

Product Name: KD-Validated Smad2 Recombinant Rabbit Monoclonal Antibody**Catalog #: KVA00198**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC
Reactivity	Human,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000
Molecular Weight	Calculated MW: 52.3kDa

Antigen Information

Gene Name	SMAD2 JV18-1; MADR2; MADH2; Mothers Against Decapentaplegic Homolog 2; MAD Homolog 2; HMD-2; HSMAD2; MAD, Mothers Against Decapentaplegic Homolog 2 (Drosophila);
Alternative Names	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
Gene ID	4087.0
SwissProt ID	Q15796
Immunogen	A synthesized peptide derived from human smad2

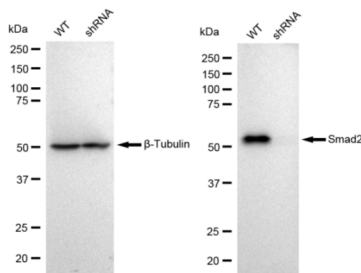
Background

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)- β , and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF- β receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF- β signal, this protein is phosphorylated by the TGF- β 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 of this protein into the nucleus, where it binds to target promoters and forms a transcription repressor complex with other cofactors. This protein can also be phosphorylated by activin type 1 receptor kinase, and mediates the signal from the activin. Alternatively spliced transcript variants have been observed for this gene. [provided by RefSeq, May 2012]

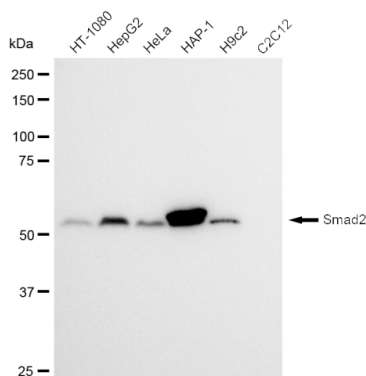
Research Area

Signal Transduction, Epigenetics and Nuclear Signaling, Stem Cells, Cancer

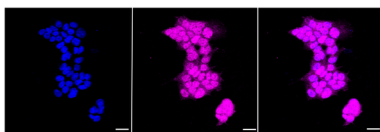
Image Data



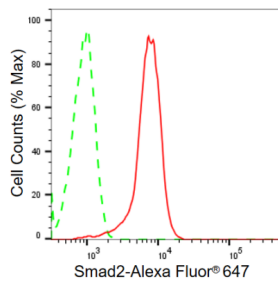
Western blotting analysis using Smad2 antibody (KVA00198). Smad2 expression in wild type (WT) and Smad2 shRNA knockdown (KD) HT-1080 cells with 30 μ g of total cell lysates. β -Tubulin serves as a loading control. The blot was incubated with Smad2 antibody (KVA00198, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Western blotting analysis using Smad2 antibody (KVA00198). Total cell lysates (30 μ g) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with Smad2 antibody (KVA00198, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Immunocytochemical staining of HAP-1 cells with Smad2 antibody (KVA00198, 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 μ m.



Flow cytometric analysis of Smad2 expression in HAP-1 cells using Smad2 antibody (KVA00198, 1:2,000). Green, isotype control; red, Smad2.