

For Research Use Only

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: 100ul , Concentration: 1000 µg/ml by Nanodrop;	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

*** 20ul sizes contain 0.1% BSA

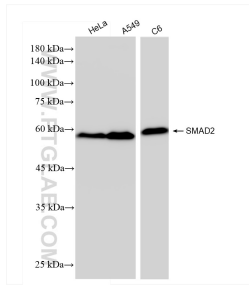
For technical support and original validation data for this product please contact:

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

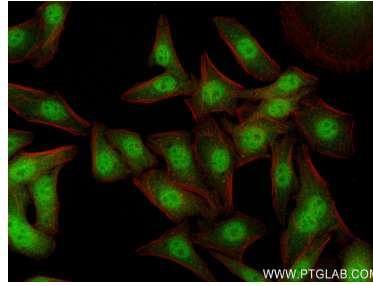
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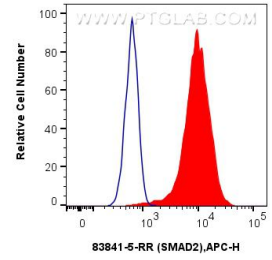
Selected Validation Data



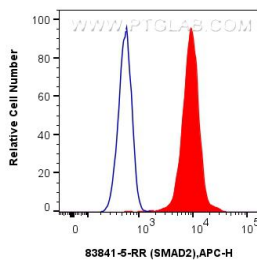
Various lysates were subjected to SDS PAGE followed by western blot with 83841-5-RR (SMAD2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



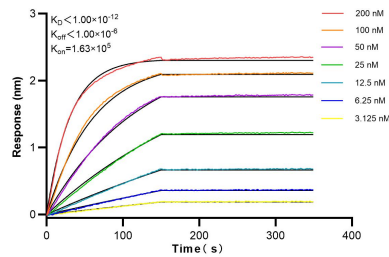
Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using SMAD2 antibody (83841-5-RR, Clone: 240950A11) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).



1×10^6 HeLa cells were intracellularly stained with 0.25 μ g SMAD2 Recombinant antibody (83841-5-RR, Clone:240950A11) and APC-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L)(red), or 0.25 μ g Isotype Control (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



1×10^6 Jurkat cells were intracellularly stained with 0.25 μ g SMAD2 Recombinant antibody (83841-5-RR, Clone:240950A11) and APC-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L)(red), or 0.25 μ g 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.