

SMAD2 Recombinant antibody

Catalog Number: 83841-5-RR

Basic Information

Catalog Number: 83841-5-RR	GenBank Accession Number: BC014840	Purification Method: Protein A purification
Size: 1000 ug/ml	GeneID (NCBI): 4087	CloneNo.: 240950A11
Source: Rabbit	UNIPROT ID: Q15796	Recommended Dilutions: WB 1:5000-1:50000 IF/ICC 1:200-1:800
Isotype: IgG	Full Name: SMAD family member 2	
Immunogen Catalog Number: AG3237	Calculated MW: 467 aa, 52 kDa Observed MW: 58 kDa	

Applications

Tested Applications: WB, IF/ICC, FC (Intra), ELISA	Positive Controls: WB : HeLa cells, A549 cells, C6 cells IF/ICC : HepG2 cells,
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 -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

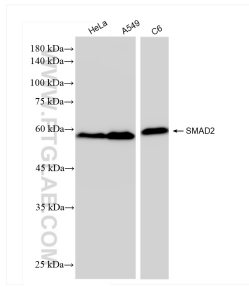
For technical support and original validation data for this product please contact:

T: 4006900926

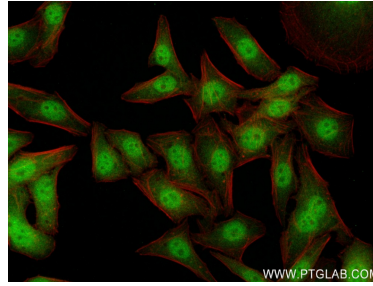
E: Proteintech-CN@ptglab.comW: ptgcn.com

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

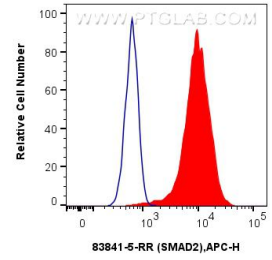
Selected Validation Data



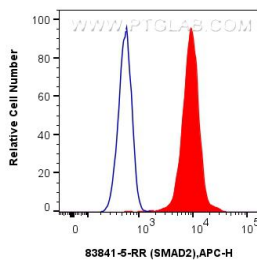
Various lysates were subjected to SDS PAGE followed by western blot with 83841-5-RR (SMAD2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



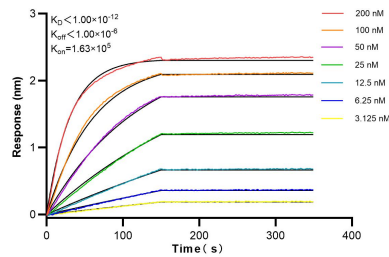
Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using SMAD2 antibody (83841-5-RR, Clone: 240950A11) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).



1x10⁶ HeLa cells were intracellularly stained with 0.25 ug SMAD2 Recombinant antibody (83841-5-RR, Clone:240950A11) and APC-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L)(red), or 0.25 ug Isotype Control (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



1x10⁶ Jurkat cells were intracellularly stained with 0.25 ug SMAD2 Recombinant antibody (83841-5-RR, Clone:240950A11) and APC-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L)(red), or 0.25 ug Isotype Control (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



Biolayer interferometry (BLI) kinetic assays of 83841-5-RR against Human SMAD2 were performed. The affinity constant is below 1 pM.