

Product Name: KD-Validated Smad4 Recombinant Rabbit Monoclonal Antibody
Catalog #: KVA00253

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,Mouse,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; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 60.4kDa

Antigen Information

Gene Name	SMAD4
Alternative Names	DPC4; MADH4; Mothers Against Decapentaplegic Homolog 4; Deletion Target In Pancreatic Carcinoma 4; MAD Homolog 4; MAD, Mothers Against Decapentaplegic Homolog 4 (Drosophila); Mothers Against Decapentaplegic, Drosophila, Homolog Of, 4; SMAD, Mothers Against DPP Homolog 4 (Drosophila); Deleted In Pancreatic Carcinoma Locus 4; SMAD, Mothers Against DPP Homolog 4; Mothers Against DPP Homolog 4; SMAD 4; HSMAD4; MYHRS; Smad4; JIP
Gene ID	4089.0
SwissProt ID	Q13485
Immunogen	A synthesized peptide derived from human Smad4

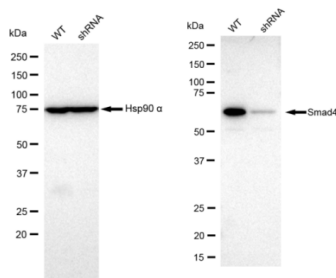
Background

This gene encodes a member of the Smad family of signal transduction proteins. Smad proteins are phosphorylated and activated by transmembrane serine-threonine receptor kinases in response to transforming growth factor (TGF)-beta signaling. The product of this gene forms homomeric complexes and heteromeric complexes with other activated Smad proteins, which then accumulate in the nucleus and regulate the transcription of target genes. This protein binds to DNA and recognizes an 8-bp palindromic sequence (GTCTAGAC) called the Smad-binding element (SBE). The protein acts as a tumor suppressor and inhibits epithelial cell proliferation. It may also have an inhibitory effect on tumors by reducing angiogenesis and increasing blood vessel hyperpermeability. The encoded protein is a crucial component of the bone morphogenetic protein signaling pathway. The Smad proteins are subject to complex regulation by post-translational modifications. Mutations or deletions in this gene have been shown to result in pancreatic cancer, juvenile polyposis syndrome, and hereditary hemorrhagic telangiectasia syndrome. [provided by RefSeq, May 2022]

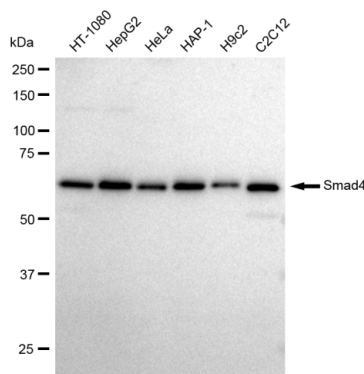
Research Area

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

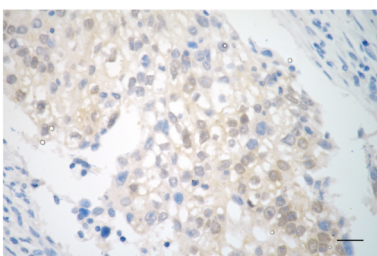
Image Data



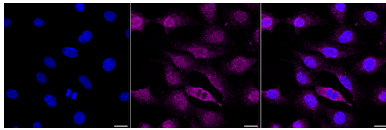
Western blotting analysis using Smad4 antibody (KVA00253). Smad4 expression in wild type (WT) and Smad4 shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with Smad4 antibody (KVA00253, 1:5,000) and HRP-conjugated goat anti rabbit secondary antibody (APS0635, 1:10,000) respectively.



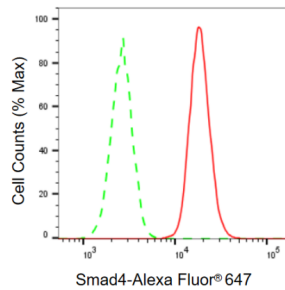
Western blotting analysis using Smad4 antibody (KVA00253). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with Smad4 antibody (KVA00253, 1:5,000) and HRP-conjugated goat anti rabbit secondary antibody (APS0635, 1:10,000) respectively.



Immunohistochemistry was performed on paraffin-embedded human breast carcinoma using smad4 antibody (KVA00253, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



Immunocytochemical staining of C2C12 cells with Smad4 antibody (KVA00253, 1:1,000). Nuclei were stained blue with DAPI; Smad4 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 Smad4 expression in C2C12 cells using Smad4 antibody (KVA00253, 1:2,000). Green, isotype control; red, Smad4.