

For Research Use Only

# Phospho-SMAD2 (Ser465/467)/SMAD3 (Ser423/425) Recombinant antibody

Catalog Number: 80427-2-RR

2 Publications



## Basic Information

Catalog Number:

80427-2-RR

Concentration:

1000  $\mu$ g/ml

Source:

Rabbit

Isotype:

IgG

GenBank Accession Number:

BC014840

GeneID (NCBI):

4087

UNIPROT ID:

Q15796

Full Name:

SMAD family member 2

Calculated MW:

467 aa, 52 kDa

Observed MW:

60 kDa

Purification Method:

Protein A purification

CloneNo.:

240826D11

Recommended Dilutions:

WB 1:1000-1:4000

IF/ICC 1:250-1:1000

## Applications

Tested Applications:

WB, IF/ICC, FC (Intra), ELISA

Cited Applications:

WB

Species Specificity:

human

Cited Species:

human, mouse

Positive Controls:

WB : Calyculin A treated HEK-293 cells,

IF/ICC : TGF beta 1 treated HEK-293 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)

## Notable Publications

| Author       | Pubmed ID | Journal       | Application |
|--------------|-----------|---------------|-------------|
| Hui Jia      | 39954622  | Phytomedicine | WB          |
| Shenyang Liu | 39224804  | Front Oncol   | WB          |

## Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

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

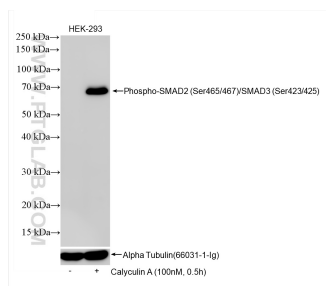
T: 4006900926

E: [Proteintech-CN@ptglab.com](mailto:Proteintech-CN@ptglab.com)

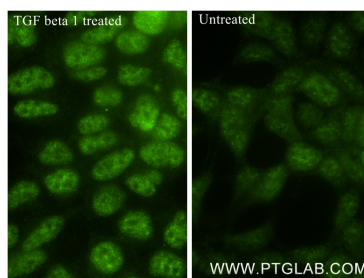
W: [ptgcn.com](http://ptgcn.com)

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

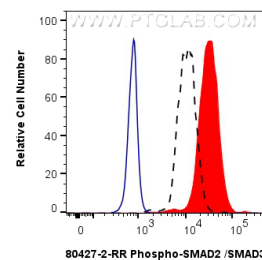
## Selected Validation Data



Non-treated and Calyculin A treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 80427-2-RR (Phospho-SMAD2 (Ser465/467)/SMAD3 (Ser423/425) antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Alpha Tubulin (66031-1-Ig) antibody as a loading control.



Immunofluorescent analysis of (4% PFA) fixed TGF beta 1 treated and untreated HEK-293 cells using Phospho-SMAD2 (Ser465/467)/SMAD3 (Ser423/425) antibody (80427-2-RR, Clone: 240826D11 ) at dilution of 1:500 and CoraLite® 488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2).



1X10<sup>6</sup> HEK-293 cells untreated (dashed lines) or treated with Calyculin A were intracellularly stained with 0.13 ug Phospho-SMAD2 (Ser465/467)/SMAD3 (Ser423/425) Recombinant antibody (80427-2-RR, Clone:240826D11) and CoraLite® 488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2)(red), or 0.13 ug Rabbit IgG Isotype Control Recombinant Antibody (98136-1-RR, Clone: 240953C9) (blue). Cells were fixed with 4% PFA and permeabilized with 90% MeOH.