

# SMAD2 Recombinant monoclonal antibody, PBS Only

Catalog Number: 83841-4-PBS

## Basic Information

Catalog Number:	83841-4-PBS	GenBank Accession Number:	BC014840	Purification Method:	Protein A purification
Source:	Rabbit	GeneID (NCBI):	4087	CloneNo.:	240950F1
Isotype:	IgG	UNIPROT ID:	Q15796		
Immunogen Catalog Number:	AG3237	Full Name:	SMAD family member 2		
		Calculated MW:	467 aa, 52 kDa		
		Observed MW:	58 kDa		

## Applications

**Tested Applications:**  
WB, IF/ICC, FC (Intra), ELISA, ChIP-qPCR

**Species Specificity:**  
human, rat

## 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 -80°C.  
**The product is shipped with ice packs. Upon receipt, store it immediately at -80°C**

**Storage Buffer:**  
PBS only, pH7.3

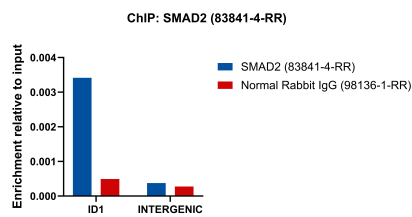
For technical support and original validation data for this product please contact:

T: 4006900926

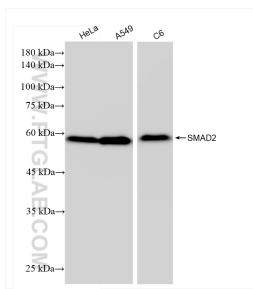
E: [Proteintech-CN@ptglab.com](mailto:Proteintech-CN@ptglab.com)W: [ptgcn.com](http://ptgcn.com)

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

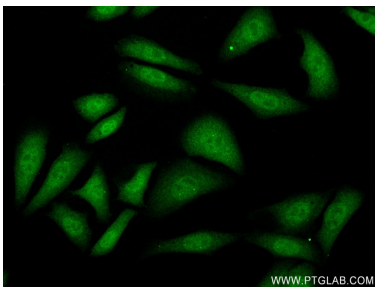
Selected Validation Data



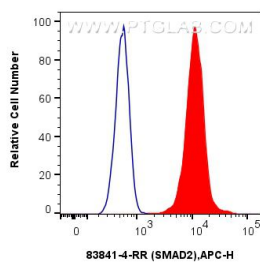
Chromatin was prepared from HaCaT cells treated with TGF-β 3 (7 ng/ml) for 1 h. Cells were fixed with formaldehyde for 10 minutes. The ChIP was performed with 20 μg of cross-linked chromatin, 5 μg of SMAD2 (83841-4-RR) or 5 μg of Normal Rabbit IgG (98136-1-RR), and 20 μl of Protein A Magarose Beads. The immunoprecipitated DNA was quantified by real-time PCR. This data was developed using the same antibody clone with 83841-4-PBS in a different storage buffer formulation.



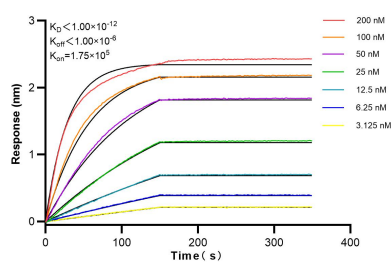
Various lysates were subjected to SDS PAGE followed by western blot with 83841-4-RR (SMAD2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 83841-4-PBS in a different storage buffer formulation.



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using SMAD2 antibody (83841-4-RR, Clone: 240950F1) at dilution of 1:250 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2). This data was developed using the same antibody clone with 83841-4-PBS in a different storage buffer formulation.



1x10<sup>6</sup> Jurkat cells were intracellularly stained with 0.25 μg SMAD2 Recombinant antibody (83841-4-RR, Clone:240950F1) and APC-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L)(red), or 0.25 μg Isotype Control (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer. This data was developed using the same antibody clone with 83841-4-PBS in a different storage buffer formulation.



Biolayer interferometry (BLI) kinetic assays of 83841-4-RR against Human SMAD2 were performed. The affinity constant is below 1 pM.