

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

Anti-Smad1 Antibody - Product Information

Application	WB, IHC-P, ICC
Primary Accession	P70340
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, -
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

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 Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

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, PubMed:15329343, PubMed:21420501, PubMed: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).

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

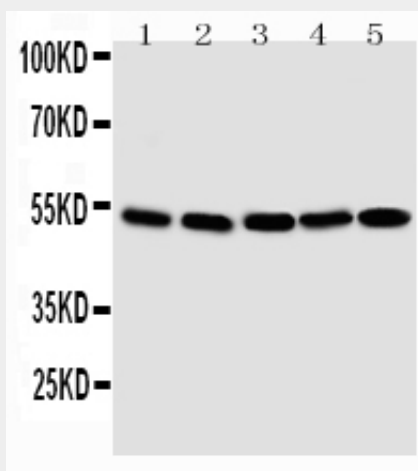
Ubiquitous.

Anti-Smad1 Antibody - Protocols

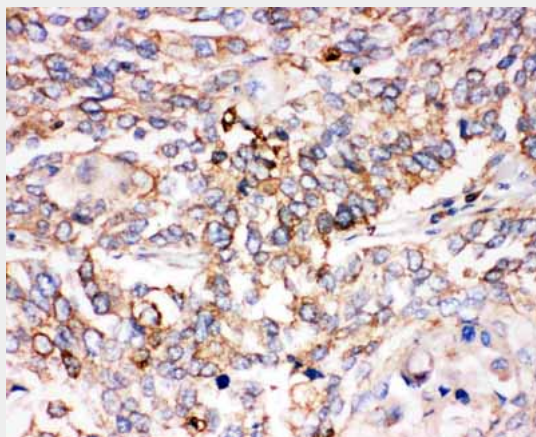
Provided below are standard protocols that you may find useful for product applications.

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

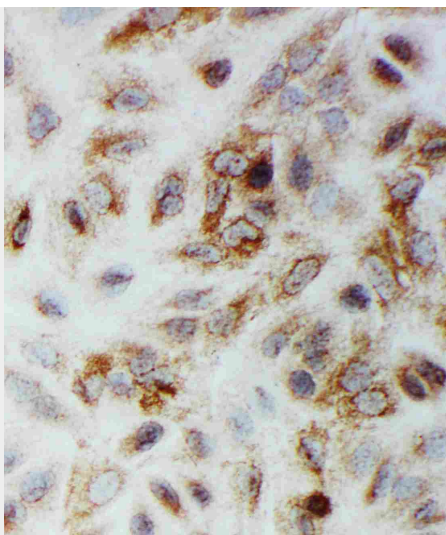
Anti-Smad1 Antibody - Images



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."