

Smad2 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52780

Specification

Smad2 Antibody - Product Information

Application WB, ICC
Primary Accession Q15796
Reactivity Human
Host Mouse
Clonality Monoclonal
Isotype IgG1
Calculated MW 60 KDa

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:8752209).

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

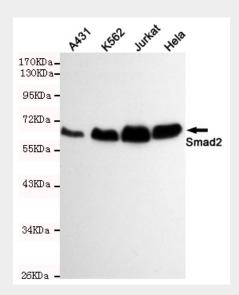
Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta.

Smad2 Antibody - Protocols

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

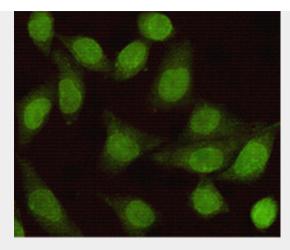
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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).