# Smad2/3 (Phospho Thr8) (PT0741R) PT™ Rabbit mAb

CatalogNo: YM8550 Recombinant

## Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat,Pig

Applications
- WB,ICC/IF,IP,ELISA

MW
- 48kD (Calculated)

62kD (Observed)

Isotype
- IgG, Kappa

## Storage

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|---|---|
| **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 1:2000-1:10000**
**ICC/IF 1:200-1:1000**
**ELISA 1:5000-1:20000**
**IP 1:50-1:200**

## Basic Information

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| **Clonality** | Monoclonal |
| **Clone Number** | PT0741R |

## Immunogen Information

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

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|---|---|
| **Specificity** | Phospho-Smad2/3 (T8) Antibody detects endogenous levels of Smad2/3 protein only when phosphorylated at T8.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 When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports.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):PFtPP |

## Target Information

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| **Gene name** | SMAD2/SMAD3 |
| **Protein Name** | Mothers against decapentaplegic homolog 2/3 |

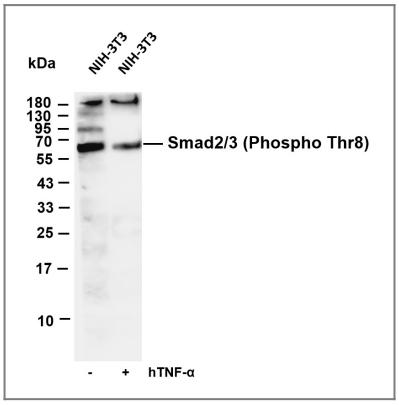
| Organism | Gene ID | UniProt ID |
|---|---|---|
| Human | 4087; 4088; | Q15796; P84022; |
| Mouse | 17126; 17127; | Q62432; |
| Rat | 29357; 25631; | O70436; P84025; |

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|---|---|
| **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. |

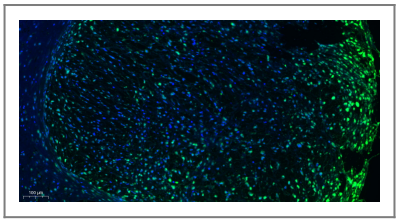
**Function**

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-Smad2/3 (Phospho Thr8) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: NIH-3T3 Lane 2: NIH-3T3  treated with hTNF-α (20 ng/mL) for 30 minutes Predicted band size: 48kDa Observed band size: 62kDa



Immunofluorescence analysis of human heart . Picture A: Histone H3 (Mono Methyl Lys9) (PT0921R) Rabbit mAb (red). Picture B: DAPI (blue). Picture C: Merge of A+B

## Contact information

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Please scan the QR code to access additional product information:
**Smad2/3 (Phospho Thr8) (PT0741R) PT™ Rabbit mAb**

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