

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

Rabbit monoclonal antibody
Catalog # AGI1708

Product Information

Application	WB, FC
Primary Accession	Q15797
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	24GB2100
Calculated MW	52260
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

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

Protein Information

Name	SMAD1 (HGNC:6767)
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 (BMPRI) 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

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