Smad2 (Phospho Ser465/467) (PT0662R) PT™ Rabbit mAb

CatalogNo: YM8539 Recombinant

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB,IHC,IF,ELISA

MW
- 52kD (Calculated)
60kD (Observed)

Isotype
- IgG, Kappa

Storage

Storage*	-15°C to -25°C/1 year (Do not lower than -25°C)
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA

Recommended Dilution Ratios

WB 1:500-1:2000
IF 1:200-1:1000
ELISA 1:5000-1:20000
IHC 1:100-1:400

Basic Information

Clonality	Monoclonal
Clone Number	PT0662R

Immunogen Information

Immunogen	The specific immunogen used to produce this antibody is proprietary information.

Specificity	Smad2 (Phospho Ser465/467) Antibody detects endogenous levels of Smad2 protein only when phosphorylated at Ser465/Ser467.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):CSsMs

Target Information

Gene name	SMAD2 MADH2 MADR2
Protein Name	Smad2 (Ser465/467)

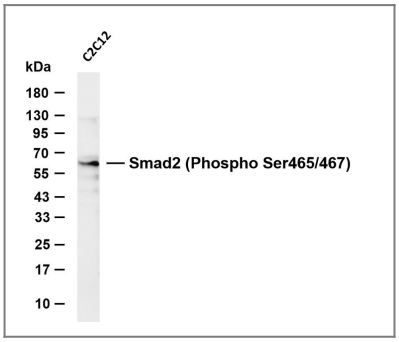
Organism	Gene ID	UniProt ID
Human	4087;	Q15796;
Mouse	17126;	Q62432;
Rat	29357;	O70436;

Cellular Localization	Cytoplasm . Nucleus . Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation , migrates to the nucleus when complexed with SMAD4 (PubMed:9865696 , PubMed:21145499) . On dephosphorylation by phosphatase PPM1A , released from the SMAD2/SMAD4 complex , and exported out of the nucleus by interaction with RANBP1 (PubMed:16751101 , PubMed:19289081) . Localized mainly to the nucleus in the early stages of embryo development with expression becoming evident in the cytoplasm at the blastocyst and epiblast stages (By similarity) . .
Tissue specificity	Expressed at high levels in skeletal muscle , endothelial cells , heart and placenta.

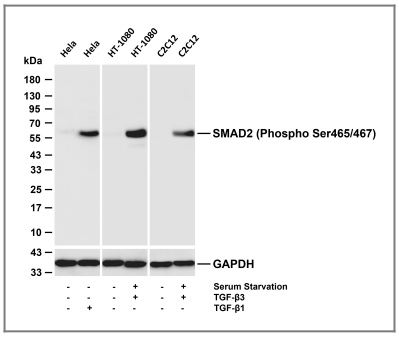
Function

Disease:Defects in SMAD2 are found in sporadic cases of colorectal carcinoma. ,Function:Transcriptional modulator activated by TGF-beta and activin type 1 receptor kinase. SMAD2 is a receptor-regulated SMAD (R-SMAD) . May act as a tumor suppressor in colorectal carcinoma. ,PTM:Acetylated on Lys-19 by coactivators in response to TGF-beta signaling , which increases transcriptional activity. Isoform short: Acetylation increases DNA binding activity in vitro and enhances its association with target promoters in vivo. ,PTM:In response to TGF-beta , ubiquitinated by NEDD4L; which promotes its degradation. ,PTM:Phosphorylated on one or several of Thr-220 , Ser-245 , Ser-250 , and Ser-255. In response to TGF-beta , phosphorylated on Ser-465/467 by TGF-beta and activin type 1 receptor kinases. Able to interact with SMURF2 when phosphorylated on Ser-465/467 , recruiting other proteins , such as SNON , for degradation. In response to decorin , the naturally occurring inhibitor of TGF-beta signaling , phosphorylated on Ser-240 by CaMK2. Phosphorylated by MAPK3 upon EGF stimulation; which increases transcriptional activity and stability , and is blocked by calmodulin. ,similarity:Belongs to the dwarfin/SMAD family. ,similarity:Contains 1 MH1 (MAD homology 1) domain. ,similarity:Contains 1 MH2 (MAD homology 2) domain. ,subcellular location:Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4. ,subunit:Found in a complex with SMAD3 and TRIM33 upon addition of TGF-beta. Interacts with SMAD3 and TRIM33. Interacts with SARA (SMAD anchor for receptor activation) ; may form trimers with the SMAD4 co-SMAD. Interacts with FOXH1 , homeobox protein TGIF , PEBP2-alpha subunit , CREB-binding protein (CBP) , EP300 and SKI. Interacts with SNON; when phosphorylated at Ser-465/467. Interacts (via PY-motif) with SMURF2. Interacts with AIP1 and HGS. Interacts with NEDD4L in response to TGF-beta (By similarity) . Interacts with LBXCOR1 and CORL2. ,tissue specificity:Expressed at high levels in skeletal muscle , heart and placenta. ,

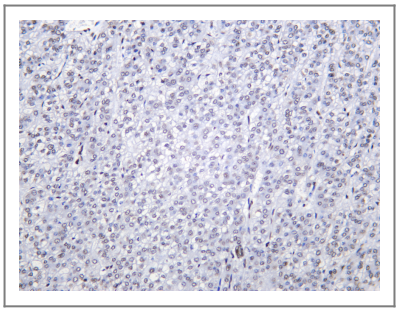
Validation Data



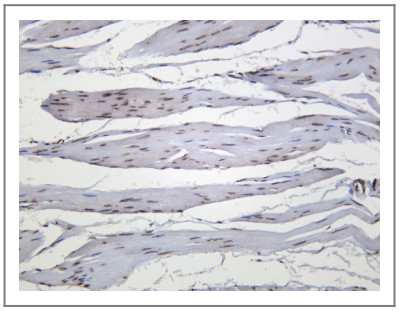
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Smad2 (Phospho Ser465/467) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: C2C12 serum was starved overnight and treated with TGF-β3 (10ng/ml) for 20 minutes Predicted band size: 52kDa Observed band size: 60kDa



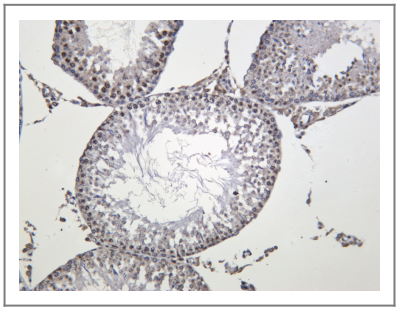
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-SMAD2 (Phospho Ser465/467) (PT0662R) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: Hela Lane 2: Hela was treated with TGF-β1(20ng/ml) for 15 minutes Lane 3: HT-1080 Lane 4: HT-1080 serum was starved overnight and treated with TGF-β3(10ng/ml) for 30 minutes Lane 5: C2C12 Lane 6: C2C12 serum was starved overnight and treated with TGF-β3(10ng/ml) for 30 minutes Predicted band size: 52kDa Observed band size: 60kDa



Human liver cancer was stained with anti-SMAD2 (Phospho Ser465/467) (PT0662R) Rabbit antibody



Human smooth muscle was stained with anti-SMAD2 (Phospho Ser465/467) (PT0662R) Rabbit antibody



Rat testis was stained with anti-SMAD2 (Phospho Ser465/467) (PT0662R) Rabbit antibody

Contact information

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Please scan the QR code to access additional product information: **Smad2 (Phospho Ser465/467) (PT0662R) PT™ Rabbit mAb**