

Anti-SMAD1 Picoband Antibody

Catalog # ABO12086

Product Information

Application	WB
Primary Accession	Q15797
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Mothers against decapentaplegic homolog 1(SMAD1) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Calculated MW	52260
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm. Nucleus. Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4. Co-localizes with LEMD3 at the nucleus inner membrane.
Tissue Specificity	Ubiquitous. Highest expression seen in the heart and skeletal muscle.
Source	Eukaryota
Protein Name	Mothers against decapentaplegic homolog 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human SMAD1 (240-270aa QPMDTNMMAPPLPSEINRGDVQAVAYEEPKH), different from the related mouse sequence by two amino acids, and from the related rat sequence by five amino acids.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20 °C for one year. After r ° Constitution, at 4 °C for one month. It ° Can also be aliquotted and stored frozen at -20 °C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the dwarfin/SMAD family.

Protein Information

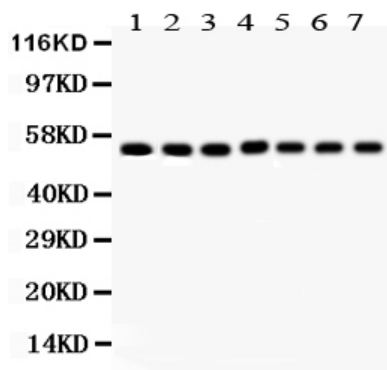
Name	SMAD1 (HGNC:6767)
Synonyms	BSP1, MADH1, MADR1
Function	Transcriptional modulator that plays a role in various cellular processes, including embryonic development, cell differentiation, and tissue homeostasis (PubMed: 9335504). Upon BMP ligand binding to their receptors at the cell surface, is phosphorylated by activated type I BMP receptors (BMPRIIs) 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

Background

SMADs are proteins that modulate the activity of transforming growth factor beta ligands. The SMADs, often in complex with other SMADs/CoSMAD, act as transcription factors that regulate the expression of certain genes. It was concluded that targeted ubiquitination of SMADs may serve to control both embryonic development and a wide variety of cellular responses to TGF-beta signals. R-Smads or receptor regulated Smads are a class of proteins that include SMAD1, SMAD2, SMAD3, SMAD5, and SMAD8. In response to signals by the TGF- β superfamily of ligands these proteins associate with receptor kinases and are phosphorylated at an SSXS motif at their extreme C-terminus. These proteins then typically bind to the common mediator Smad or co-SMAD SMAD4.

Images

Anti- SMAD1 Picoband antibody, ABO12086, Western blottingAll lanes: Anti SMAD1 (ABO12086) at 0.5ug/mlLane 1: Rat Cardiac Muscle Tissue Lysate at 50ugLane 2: Mouse Cardiac Muscle Tissue Lysate at 50ugLane 3: Rat Skeletal Muscle Tissue Lysate at 50ugLane 4: Mouse Skeletal Muscle Tissue Lysate at 50ugLane 5: 293T Whole Cell Lysate at 40ugLane 6: MCF-7



Whole Cell Lysate at 40ug
Lane 7: HELA Whole Cell Lysate at 40ug
Predicted bind size: 52KD
Observed bind size: 52KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.