

For Research Use Only

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

Catalog Number: 80427-2-RR

1 Publications



## Basic Information

<b>Catalog Number:</b> 80427-2-RR	<b>GenBank Accession Number:</b> BC014840	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ul , Concentration: 1000 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 4087	<b>CloneNo.:</b> 240826D11
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> Q15796	<b>Recommended Dilutions:</b> WB 1:1000-1:4000 IF/ICC 1:250-1:1000
<b>Isotype:</b> IgG	<b>Full Name:</b> SMAD family member 2	
	<b>Calculated MW:</b> 467 aa, 52 kDa	
	<b>Observed MW:</b> 60 kDa	

## Applications

<b>Tested Applications:</b> WB, IF/ICC, FC (Intra), ELISA	<b>Positive Controls:</b> WB : Calyculin A treated HEK-293 cells, IF/ICC : TGF beta 1 treated HEK-293 cells,
<b>Cited Applications:</b> WB	
<b>Species Specificity:</b> human	
<b>Cited Species:</b> human	

## 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
Shenyang Liu	39224804	Front Oncol	WB

## Storage

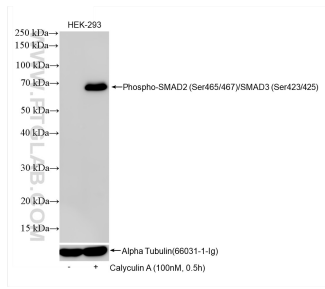
**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.  
Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

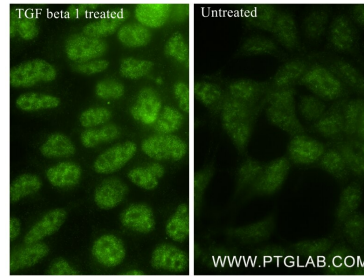
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: proteintech@ptglab.com  
W: ptglab.com

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

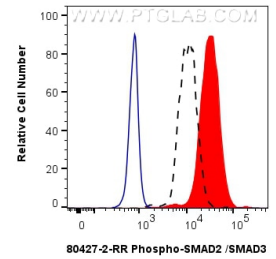
## Selected Validation Data



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.