

**Anti-Smad1 Antibody**  
**Catalog # ABO11421****Specification**

---

**Anti-Smad1 Antibody - Product Information**

Application	WB, IHC, ICC
Primary Accession	<a href="#">P70340</a>
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, IHC-P, ICC in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Smad1 Antibody - Additional Information**

**Gene ID** 17125

**Other Names**

Mothers against decapentaplegic homolog 1, MAD homolog 1, Mothers against DPP homolog 1, Dwarf-A, Dwf-A, Mothers-against-DPP-related 1, Mad-related protein 1, mMad1, SMAD family member 1, SMAD 1, Smad1, Smad1, Madh1, Madr1

**Calculated MW**

52157 MW KDa

**Application Details**

Immunocytochemistry , 0.5-1 µg/ml, Human, -<br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Cytoplasm . Nucleus . In the cytoplasm in the absence of ligand. Migration to the nucleus when complexed with SMAD4. Colocalizes with LEMD3 at the nucleus inner membrane (By similarity). .

**Tissue Specificity**

Ubiquitous.

**Protein Name**

Mothers against decapentaplegic homolog 1

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of mouse Smad1(253-267aa AEISRGDVQAVAYEE), different from the related rat sequence by one amino acid, and different from the related human sequence by two amino acids.

**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 dwarfin/SMAD family.

**Anti-Smad1 Antibody - Protein Information****Name** Smad1**Synonyms** Madh1, Madr1**Function**

Transcriptional modulator that plays a role in various cellular processes, including embryonic development, cell differentiation, and tissue homeostasis (PubMed: [11566864](http://www.uniprot.org/citations/11566864), PubMed: [15329343](http://www.uniprot.org/citations/15329343), PubMed: [21420501](http://www.uniprot.org/citations/21420501), PubMed: [35594155](http://www.uniprot.org/citations/35594155)). 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. In turn, the hetero-trimeric complex recognizes cis-regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network. SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1 (By similarity). Positively regulates BMP4-induced expression of odontogenic development regulator MSX1 following IPO7- mediated nuclear import (PubMed: [34995814](http://www.uniprot.org/citations/34995814)).

**Cellular Location**

Cytoplasm. Nucleus Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4. Co-localizes with LEMD3 at the nucleus inner membrane (By similarity). Exported from the nucleus to the cytoplasm when dephosphorylated PubMed:25755279. {ECO:0000250|UniProtKB:Q15797, ECO:0000269|PubMed:25755279}

**Tissue Location**

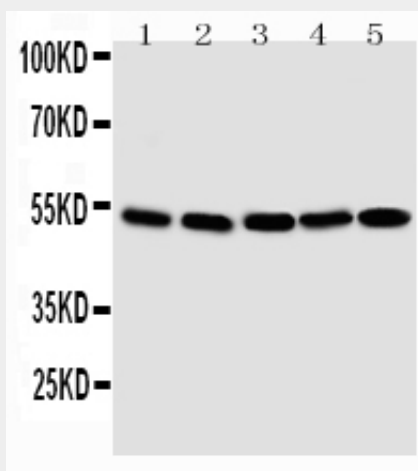
Ubiquitous.

**Anti-Smad1 Antibody - Protocols**

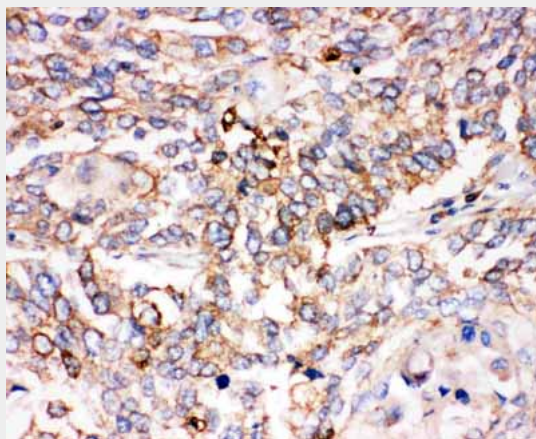
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

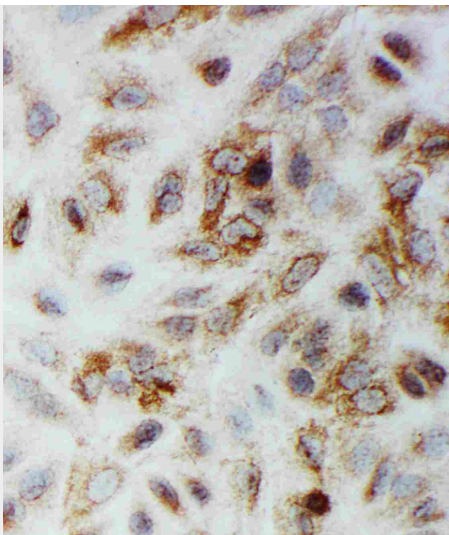
#### Anti-Smad1 Antibody - Images



Anti-Smad1 antibody, ABO11421, Western blotting  
Lane 1: SMMC Cell Lysate  
Lane 2: K562 Cell Lysate  
Lane 3: HT1080 Cell Lysate  
Lane 4: HELA Cell Lysate  
Lane 5: JURKAT Cell Lysate



Anti-Smad1 antibody, ABO11421, IHC(P)  
IHC(P): Human Lung Cancer Tissue



Anti-Smad1 antibody, ABO11421, ICCICC: A549 Cell

#### **Anti-Smad1 Antibody - Background**

Mothers against decapentaplegic homolog 1 also known as SMAD family member 1 or SMAD1 is a protein that in humans is encoded by the SMAD1 gene. SMAD1 belongs to the SMAD, a family of proteins similar to the gene products of the *Drosophila* gene mothers against decapentaplegic" (Mad) and the *C. elegans* gene Sma. The gene was assigned to human chromosome 4q31.21. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways."