

**(Mouse) Smad1 Antibody (Center)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP21203c**

## Specification

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### (Mouse) Smad1 Antibody (Center) - Product Information

Application	WB, IHC-P,E
Primary Accession	<a href="#">P70340</a>
Reactivity	Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Calculated MW	52157

### (Mouse) Smad1 Antibody (Center) - 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

#### Target/Specificity

This Mouse Smad1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 154-187 amino acids from the Central region of Mouse Smad1.

#### Dilution

WB~~1:1000

IHC-P~~1:25

#### Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

#### 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.

#### Precautions

(Mouse) Smad1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

### (Mouse) Smad1 Antibody (Center) - 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

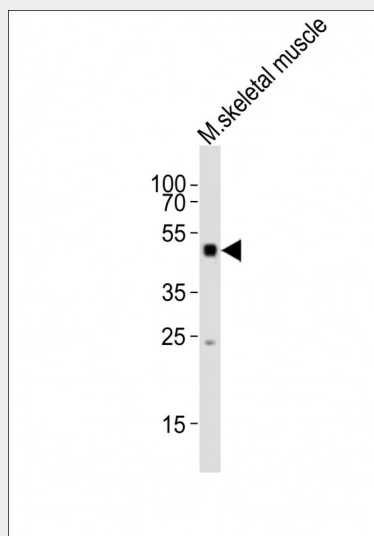
Ubiquitous.

### (Mouse) Smad1 Antibody (Center) - Protocols

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

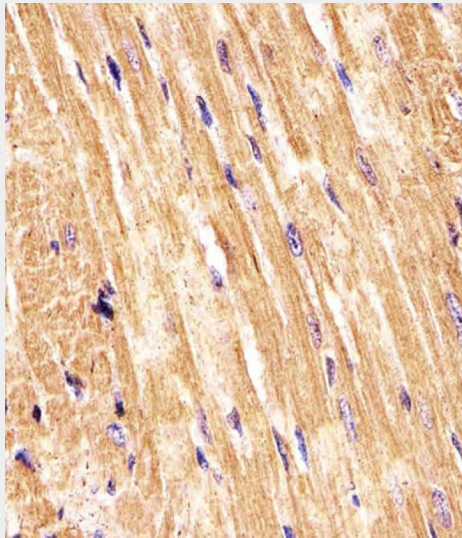
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### (Mouse) Smad1 Antibody (Center) - Images



Anti-Smad1 Antibody (Center) at 1:1000 dilution + mouse skeletal muscle lysates  
Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated

at 1/10000 dilution Predicted band size : 52 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



AP21203c staining (Mouse) Smad1 in Mouse heart tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

#### **(Mouse) Smad1 Antibody (Center) - Background**

Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. SMAD1 is a receptor-regulated SMAD (R-SMAD) (By similarity). May play a role in the initiation and maintenance of spermatogenesis. SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1 (By similarity). May act synergistically with SMAD4 and YY1 in bone morphogenetic protein (BMP)-mediated cardiac-specific gene [removed]PubMed:15329343).

#### **(Mouse) Smad1 Antibody (Center) - References**

Yingling J.M., et al. Proc. Natl. Acad. Sci. U.S.A. 93:8940-8944(1996).  
Zhao G.-Q., et al. Mech. Dev. 61:63-73(1997).  
Huang S., et al. Gene 258:43-53(2000).  
Carninci P., et al. Science 309:1559-1563(2005).  
Miura S., et al. Mol. Cell. Biol. 20:9346-9355(2000).