

# SMAD2 Monoclonal antibody

Catalog Number: 67343-1-Ig **12 Publications**

## Basic Information

<b>Catalog Number:</b> 67343-1-Ig	<b>GenBank Accession Number:</b> BC014840	<b>Purification Method:</b> Protein G purification
<b>Size:</b> 150ul , Concentration: 1000 ug/ml by Bradford method using BSA as the standard;	<b>GeneID (NCBI):</b> 4087	<b>CloneNo.:</b> 2H10C7
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> Q15796	<b>Recommended Dilutions:</b> WB 1:2000-1:10000 IHC 1:1000-1:4000 IF/ICC 1:50-1:500
<b>Isotype:</b> IgG1	<b>Full Name:</b> SMAD family member 2	
<b>Immunogen Catalog Number:</b> AG19542	<b>Calculated MW:</b> 467 aa, 52 kDa	
	<b>Observed MW:</b> 58 kDa	

## Applications

<b>Tested Applications:</b> WB, IHC, IF/ICC, ELISA	<b>Positive Controls:</b>
<b>Cited Applications:</b> WB	<b>WB :</b> HeLa cells, LNCaP cells, HEK-293 cells, Jurkat cells, K-562 cells, HSC-T6 cells, PC-12 cells, NIH/3T3 cells, RAW 264.7 cells, HepG2 cells, 4T1 cells
<b>Species Specificity:</b> Human, mouse, rat	<b>IHC :</b> human liver cancer tissue,
<b>Cited Species:</b> human, mouse, rat	<b>IF/ICC :</b> HepG2 cells,
<b>Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0</b>	

## 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 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. 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
Fanfan Gao	35547920	RSC Adv	WB
Qiujie Mou	34033703	Pediatr Pulmonol	WB
Jingjing Wei	34076355	J Cell Mol Med	WB

## Storage

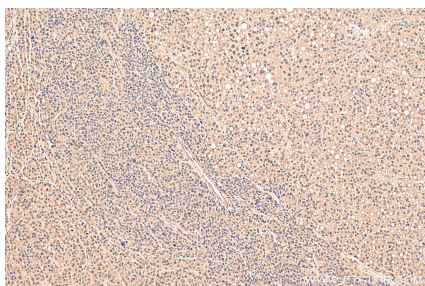
**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol, pH7.3  
**Aliquoting is unnecessary for -20°C storage**

\*\*\* 20ul sizes contain 0.1% BSA

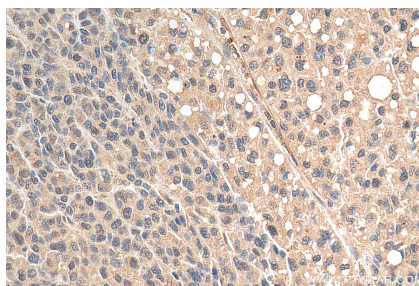
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

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

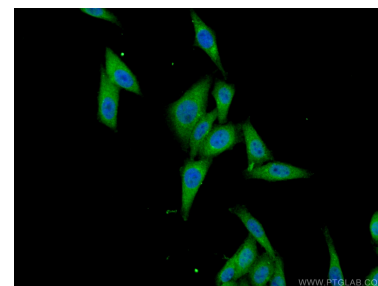
## Selected Validation Data



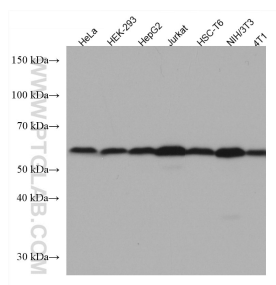
Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 67343-1-Ig (SMAD2 antibody) at dilution of 1:2000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 67343-1-Ig (SMAD2 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using 67343-1-Ig (SMAD2 antibody) at dilution of 1:100 and CoraLite488-Conjugated Goat Anti-Mouse IgG(H+L).



Various lysates were subjected to SDS PAGE followed by western blot with 67343-1-Ig (SMAD2 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.