

For Research Use Only

# Multi-rAb® SMAD2 Multi-Recombinant antibody

Catalog Number: RMX00035



## Basic Information

<b>Catalog Number:</b> RMX00035	<b>GenBank Accession Number:</b> BC014840	<b>Purification Method:</b> N/A
<b>Size:</b> 100ul, Concentration: 1000 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 4087	<b>Recommended Dilutions:</b> WB: 1:5000-1:50000 IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate IHC: 1:200-1:800 IF/ICC: 1:200-1:800
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> Q15796	
<b>Isotype:</b> IgG	<b>Full Name:</b> SMAD family member 2	
	<b>Calculated MW:</b> 467 aa, 52 kDa	
	<b>Observed MW:</b> 58 kDa	

## Applications

**Tested Applications:**  
WB, IHC, IF/ICC, IP, ELISA

**Species Specificity:**  
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:** A549 cells, HeLa cells, NIH/3T3 cells, C6 cells

**IP:** A549 cells,

**IHC:** human colon cancer tissue,

**IF/ICC:** 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 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)

## Storage

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

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

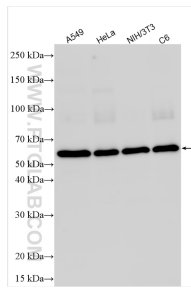
For technical support and original validation data for this product please contact:

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

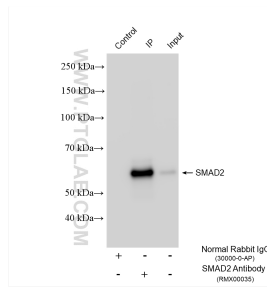
E: proteintech@ptglab.com  
W: ptglab.com

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

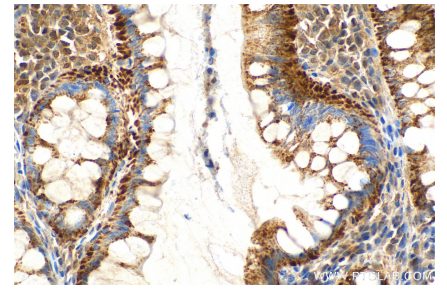
## Selected Validation Data



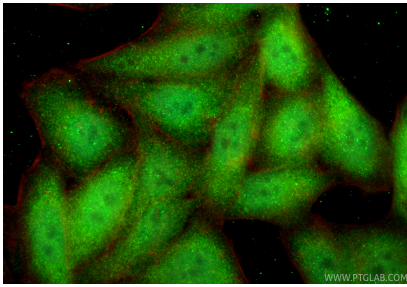
Various lysates were subjected to SDS PAGE followed by western blot with RMX00035 (SMAD2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



IP result of anti-SMAD2 (IP:RMX00035, 4ug; Detection:RMX00035 1:10000) with A549 cells lysate 920 ug.



Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using RMX00035 (SMAD2 antibody) at dilution of 1:400 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using SMAD2 antibody (RMX00035) at dilution of 1:400 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).