

Product Name: Smad2 (phospho Ser467) Rabbit Polyclonal Antibody**Catalog #: APRab05441**

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 1:50-1:200,ELISA 1:5000-1:10000
Molecular Weight	58kDa

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 Ser467. AA range:418-467

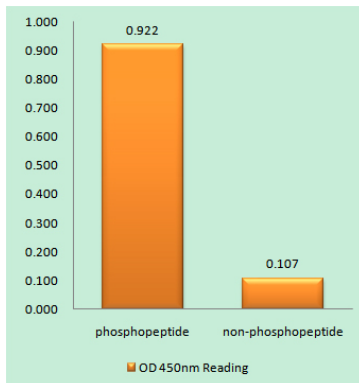
Background

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. 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.

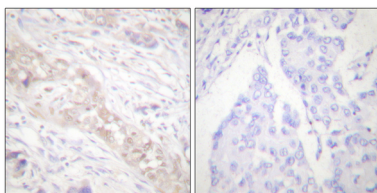
Research Area

Regulates Angiogenesis; Cell_Cycle_G1S; Cell_Cycle_G2M_DNA; Protein_Acetylation

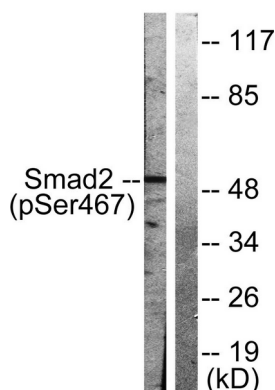
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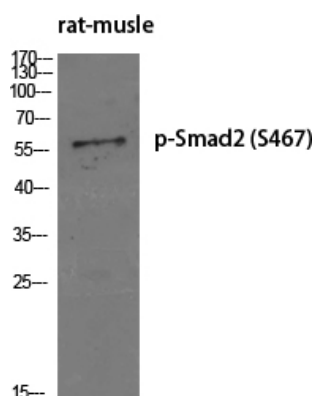
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right) , using Smad2 (Phospho-Ser467) Antibody



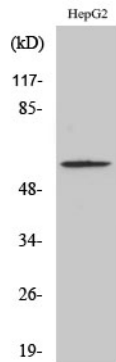
Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using Smad2 (Phospho-Ser467) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from HepG2 cells treated with PMA 125ng/ml 15' , using Smad2 (Phospho-Ser467) Antibody. The lane on the right is blocked with the phospho peptide.



Western Blot analysis of various cells using Phospho-Smad2 (S467) Polyclonal Antibody diluted at 1: 500



Western Blot analysis of HepG2 cells using Phospho-Smad2 (S467) Polyclonal Antibody diluted at 1 : 500