

## Smad2/3 Polyclonal Antibody

<b>Catalog No :</b>	YT4332
<b>Reactivity :</b>	Human;Mouse;Rat;Monkey;Pig
<b>Applications :</b>	WB;IHC;IF;ELISA
<b>Target :</b>	Smad2/3
<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/SMAD3
<b>Protein Name :</b>	Mothers against decapentaplegic homolog 2/3
<b>Human Gene Id :</b>	4087/4088
<b>Human Swiss Prot No :</b>	Q15796/P84022
<b>Mouse Gene Id :</b>	17126/17127
<b>Rat Gene Id :</b>	29357/25631
<b>Rat Swiss Prot No :</b>	O70436/P84025
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human Smad2/3. AA range:1-50
<b>Specificity :</b>	Smad2/3 Polyclonal Antibody detects endogenous levels of Smad2/3 protein.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.  Polyclonal, Rabbit,IgG

**Dilution:** WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:10000.. IF 1:50-200

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**Purification :** The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

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**Concentration :** 1 mg/ml

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**Storage Stability :** -15°C to -25°C/1 year(Do not lower than -25°C)

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**Observed Band :** 48kD

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**Cell Pathway :** Regulates Angiogenesis; Cell\_Cycle\_G1S;Cell\_Cycle\_G2M\_DNA; Protein\_Acetylation

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**Background :** The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene *mothers against decapentaplegic* (Mad) and the C. elegans gene *Sma*. 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

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**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 degr

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**Subcellular Location :** 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

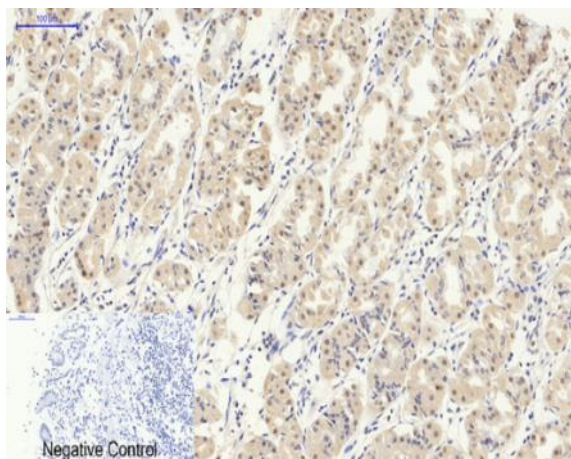
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expression becoming evident in the cytoplasm at the blastocyst and epiblast stages (By similarity).

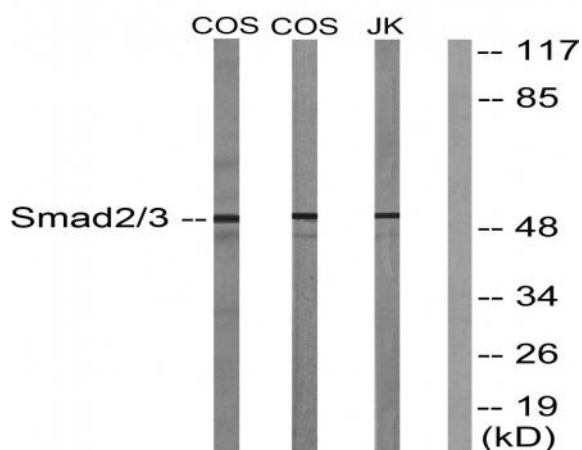
**Expression :**

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

## Products Images



Immunohistochemical analysis of paraffin-embedded Human-stomach tissue. 1, Smad2/3 Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.



Western blot analysis of lysates from COS7 and Jurkat cells, treated with UV 15', using Smad2/3 Antibody. The lane on the right is blocked with the synthesized peptide.