

For Research Use Only

SMAD2 Polyclonal antibody

Catalog Number: 12570-1-AP

Featured Product

78 Publications



Basic Information

Catalog Number:

12570-1-AP

Size:

150ul, Concentration: 300 µg/ml by Nanodrop and 220 µg/ml by Bradford method using BSA as the standard;

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG3237

GenBank Accession Number:

BC014840

GeneID (NCBI):

4087

Full Name:

SMAD family member 2

Calculated MW:

467 aa, 52 kDa

Observed MW:

58 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB 1:1000-1:6000

IP 0.5-4.0 ug for IP and 1:500-1:2000 for WB

IHC 1:50-1:500

IF 1:10-1:100

Applications

Tested Applications:

IF, IHC, IP, WB, ELISA

Cited Applications:

ChIP, CoIP, IF, IHC, WB

Species Specificity:

human, mouse, rat

Cited Species:

Cistanche Tubulosa, 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: HepG2 cells, multi-cells, Jurkat cells, HeLa cells, mouse skeletal muscle tissue, rat skeletal muscle tissue

IP: HepG2 cells,

IHC: human endometrial cancer tissue, human heart tissue, human cervical cancer tissue

IF: HepG2 cells,

Background Information

SMAD2, also named as MADH2 and MADR2, belongs to the dwarfin/SMAD family, contains 1 MH1 (MAD homology 1) domain and 1 MH2 (MAD homology 2) domain. SMAD2 is a 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. This protein may act as a tumor suppressor in colorectal carcinoma. It is phosphorylated on one or several of Thr-220, Ser-245, Ser-250, and Ser-255. In response to TGF-beta, it is phosphorylated on Ser-465/467 by TGF-beta and activin type 1 receptor kinases, and then able to interact with SMURF2, recruiting other proteins, such as SNON, for degradation. In response to decorin, the naturally occurring inhibitor of TGF-beta signaling, it is phosphorylated on Ser-240 by CaMK2. It is phosphorylated by MAPK3 upon EGF stimulation; which increases transcriptional activity and stability, and is blocked by calmodulin. In response to TGF-beta, it is ubiquitinated by NEDD4L, which promotes its degradation. In response to TGF-beta signaling, it is acetylated on Lys-19 by coactivators, which increases transcriptional activity. This antibody is a rabbit polyclonal antibody raised against residues near the N terminus of human SMAD2. The molecular weight of unphosphorylated forms of Smad2 is 52 kDa and phosphorylated forms of Smad2 is 58 kDa. (PMID: 9006934)

Notable Publications

Author	Pubmed ID	Journal	Application
Shun Gu	33007305	Exp Eye Res	WB
Peng Xu	33230456	Mol Ther Nucleic Acids	WB, IHC
Yongyi Bai	34546460	Basic Res Cardiol	CoIP

Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

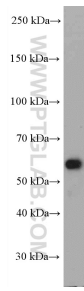
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

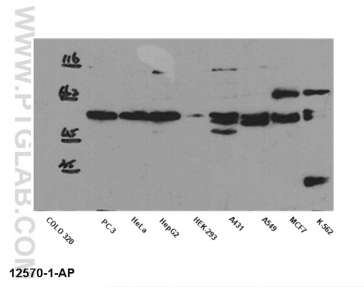
E: proteintech@ptglab.com
W: ptglab.com

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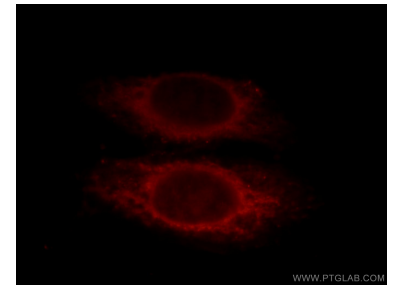
Selected Validation Data



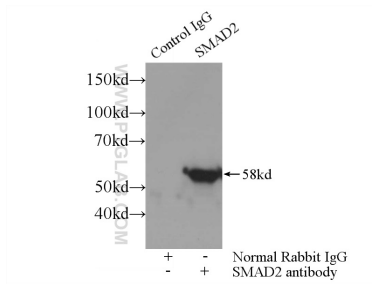
HepG2 cells were subjected to SDS PAGE followed by western blot with 12570-1-AP (SMAD2 antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



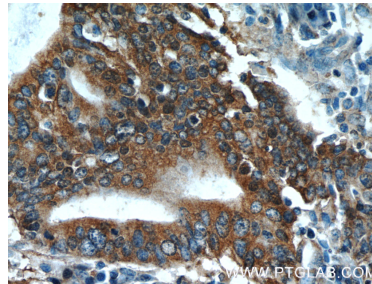
WB result of anti-SMAD2 (12570-1-AP) in different cell lysates.



Immunofluorescent analysis of HepG2 cells, using SMAD2 antibody 12570-1-AP at 1:25 dilution and Rhodamine-labeled goat anti-rabbit IgG (red).



IP Result of anti-SMAD2 (IP:12570-1-AP, 3 μ g; Detection:12570-1-AP 1:1000) with HepG2 cells lysate 3000 μ g.



Immunohistochemical analysis of paraffin-embedded human endometrial cancer tissue slide using 12570-1-AP (SMAD2 Antibody) at dilution of 1:50 (under 40 \times lens).