

Rabbit Phospho-SMAD4 (T277) Polyclonal Antibody | anti-SMAD4 antibody

Phospho-SMAD4 (T277) Antibody

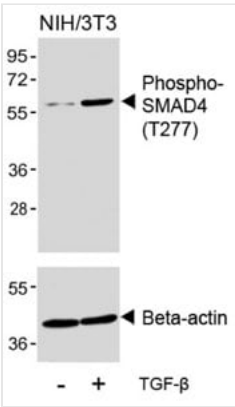
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA28715	Rabbit	Human, Mouse Predicted Species Reactivity: Rat	ELISA, Western Blot

PRODUCT SYNONYMS

Phospho-SMAD4 (T277); Polyclonal Antibody; Phospho-SMAD4 (T277) Antibody; Mothers against decapentaplegic homolog 4; MAD homolog 4; Mothers against DPP homolog 4; Deletion target in pancreatic carcinoma 4; SMAD family member 4; SMAD 4; Smad4; hSMAD4; SMAD4; DPC4; MADH4; anti-SMAD4 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse Predicted Species Reactivity: Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	This SMAD4 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding T277 of human SMAD4.
Purity/Purification	This antibody is purified through a protein A column, followed by peptide affinity purification.
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.
Sequence Length	552
Applicable Applications for anti-SMAD4 antibody	ELISA, WB (Western Blot)
Application Notes	WB~~1:500
Function	In muscle physiology, plays a central role in the balance between atrophy and hypertrophy. When recruited by MSTN, promotes atrophy response via phosphorylated SMAD2/4. MSTN decrease causes SMAD4 release and subsequent recruitment by the BMP pathway to promote hypertrophy via phosphorylated SMAD1/5/8. Acts synergistically with SMAD1 and YY1 in bone morphogenetic protein (BMP)-mediated cardiac-specific gene expression. Binds to SMAD binding elements (SBEs) (5'-GTCT/AGAC-3') within BMP response element (BMPRE) of cardiac activating regions (By similarity). Common SMAD (co-SMAD) is the coactivator and mediator of signal transduction by TGF-beta (transforming growth factor). Component of the heterotrimeric SMAD2/SMAD3-SMAD4 complex that forms in the nucleus and is required for the TGF-mediated signaling (PubMed:25514493). Promotes binding of the SMAD2/SMAD4/FAST-1 complex to DNA and provides an activation function required for SMAD1 or SMAD2 to stimulate transcription. Component of the multimeric SMAD3/SMAD4/JUN/FOS complex which forms at the AP1 promoter site; required for synergistic transcriptional activity in response to TGF-beta. May act as a tumor suppressor. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.
Cellular Location	Cytoplasm. Nucleus. Note: Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with R-SMAD (PubMed:15799969). PDPK1 prevents its nuclear translocation in response to TGF-beta (PubMed:17327236).
Preparation and Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.



WB (Western Blot)
Western blot analysis of lysates from NIH/3T3 cell line, untreated or treated with TGF-beta (100ng/ml, 30 min), using Phospho-SMAD4 Antibody(upper) or Beta-actin (lower).

ADDITIONAL INFORMATION

Related Product Information for anti-SMAD4 antibody	Common mediator of signal transduction by TGF-beta (transforming growth factor) superfamily, SMAD4 is the common SMAD (co-SMAD). It promotes binding of the SMAD2/SMAD4/FAST-1 complex to DNA and provides an activation function required for SMAD1 or SMAD2 to stimulate transcription. It may act as a tumor suppressor.
Product Categories/Family for anti-SMAD4 antibody	Cancer; Cardiovascular; Neuroscience; Signal Transduction; GPCR Antibodies
References	Sekiya, T., et al., Biochem. Biophys. Res. Commun. 320(3):680-684 (2004). Horvath, L.G., et al., Prostate 59(3):234-242 (2004). Li, L., et al., Mol. Cell. Biol. 24(2):856-864 (2004). Wan, M., et al., J. Biol. Chem. 279(15):14484-14487 (2004). Maru, D., et al., Oncogene 23(3):859-864 (2004).

NCBI AND UNIPROT INFORMATION

NCBI GI #	4885457
NCBI GeneID	4089
NCBI Accession #	NP_005350.1
NCBI GenBank Nucleotide #	NM_005359.5
UniProt Accession #	Q13485; A8K405
NCBI Official Full Name	mothers against decapentaplegic homolog 4
NCBI Official Synonym Full Names	SMAD family member 4
NCBI Official Symbol	SMAD4
NCBI Official Synonym Symbols	JIP; DPC4; MADH4; MYHRS
NCBI Protein Information	mothers against decapentaplegic homolog 4
UniProt Protein Name	Mothers against decapentaplegic homolog 4
UniProt Gene Name	SMAD4
UniProt Synonym Gene Names	DPC4; MADH4; MAD homolog 4; Mothers against DPP homolog 4; SMAD 4; Smad4; hSMAD4
UniProt Entry Name	SMAD4_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/phospho-smad4-t277-antibody-western-blot-elisa/28715>