

**Smad2 Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AP52780****Specification**

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**Smad2 Antibody - Product Information**

Application	<b>WB, ICC</b>
Primary Accession	<a href="#">O15796</a>
Reactivity	<b>Human</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG1</b>
Calculated MW	<b>60 KDa</b>

**Smad2 Antibody - Additional Information****Gene ID** 4087**Other Names**

hMAD 2;hMAD-2;hSMAD2;JV18 1;JV18;JV18;JV18-1;JV181;MAD;MAD;MAD homolog 2;MAD Related Protein 2;Mad-related protein 2;MADH2;MADR2;MGC22139;MGC34440;Mothers Against Decapentaplegic Homolog 2;Mothers Against Decapentaplegic Homolog 2;mothers against DPP homolog 2;OTTHUMP00000163489;Sma and Mad related protein 2;SMAD 2;SMAD;SMAD family member 2;SMAD, mothers against DPP homolog 2;SMAD2;SMAD2\_HUMAN.

**Dilution**

WB~~1:500

ICC~~1:100

**Format**

ascites

**Storage**

Store at -20 °C.Stable for 12 months from date of receipt

**Smad2 Antibody - Protein Information****Name** SMAD2**Synonyms** MADH2, MADR2**Function**

Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD2/SMAD4 complex, activates transcription. Promotes TGFB1-mediated transcription of odontoblastic differentiation genes in dental papilla cells (By similarity). Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ

which acts as a negative regulator. May act as a tumor suppressor in colorectal carcinoma (PubMed:<a href="http://www.uniprot.org/citations/8752209" target="\_blank">8752209</a>).

#### Cellular Location

Cytoplasm. Nucleus. Note=Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 or with IPO7 (PubMed:21145499, PubMed:9865696). 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). {ECO:0000250|UniProtKB:Q62432, ECO:0000269|PubMed:16751101, ECO:0000269|PubMed:19289081, ECO:0000269|PubMed:21145499, ECO:0000269|PubMed:9865696}

#### Tissue Location

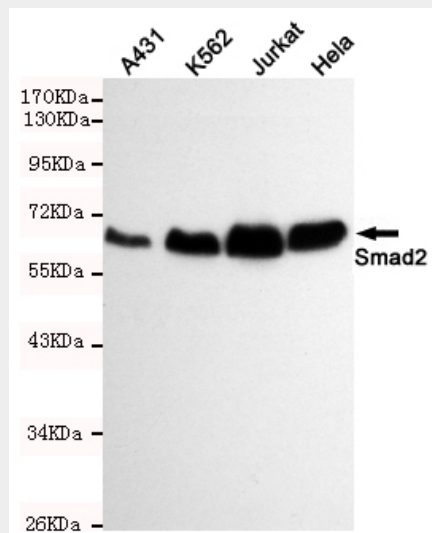
Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta.

### Smad2 Antibody - Protocols

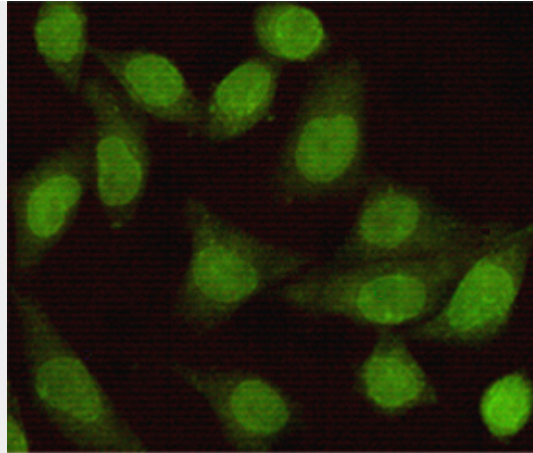
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Smad2 Antibody - Images



Western blot detection of Smad2 in HeLa,A431,Jurkat and K562 cell lysates using Smad2 mouse mAb (1:500 diluted).Predicted band size:60KDa.Observed band size:60KDa.



Immunocytochemistry staining of HeLa cells fixed with 1% Paraformaldehyde and using Smad2 mouse mAb (dilution 1:100).

### **Smad2 Antibody - Background**

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### **Smad2 Antibody - References**

Riggins G.J., et al. Nat. Genet. 13:347-349(1996).  
Zhang Y., et al. Nature 383:168-172(1996).  
Eppert K., et al. Cell 86:543-552(1996).  
Liu F., et al. Genes Dev. 11:3157-3167(1997).  
Takenoshita S., et al. Genomics 48:1-11(1998).