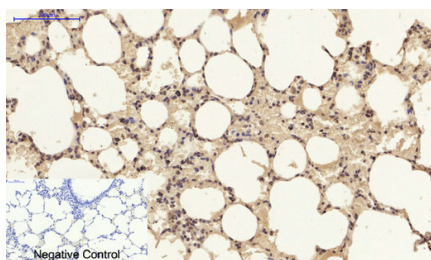
Immunohistochemical analysis of paraffin-embedded Rat-heart tissue. 1,Smad2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



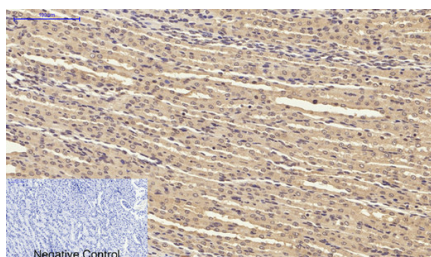
Immunohistochemical analysis of paraffin-embedded Rat-testis tissue. 1,Smad2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



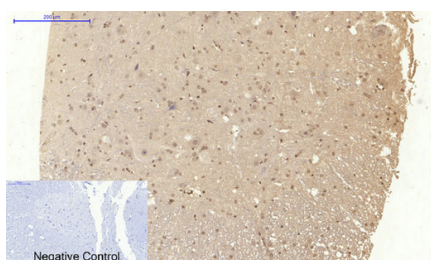
Immunohistochemical analysis of paraffin-embedded Rat-liver tissue. 1,Smad2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



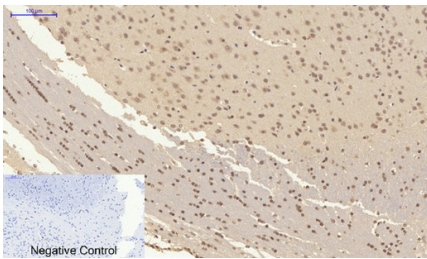
Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1,Smad2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



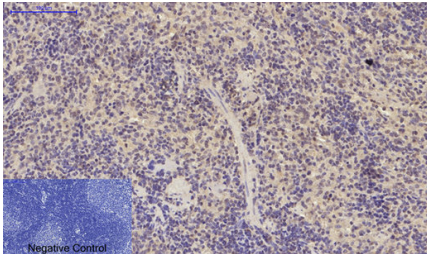
Immunohistochemical analysis of paraffin-embedded Rat-kidney tissue. 1,Smad2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



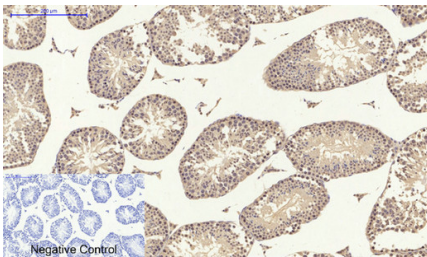
Immunohistochemical analysis of paraffin-embedded Rat-spinal-cord tissue. 1,Smad2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



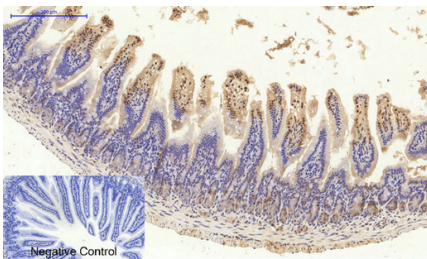
Immunohistochemical analysis of paraffin-embedded Rat-brain tissue. 1, Smad2 Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.



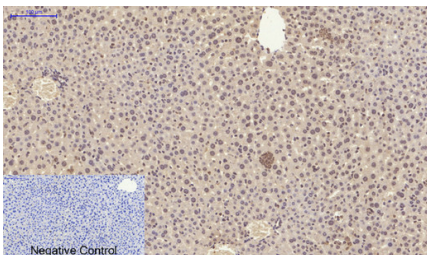
Immunohistochemical analysis of paraffin-embedded Rat-spleen tissue. 1, Smad2 Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.



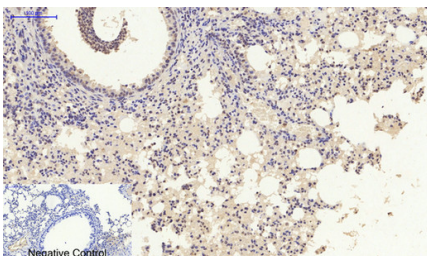
Immunohistochemical analysis of paraffin-embedded Mouse-testis tissue. 1, Smad2 Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Mouse-colon tissue. 1, Smad2 Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.

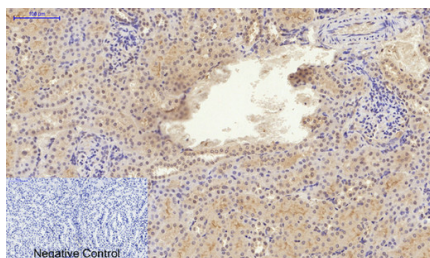


Immunohistochemical analysis of paraffin-embedded Mouse-liver tissue. 1, Smad2 Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.

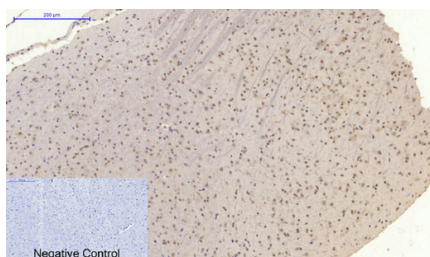


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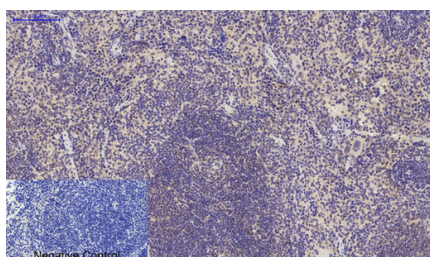
Immunohistochemical analysis of paraffin-embedded Mouse-kidney tissue. 1, Smad2 Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.



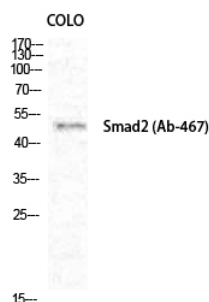
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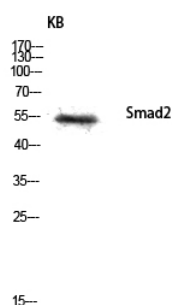
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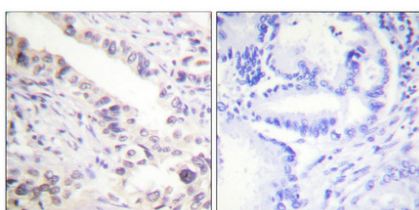
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Western Blot analysis of COLO cells using Smad2 Polyclonal Antibody diluted at 1 : 1000



Western blot analysis of KB lysis using Smad2 antibody. Antibody was diluted at 1:1000



Immunohistochemical analysis of paraffin-embedded Human breast cancer. Antibody was diluted at 1:100 (4°C, overnight). High-pressure and temperature Tris-EDTA, pH 8.0 was used for antigen retrieval. Negative control (right) obtained from antibody was pre-absorbed by immunogen peptide.

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