
Product Name: Smad2 (phospho Thr220) Rabbit Polyclonal Antibody**Catalog #: APRab05442**

For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Phosphorylated
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application**Dilution Ratio** WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:5000-1:20000**Molecular Weight****Antigen Information**

Gene Name	SMAD2 SMAD2; MADH2; MADR2; Mothers against decapentaplegic homolog 2; MAD homolog 2;
Alternative Names	Mothers against DPP homolog 2; JV18-1; Mad-related protein 2; hMAD-2; SMAD family member 2; SMAD 2; Smad2; hSMAD2
Gene ID	4087.0
SwissProt ID	Q15796
Immunogen	The antiserum was produced against synthesized peptide derived from human Smad2 around the phosphorylation site of Thr220. AA range:186-235

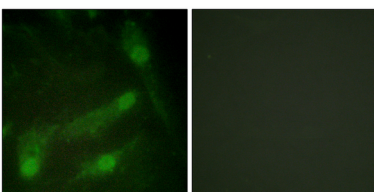
Background

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 signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated 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 important for the translocation disease: Defects in SMAD2 are found in sporadic cases of colorectal carcinoma., function: Transcriptional modulator activated by TGF-beta and activin type 1 receptor kinase. SMAD2 is a receptor-regulated SMAD (R-SMAD). May act as a tumor suppressor in colorectal carcinoma., PTM: Acetylated on Lys-19 by coactivators in response to TGF-beta signaling, which increases transcriptional activity. Isoform short: Acetylation increases DNA binding activity in vitro and enhances its association with target promoters in vivo., PTM: In response to TGF-beta, ubiquitinated by NEDD4L; which promotes its degradation., PTM: Phosphorylated on one or several of Thr-220, Ser-245, Ser-250, and Ser-255. In response to TGF-beta, phosphorylated on Ser-465/467 by TGF-beta and activin type 1 receptor kinases. Able to interact with SMURF2 when phosphorylated on Ser-465/467, recruiting other proteins, such as SNON, for degradation. In response to decorin, the naturally occurring inhibitor of TGF-beta signaling, phosphorylated on Ser-240 by CaMK2. Phosphorylated by MAPK3 upon EGF stimulation; which increases transcriptional activity and stability, and is blocked by calmodulin., 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: Found in a complex with SMAD3 and TRIM33 upon addition of TGF-beta. Interacts with SMAD3 and TRIM33. Interacts with SARA (SMAD anchor for receptor activation); may form trimers with the SMAD4 co-SMAD. Interacts with FOXH1, homeobox protein TGIF, PEBP2-alpha subunit, CREB-binding protein (CBP), EP300 and SKI. Interacts with SNON; when phosphorylated at Ser-465/467. Interacts (via PY-motif) with SMURF2. Interacts with AIP1 and HGS. Interacts with NEDD4L in response to TGF-beta (By similarity). Interacts with LBXCOR1 and CORL2., tissue specificity: Expressed at high levels in skeletal muscle, heart and placenta.,

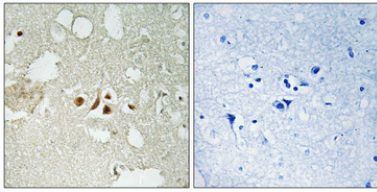
Research Area

Regulates Angiogenesis; Cell_Cycle_G1S; Cell_Cycle_G2M_DNA; Protein_Acetylation

Image Data



Immunofluorescence analysis of HeLa cells, using Smad2 (Phospho-Thr220) Antibody. The picture on the right is blocked with the phospho peptide.



Immunohistochemical analysis of paraffin-embedded Human brain. Antibody was diluted at 1:100 (4°, overnight) . High-pressure and temperature Tris-EDTA, pH8.0 was used for antigen retrieval. Negative control (right) obtained from antibody was pre-absorbed by immunogen peptide.