

KD-Validated Anti-Smad2 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI2368**Specification****KD-Validated Anti-Smad2 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	Q15796
Reactivity	Rat, Human
Clonality	Monoclonal
Isotype	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 TGFβ1-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

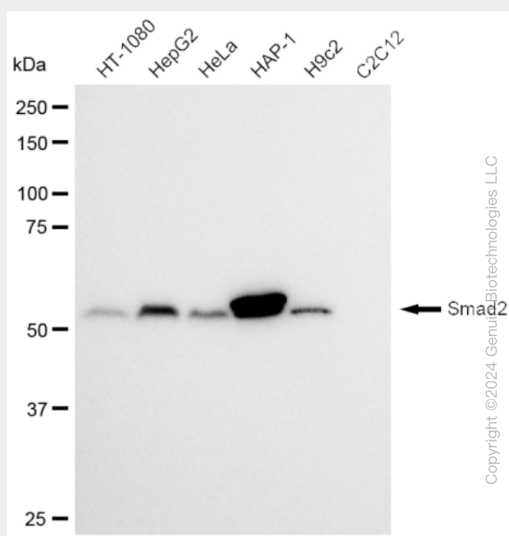
Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta.

KD-Validated Anti-Smad2 Rabbit Monoclonal Antibody - Protocols

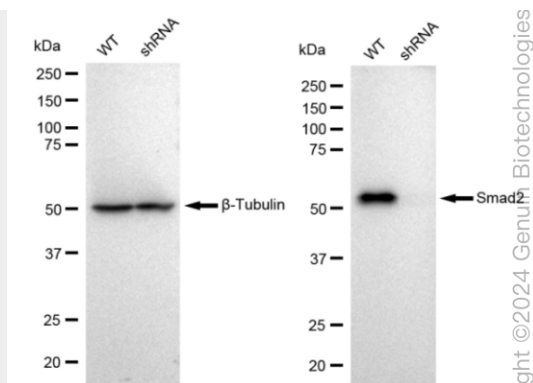
Provided below are standard protocols that you may find useful for product applications.

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

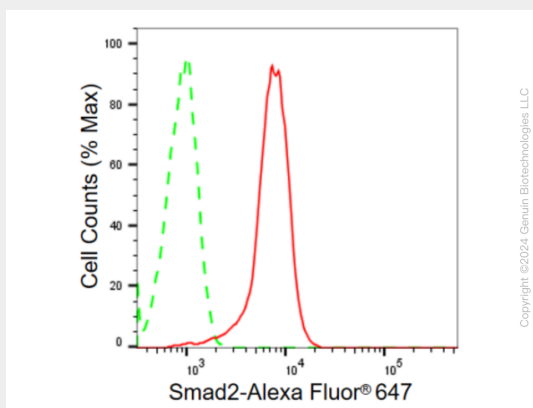
KD-Validated Anti-Smad2 Rabbit Monoclonal Antibody - Images



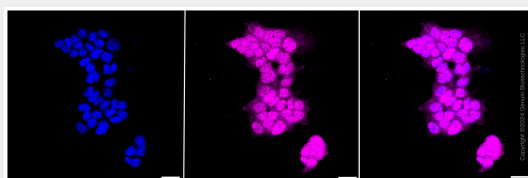
Western blotting analysis using anti-Smad2 antibody (Cat#AGI2368). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Smad2 antibody (Cat#AGI2368, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



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 µg 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.