

**Smad2 (phospho Ser250) Polyclonal Antibody**

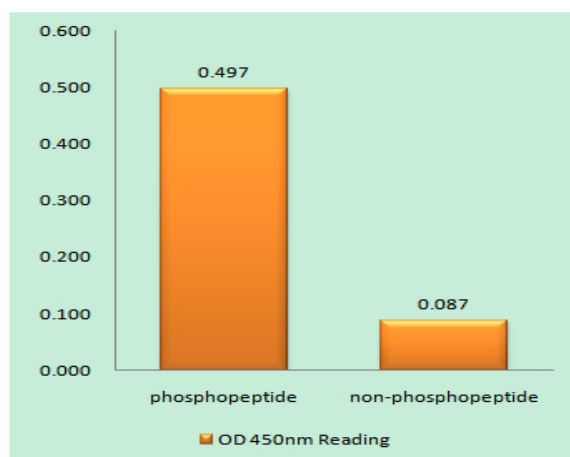
<b>Catalog No :</b>	YP0361
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	WB;ELISA;IHC
<b>Target :</b>	Smad2
<b>Fields :</b>	>>Cell cycle;>>Endocytosis;>>Cellular senescence;>>TGF-beta signaling pathway;>>Apelin signaling pathway;>>Hippo signaling pathway;>>Signaling pathways regulating pluripotency 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 Ser250. AA range:216-265
<b>Specificity :</b>	Phospho-Smad2 (S250) Polyclonal Antibody detects endogenous levels of Smad2 protein only when phosphorylated at S250.

<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 1:500-2000;IHC 1:50-300; ELISA 2000-20000
<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>	65kD
<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

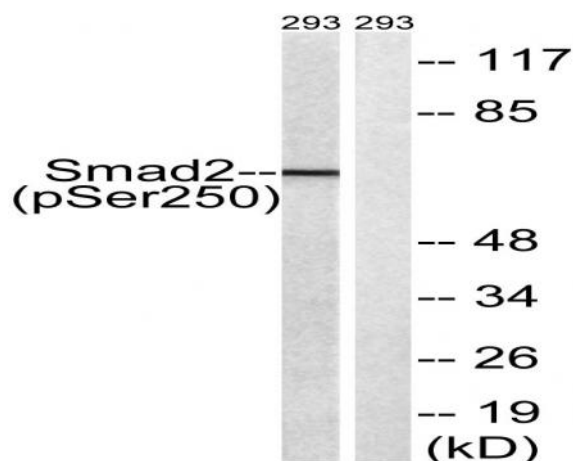
**Location :** (PubMed:9865696, PubMed:21145499). On dephosphorylation by phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1 (PubMed:16751101, PubMed:19289081). Localized mainly to the nucleus in the early stages of embryo development 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.

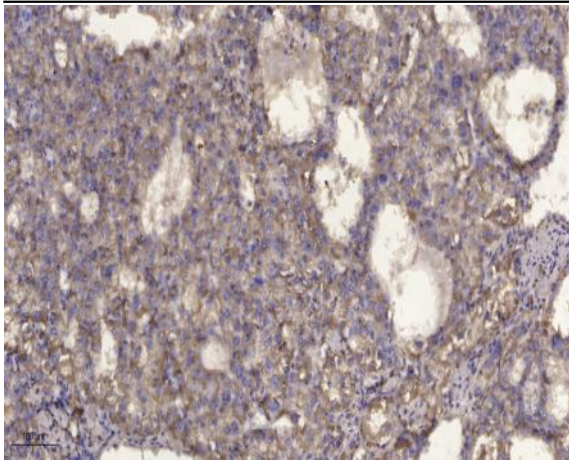
## Products Images



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Smad2 (Phospho-Ser250) Antibody



Western blot analysis of lysates from 293 cells treated with PMA 125ng/ml 30', using Smad2 (Phospho-Ser250) Antibody. The lane on the right is blocked with the phospho peptide.



Immunohistochemical analysis of paraffin-embedded human liver cancer. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).