

**Anti-Smad3 Picoband Antibody**  
**Catalog # ABO12087****Specification****Anti-Smad3 Picoband Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P84022</a>
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.

**Anti-Smad3 Picoband Antibody - 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 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human <br>

**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.

**Protein Name**

Mothers against decapentaplegic homolog 3

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

**Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of human Smad3 (193-222aa DHQMNHSM DAGSPNLSPNPMSPA HNNLDLQ), 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 reconstitution, 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 Smad3/SMAD family.

### **Anti-Smad3 Picoband Antibody - Protein Information**

**Name** SMAD3

**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**

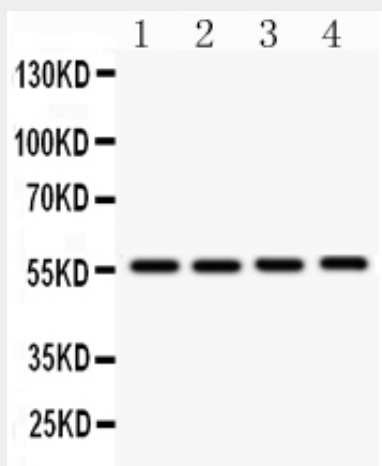
Cytoplasm. Nucleus. Note=Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 (PubMed:15799969, PubMed:21145499). Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus 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}

### **Anti-Smad3 Picoband 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 Cytometry](#)
- [Cell Culture](#)

#### **Anti-Smad3 Picoband Antibody - Images**



Anti- SMAD3 Picoband antibody, ABO12087, Western blottingAll lanes: Anti SMAD3 (ABO12087) at 0.5ug/mlLane 1: U87 Whole Cell Lysate at 40ugLane 2: Human Placenta Tissue Lysate at 50ugLane 3: PANC Whole Cell Lysate at 40ugLane 4: HELA Whole Cell Lysate at 40ugPredicted bind size: 48KDObserved bind size: 56KD

#### **Anti-Smad3 Picoband Antibody - 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- $\beta$ ) 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.