

**Smad2 (phospho Ser467) Polyclonal Antibody**

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| <b>Catalog No :</b>          | YP0584  |
| <b>Reactivity :</b>          | Human;Mouse;Rat   |
| <b>Applications :</b>        | WB;IHC;IF;ELISA   |
| <b>Target :</b>              | Smad2   |
| <b>Fields :</b>              | >>Cell cycle;>>Endocytosis;>>Cellular senescence;>>TGF-beta signaling pathway;>>Apelin signaling pathway;>>Hippo signaling pathway;>>Signaling pathways regulating pluripotency of stem cells;>>Th17 cell differentiation;>>Relaxin signaling pathway;>>AGE-RAGE signaling pathway in diabetic complications;>>Chagas disease;>>Human T-cell leukemia virus 1 infection;>>Pathways in cancer;>>Proteoglycans in cancer;>>Colorectal cancer;>>Pancreatic cancer;>>Hepatocellular carcinoma;>>Gastric cancer;>>Inflammatory bowel disease;>>Diabetic cardiomyopathy |
| <b>Gene Name :</b>           | SMAD2   |
| <b>Protein Name :</b>        | Mothers against decapentaplegic homolog 2   |
| <b>Human Gene Id :</b>       | 4087  |
| <b>Human Swiss Prot No :</b> | Q15796  |
| <b>Mouse Gene Id :</b>       | 17126   |
| <b>Mouse Swiss Prot No :</b> | Q62432  |
| <b>Rat Gene Id :</b>         | 29357   |
| <b>Rat Swiss Prot No :</b>   | O70436  |
| <b>Immunogen :</b>           | The antiserum was produced against synthesized peptide derived from human Smad2 around the phosphorylation site of Ser467. AA range:418-467   |
| <b>Specificity :</b>         | Phospho-Smad2 (S467) Polyclonal Antibody detects endogenous levels of Smad2 protein only when phosphorylated at S467.   |

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| <b>Formulation :</b>       | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.   |
| <b>Source :</b>            | Polyclonal, Rabbit,IgG  |
| <b>Dilution :</b>          | WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:5000.. IF 1:50-200   |
| <b>Purification :</b>      | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.   |
| <b>Concentration :</b>     | 1 mg/ml   |
| <b>Storage Stability :</b> | -15°C to -25°C/1 year(Do not lower than -25°C)  |
| <b>Observed Band :</b>     | 58kD  |
| <b>Cell Pathway :</b>      | Regulates Angiogenesis; Cell_Cycle_G1S;Cell_Cycle_G2M_DNA; Protein_Acetylation  |
| <b>Background :</b>        | <p>The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene <i>mothers against decapentaplegic</i> (Mad) and the C. elegans gene <i>Sma</i>. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated by the TGF-beta receptors. The phosphorylation induces the dissociation of this protein with SARA and the association with the family member SMAD4. The association with SMAD4 is important for the translocation</p> |
| <b>Function :</b>          | <p>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 degr</p>               |
| <b>Subcellular</b>         | Cytoplasm . Nucleus . Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4  |

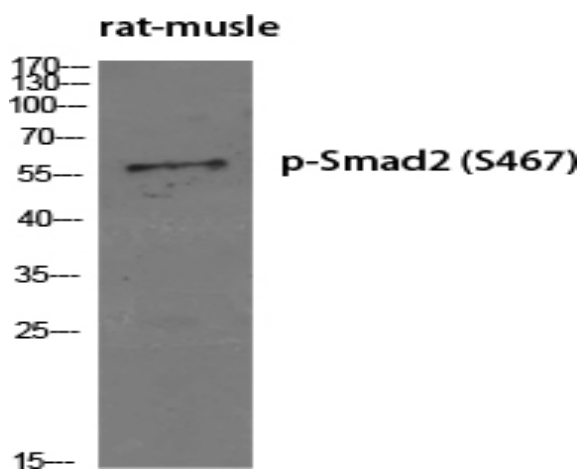
**Location :**

(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). .

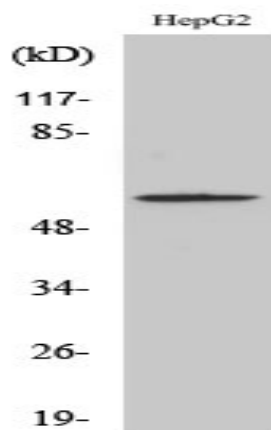
**Expression :**

Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta.

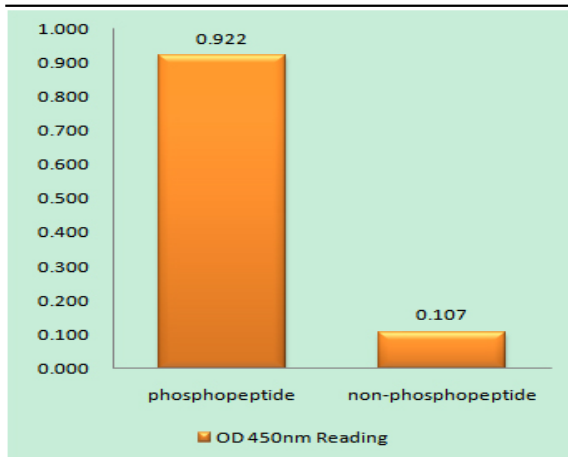
## Products Images



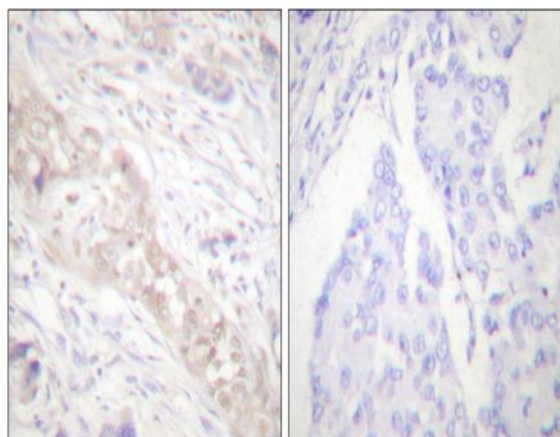
Western Blot analysis of various cells using Phospho-Smad2 (S467) Polyclonal Antibody diluted at 1:500



Western Blot analysis of HepG2 cells using Phospho-Smad2 (S467) Polyclonal Antibody diluted at 1:500



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Smad2 (Phospho-Ser467) Antibody



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using Smad2 (Phospho-Ser467) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from HepG2 cells treated with PMA 125ng/ml 15', using Smad2 (Phospho-Ser467) Antibody. The lane on the right is blocked with the phospho peptide.