

Smad1/5/9 Polyclonal Antibody

Catalog No :	YT4325
Reactivity :	Human;Mouse;Rat
Applications :	WB;IHC;IF;ELISA
Target :	Smad1/5/9
Fields :	>>TGF-beta signaling pathway;>>Hippo signaling pathway;>>Signaling pathways regulating pluripotency of stem cells;>>Transcriptional misregulation in cancer
Gene Name :	SMAD1/SMAD5/SMAD9
Protein Name :	Mothers against decapentaplegic homolog 1/Mothers against decapentaplegic homolog 5/Mothers against decapentaplegic homolog 9
Human Gene Id :	4086/4090/4093
Human Swiss Prot No :	Q15797/Q99717/O15198
Mouse Gene Id :	17125/17129/55994
Rat Gene Id :	59328/85435
Rat Swiss Prot No :	P97588/Q9R1V3/O54835
Immunogen :	The antiserum was produced against synthesized peptide derived from human Smad1/5/9. AA range:10-59
Specificity :	Smad1/5/9 Polyclonal Antibody detects endogenous levels of Smad1/5/9 protein.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:10000.. IF 1:50-200

Purification : The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Concentration : 1 mg/ml

Storage Stability : -15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band : 56kD

Cell Pathway : TGF-beta;

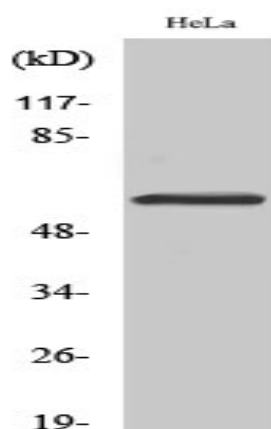
Background : The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene *mothers against decapentaplegic* (Mad) and the C. elegans gene *Sma*. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signals of the bone morphogenetic proteins (BMPs), which are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. In response to BMP ligands, this protein can be phosphorylated and activated by the BMP receptor kinase. The phosphorylated form of this protein forms a complex with SMAD4, which is important for its function in the transcription regulation. This protein is a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1 and SMURF2, and undergoes ubiquitination and proteasome-med

Function : function:Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. SMAD1 is a receptor-regulated SMAD (R-SMAD).,PTM:Phosphorylated on serine by BMP type 1 receptor kinase.,PTM:Ubiquitin-mediated proteolysis by SMAD-specific E3 ubiquitin ligase SMURF1.,similarity:Belongs to the dwarfin/SMAD family.,similarity:Contains 1 MH1 (MAD homology 1) domain.,similarity:Contains 1 MH2 (MAD homology 2) domain.,subcellular location:Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4.,subunit:Interacts with HGS, NANOG and ZCCHC12 (By similarity). May form trimers with another SMAD1 and the co-SMAD SMAD4. Interacts with PEBP2-alpha subunit, CREB-binding protein (CBP), p300, SMURF1, SMURF2 and HOXC8. Associates with ZNF423 or ZNF521 in response to BMP2 leading to activate transcription of BMP target genes. Interacts with LBXCOR1.,

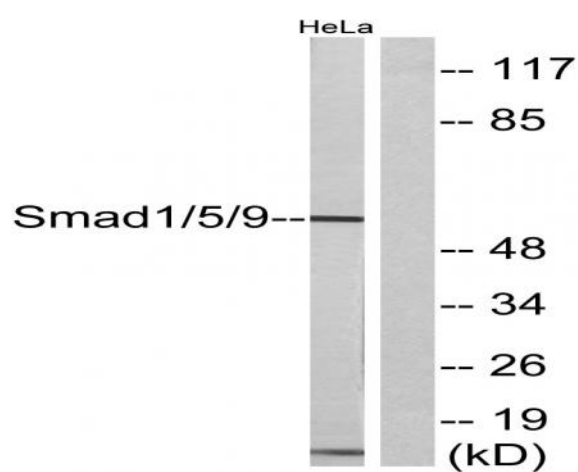
Subcellular Location : Cytoplasm . Nucleus . Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4 (PubMed:15647271). Co-localizes with LEMD3 at the nucleus inner membrane (PubMed:15647271). Exported from the nucleus to the cytoplasm when dephosphorylated (By similarity). .

Expression : Ubiquitous. Highest expression seen in the heart and skeletal muscle.

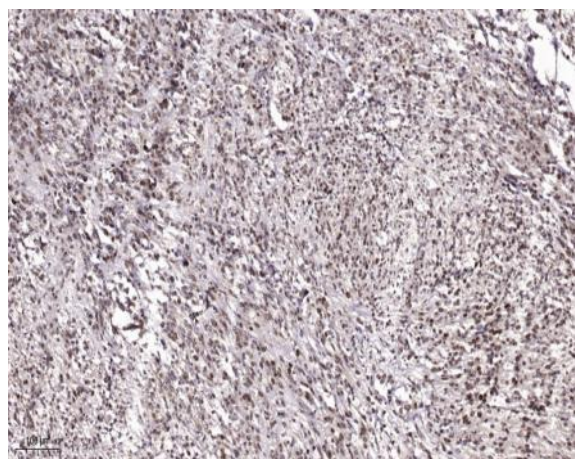
Products Images



Western Blot analysis of various cells using Smad1/5/9 Polyclonal Antibody diluted at 1:500



Western blot analysis of lysates from HeLa cells, using Smad1/5/9 Antibody. The lane on the right is blocked with the synthesized peptide.



Immunohistochemical analysis of paraffin-embedded human Colon cancer. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).