For Research Use Only

Phospho-SMAD2 (Ser465/467)/SMAD3 (Ser423/425) Recombinant antibody, PBS Only

Catalog Number:80427-2-PBS

proteintech®
Antibodies | ELISA kits | Proteins
Uni-rAb
www.ptglab.com

Basic Information

Catalog Number:
80427-2-PBS

Size:
100ug , Concentration: 1 mg/ml by Nanodrop;

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 purfication

CloneNo.:
240826D11

Applications

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

Species Specificity:
human

Background Information

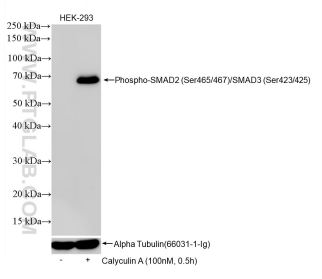
SMAD2, also named as MADH2 and MADR2, belongs to the dwarfin/SMAD family, contains 1 MH1 (MAD homology 1) domain and 1 MH2 (MAD homology 2) domain. SMAD2 is a receptor-regulated SMAD(R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta and activin type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

Storage

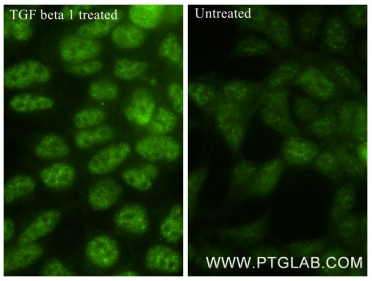
Storage:
Store at -80°C.
Storage Buffer:
PBS Only

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

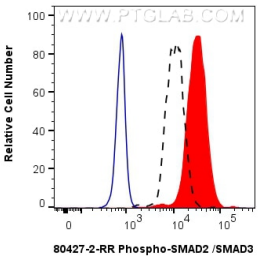
Selected Validation Data



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. This data was developed using the same antibody clone with 80427-2-PBS in a different storage buffer formulation.



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). This data was developed using the same antibody clone with 80427-2-PBS in a different storage buffer formulation.



1X10^6 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