

Anti-Smad3 Picoband Antibody

Catalog # ABO12087

Product Information

Application	WB
Primary Accession	P84022
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Mothers against decapentaplegic homolog 3 (SMAD3) detection. Tested with WB in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	4088
Other Names	Mothers against decapentaplegic homolog 3, MAD homolog 3, Mad3, Mothers against DPP homolog 3, hMAD-3, JV15-2, SMAD family member 3, SMAD 3, Smad3, hSMAD3, SMAD3, MADH3
Calculated MW	48081
Application Details	Western blot, 0.1-0.5 µg/ml, Human
Subcellular Localization	Cytoplasm. Nucleus. Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4. Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1. Co-localizes with LEMD3 at the nucleus inner membrane. MAPK-mediated phosphorylation appears to have no effect on nuclear import. PDPK1 prevents its nuclear translocation in response to TGF-beta.
Source	Eukaryota
Protein Name	Mothers against decapentaplegic homolog 3
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 Smad3 (193-222aa DHQMNHSM DAGSPNLS PNPMS PAHNNLDLQ), identical to the related mouse and rat sequences.
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

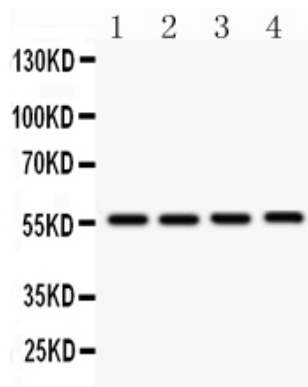
Name	SMAD3 (HGNC:6769)
Synonyms	MADH3
Function	Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD3/SMAD4 complex, activates transcription. Also can form a SMAD3/SMAD4/JUN/FOS complex at the AP- 1/SMAD site to regulate TGF-beta-mediated transcription. Has an inhibitory effect on wound healing probably by modulating both growth and migration of primary keratinocytes and by altering the TGF-mediated chemotaxis of monocytes. This effect on wound healing appears to be hormone-sensitive. Regulator of chondrogenesis and osteogenesis and inhibits early healing of bone fractures. 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 and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 (PubMed:15799969, PubMed:21145499). Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1 (PubMed:16751101, PubMed:19289081). Co-localizes with LEMD3 at the nucleus inner membrane (PubMed:15601644). MAPK-mediated phosphorylation appears to have no effect on nuclear import (PubMed:19218245). PDPK1 prevents its nuclear translocation in response to TGF-beta (PubMed:17327236). Localized mainly to the nucleus in the early stages of embryo development with expression becoming evident in the cytoplasm of the inner cell mass at the blastocyst stage (By similarity). {ECO:0000250 UniProtKB:Q8BUN5, ECO:0000269 PubMed:15601644, ECO:0000269 PubMed:15799969, ECO:0000269 PubMed:16751101, ECO:0000269 PubMed:17327236, ECO:0000269 PubMed:19218245, ECO:0000269 PubMed:19289081, ECO:0000269 PubMed:21145499}

Background

Mothers against decapentaplegic homolog 3 also known as SMAD family member 3 or SMAD3 is a protein that in humans is encoded by the SMAD3 gene. SMAD3 is a member of the SMAD family of proteins. It is located in 15q22.33. And it mediates the signals from the transforming growth factor beta (TGF- β) super family ligands that regulate cell proliferation, differentiation and death. Based on its essential role in TGF beta signaling pathway, SMAD3 has been related with tumor growth in cancer development.

Images

Anti- SMAD3 Picoband antibody, ABO12087, Western



blottingAll lanes: Anti SMAD3 (ABO12087) at 0.5ug/ml
 Lane 1: U87 Whole Cell Lysate at 40ug
 Lane 2: Human Placenta Tissue Lysate at 50ug
 Lane 3: PANC Whole Cell Lysate at 40ug
 Lane 4: HELA Whole Cell Lysate at 40ug
 Predicted bind size: 48KD
 Observed bind size: 56KD

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