For Research Use Only

SMAD9 Polyclonal antibody

Catalog Number:16397-1-AP 6 Publications

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Basic Information

Catalog Number:
16397-1-AP

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG9490

GenBank Accession Number:
BC011559

GeneID (NCBI):
4093

UNIPROT ID:
O15198

Full Name:
SMAD family member 9

Calculated MW:
430 aa, 49 kDa

Observed MW:
49-55 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB: 1:500-1:2000
IHC: 1:50-1:500

Applications

Tested Applications:
WB, IHC, ELISA

Cited Applications:
WB

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : HeLa cells, A549 cells, HEK-293 cells, HepG2 cells, mouse lung tissue

IHC : human prostate cancer tissue, human urothelial carcinoma tissue, mouse heart tissue, rat heart tissue

Background Information

SMAD9 (also known as MADH9 or MAD homolog 9) is a key signaling molecule in the transforming growth factor-β (TGF-β) superfamily signaling pathway and belongs to the SMAD1/5/9 subgroup of receptor-regulated SMADs (R-SMADs). It is primarily activated and phosphorylated by BMP (bone morphogenetic protein) type I receptors. Once activated, SMAD9 forms a complex with the common SMAD4 (Co-SMAD), translocates into the nucleus, and acts as a transcription factor to regulate the expression of specific target genes. This process is involved in modulating a variety of critical biological processes, including cell proliferation, differentiation, apoptosis, and embryonic development. Mutations or abnormal expression of SMAD9 are associated with several diseases, particularly in pulmonary arterial hypertension, certain cancers, and vascular diseases, where it plays a significant role.

Notable Publications

Author	Pubmed ID	Journal	Application
Xueni Wang	32879393	Sci Rep	WB
Ping Yin	34907172	Cell Death Discov	WB
Yuetong Zhang	41237766	Cancer Cell	WB

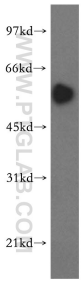
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

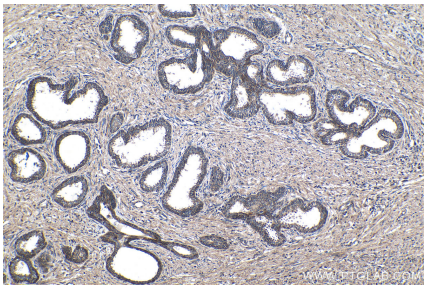
For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

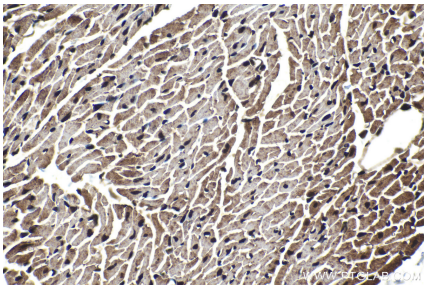
Selected Validation Data



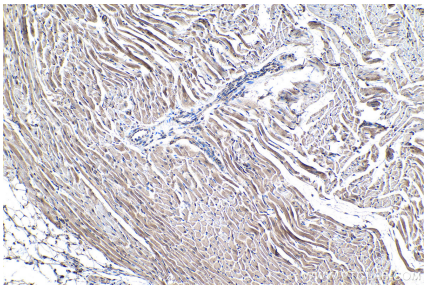
HeLa cells were subjected to SDS PAGE followed by western blot with 16397-1-AP (SMAD9 antibody) at dilution of 1:500 incubated at room temperature for 1.5 hours.



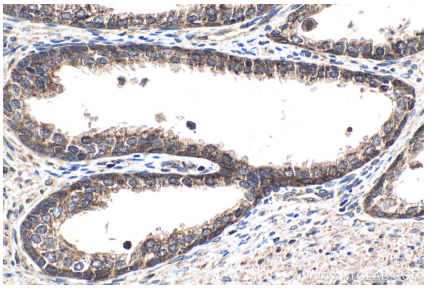
Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue slide using 16397-1-AP (SMAD9 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



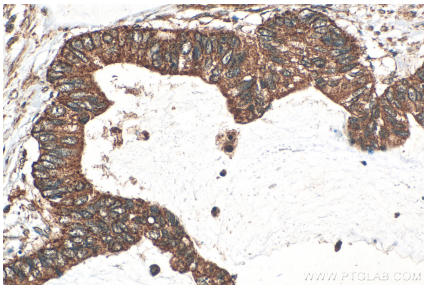
Immunohistochemical analysis of paraffin-embedded mouse heart tissue slide using 16397-1-AP (SMAD9 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded rat heart tissue slide using 16397-1-AP (SMAD9 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue slide using 16397-1-AP (SMAD9 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human urothelial carcinoma tissue slide using 16397-1-AP (SMAD9 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).