For Research Use Only

SMAD2 Recombinant antibody

Catalog Number:83841-5-RR

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Basic Information

Catalog Number:
83841-5-RR

Size:
1000 ug/ml

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG3237

GenBank Accession Number:
BC014840

GeneID (NCBI):
4087

UNIPROT ID:
Q15796

Full Name:
SMAD family member 2

Calculated MW:
467 aa, 52 kDa

Observed MW:
58 kDa

Purification Method:
Protein A purfication

CloneNo.:
240950A11

Recommended Dilutions:
WB 1:5000-1:50000
IF/ICC 1:200-1:800

Applications

Tested Applications:
WB, IF/ICC, FC (Intra), ELISA

Species Specificity:
human, rat

Positive Controls:

WB : HeLa cells, A549 cells, C6 cells

IF/ICC : HepG2 cells,

Background Information

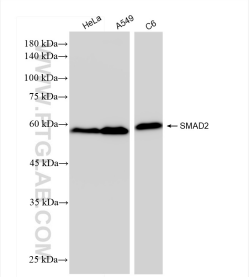
SMAD2, also named as MADH2 and MADR2, belongs to the dwarfin/SMAD family, contains 1 MH1 (MAD homology 1) domain and 1 MH2 (MAD homology 2) domain. SMAD2 is a receptor-regulated SMAD(R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta and activin type 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

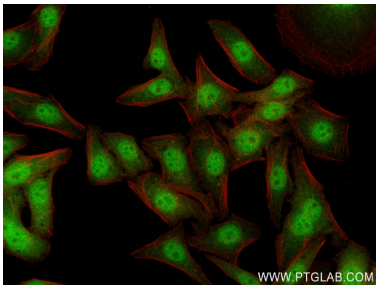
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

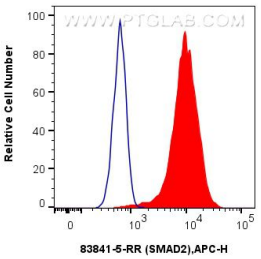
Selected Validation Data



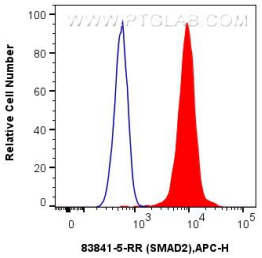
Various lysates were subjected to SDS PAGE followed by western blot with 83841-5-RR (SMAD2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



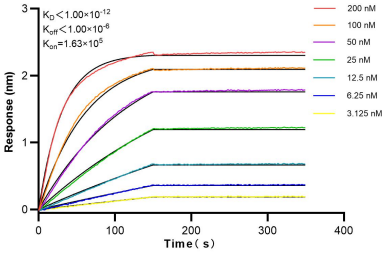
Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using SMAD2 antibody (83841-5-RR, Clone: 240950A11) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).



1x10^6 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).



1x10^6 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.