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KD-Validated Anti-SMAD Family Member 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1708

Specification

KD-Validated Anti-SMAD Family Member 1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	Q15797
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 52 kDa , observed , 58 kDa KDa**
Gene Name	**SMAD1**
Aliases	**SMAD1; SMAD Family Member 1; MADR1; JV4-1; MADH1; Mothers Against Decapentaplegic Homolog 1; Mothers Against DPP Homolog 1; Mad-Related Protein 1; BSP-1; BSP1; MAD, Mothers Against Decapentaplegic Homolog 1 (Drosophila); Transforming Growth Factor-Beta Signaling Protein 1; Transforming Growth Factor-Beta-Signaling Protein 1; SMAD, Mothers Against DPP Homolog 1 (Drosophila); MAD, Mothers Against Decapentaplegic Homolog 1; SMAD, Mothers Against DPP Homolog 1; TGF-Beta Signaling Protein 1; MAD Homolog 1; SMAD 1; HSMAD1; Smad1; JV41**
Immunogen	**A synthesized peptide derived from human Smad1**

KD-Validated Anti-SMAD Family Member 1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**4086**

Other Names
Mothers against decapentaplegic homolog 1, MAD homolog 1, Mothers against DPP homolog 1, JV4-1, Mad-related protein 1, SMAD family member 1, SMAD 1, Smad1, hSMAD1, Transforming growth factor-beta-signaling protein 1, BSP-1, SMAD1, BSP1, MADH1, MADR1

KD-Validated Anti-SMAD Family Member 1 Rabbit Monoclonal Antibody - Protein Information

Name SMAD1

Synonyms BSP1, MADH1, MADR1

Function
Transcriptional modulator that plays a role in various cellular processes, including embryonic development, cell differentiation, and tissue homeostasis (PubMed:9335504). Upon BMP ligand binding to their receptors at the cell surface, is phosphorylated by activated type I BMP receptors (BMPRIs) and associates with SMAD4 to form a heteromeric complex which translocates into the nucleus acting as transcription factor (PubMed:33667543). In turn, the hetero-trimeric complex recognizes cis-regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network (PubMed:33667543). SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1. Positively regulates BMP4-induced expression of odontogenic development regulator MSX1 following IPO7-mediated nuclear import (By similarity).

Cellular Location
Cytoplasm. Nucleus Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4 (PubMed:15647271). Co-localizes with LEMD3 at the nucleus inner membrane (PubMed:15647271). Exported from the nucleus to the cytoplasm when dephosphorylated (By similarity) {ECO:0000250|UniProtKB:P70340, ECO:0000269|PubMed:15647271}

Tissue Location
Ubiquitous. Highest expression seen in the heart and skeletal muscle

KD-Validated Anti-SMAD Family Member 1 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 Cytomety
- Cell Culture

KD-Validated Anti-SMAD Family Member 1 Rabbit Monoclonal Antibody - Images

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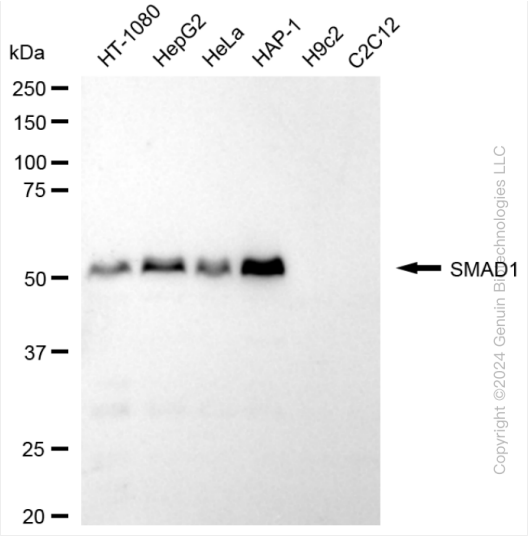
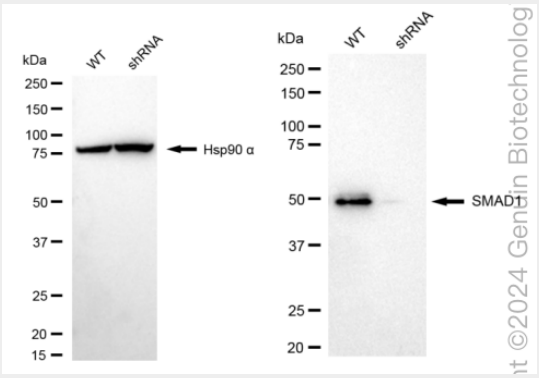
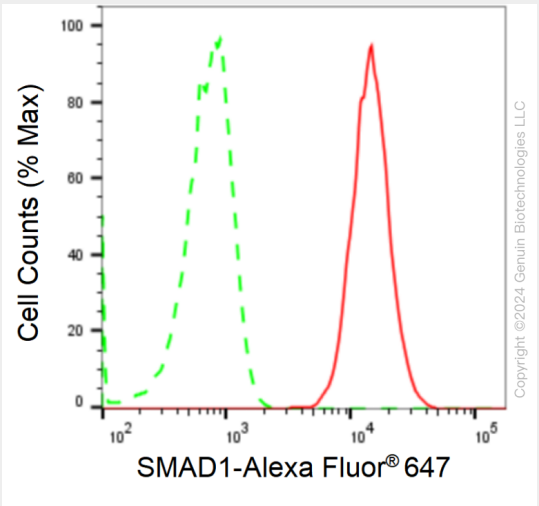


Western blotting analysis using anti-SMAD1 antibody (Cat#AGI1708). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-SMAD1 antibody (Cat#AGI1708, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-SMAD1 antibody (Cat#AGI1708). SMAD1 expression in wild type (WT) and SMAD1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-SMAD1 antibody (Cat#AGI1708, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of SMAD1 expression in HAP-1 cells using anti-SMAD1 antibody

(Cat#AGI1708, 1:2,000). Green, isotype control; red, SMAD1.