

KD-Validated Anti-Smad2 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody Catalog # AGI2368

Specification

KD-Validated Anti-Smad2 Rabbit Monoclonal Antibody - Product Information

Application

Primary Accession

Reactivity

Clonality

Isotype

WB, FC, ICC

O15796

Rat, Human

Monoclonal

Rabbit IgG

Calculated MW Predicted, 52 kDa; Observed, 58 kDa KDa

Gene Name SMAD2

Aliases

JV18-1; MADR2; MADH2; Mothers Against

Decapentaplegic Homolog 2; MAD Homolog

2; HMAD-2; HSMAD2; MAD, Mothers Against Decapentaplegic Homolog 2 (Drosophila); SMAD, Mothers Against DPP Homolog 2 (Drosophila); SMAD, Mothers Against DPP Homolog 2; Sma- And Mad-Related Protein 2; Mothers Against DPP Homolog 2; Mother Against DPP Homolog 2; Mad-Related Protein 2; SMAD

2; CHTD8; Smad2; JV18; LDS6

Immunogen A synthesized peptide derived from human

smad2

KD-Validated Anti-Smad2 Rabbit Monoclonal Antibody - Additional Information

Gene ID 4087

Other Names

Mothers against decapentaplegic homolog 2, MAD homolog 2, Mothers against DPP homolog 2, JV18-1, Mad-related protein 2, hMAD-2, SMAD family member 2, SMAD 2, Smad2, hSMAD2, SMAD2, MADH2, MADR2

KD-Validated Anti-Smad2 Rabbit Monoclonal 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

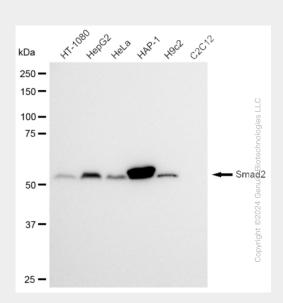
Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta.

KD-Validated Anti-Smad2 Rabbit Monoclonal Antibody - Protocols

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

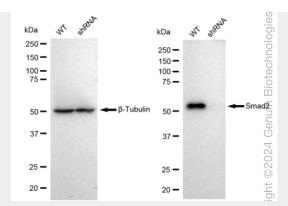
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-Smad2 Rabbit Monoclonal Antibody - Images

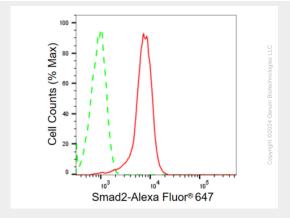


Western blotting analysis using anti-Smad2 antibody (Cat#AGI2368). Total cell lysates (30 μg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Smad2 antibody (Cat#AGI2368, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

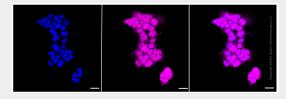




Western blotting analysis using anti-Smad2 antibody (Cat#AGI2368). Smad2 expression in wild type (WT) and Smad2 shRNA knockdown (KD) HT-1080 cells with 30 μ g of total cell lysates. β -Tubulin serves as a loading control. The blot was incubated with anti-Smad2 antibody (Cat#AGI2368, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Smad2 in HAP-1 cells using Smad2 antibody (Cat#AGI2368, 1:2,000). Green, isotype control; red, Smad2.



Immunocytochemical staining of HAP-1 cells with Smad2 antibody (Cat#AGI2368, 1:1,000). Nuclei were stained blue with DAPI; Smad2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.