

Datasheet for 600-401-MN6**Smad1 Antibody****Overview**

Description:	Anti-SMAD1 (RABBIT) Antibody - 600-401-MN6
Item No.:	600-401-MN6
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Mouse
Host Species:	Rabbit

Product Details

Background:	Smad1 is also known Mothers Against Decapentaplegic homolog 1, Mothers against DPP homolog 1, hSMAD-3, JV4-1, Transforming growth factor-Beta-Signaling Protein 1 or BSP1. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. SMAD1, as a transcriptional modulator, is activated by BMP (Bone Morphogenetic Protein) type 1 receptor kinase (it is a receptor-regulated SMAD or R-SMAD). BMPs are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. SMAD proteins have been implicated as downstream effectors of TGF beta/BMP signaling. In response to BMP ligands, SMAD1 can be phosphorylated (other sites besides the most prominent of S206, are S187, S195, and S214). S-206 is phosphorylated by ERK in response to mitogenic growth factors, or by recombinant ERK in vitro; this can be tested by treating cells with EGF or in cancer cells where Ras is activated. The phosphorylated form of this protein forms a complex with SMAD4, which is important for its function in the transcription regulation. This protein is also a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1 and SMURF2, and undergoes ubiquitination and proteasome-mediated degradation.
Synonyms:	Mothers against decapentaplegic homolog 1, MAD homolog 1, Mothers against DPP homolog 1, Dwarfing-A, Dwf-A, Mothers-against-DPP-related 1, Mad-related protein 1, mMad1, SMAD 1, Smad1, Madh1, Madr1
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Smad1
Reactivity:	Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Smad1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal portion of mouse Smad1 conjugated to Keyhole Limpet Hemocyanin (KLH).
Purity/Specificity:	This affinity purified antibody is directed against mouse Smad1. This product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross-reactivity with the antigen based on 100% homology with the immunizing sequence and 83% homology to human and rat.
Relevant Links:	• UniProtKB - P70340 • NCBI - NP_032565.2 • GeneID - 17125

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-Smad1 Antibody has been tested in ELISA, WB, IF, and IHC. Expect a band at ~52.2kDa in western blot using appropriate tissues or lysates. Positive control used: Mouse testis and C2C12 in Western Blot; C2C12 in Immunofluorescence; Mouse Lung, Skeletal Muscle, and Testis in Immunohistochemistry.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	5µg/ml
IF:	5-10µg/mL
IHC:	1:400-1:500
WB:	5µg/mL

Formulation

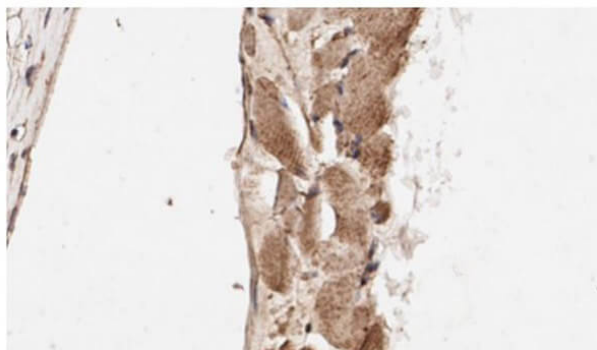
Physical State:	Liquid (sterile filtered)
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Concentration:	1.0 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

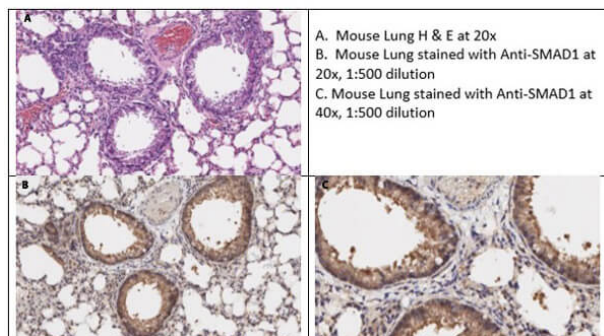
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



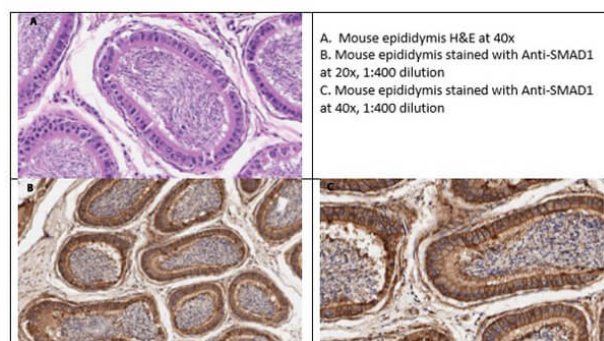
Immunohistochemistry

Immunohistochemistry of Rabbit Anti-Smad1 Antibody.
 Tissue: Mouse Skeletal Muscle Tissue. Fixative: none.
 Antigen Retrieval: HIER using citrate buffer for 20mins.
 Primary Antibody: Anti-Smad1 at 1:400 for 30mins at RT.
 Secondary Antibody: Anti-Rabbit poly HRP IgG Ready-to-Use
 for 8mins at RT. Counterstain: Hematoxylin. Substrate:
 DAB. Analysis Report: Cytoplasmic staining of skeletal
 muscle myocytes is seen.



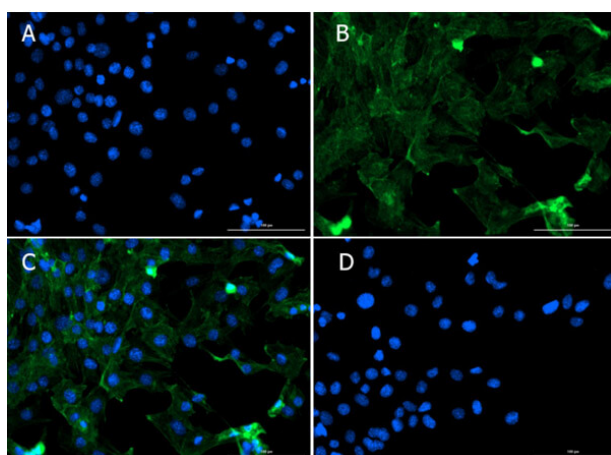
Immunohistochemistry

Immunohistochemistry of Rabbit Anti-Smad1 Antibody.
 Tissue: Mouse Lung Tissue. Fixative: none. Antigen Retrieval: HIER using citrate buffer for 20mins. Primary Antibody: Anti-Smad1 at 1:500 for 30mins at RT. Secondary Antibody: Anti-Rabbit poly HRP IgG Ready-to-Use for 8mins at RT. Counterstain: Hematoxylin. Substrate: DAB. Analysis Report: Smad1 shows strong cytoplasmic staining of airway bronchial epithelium and of mesenchymal cells within the alveolar walls in mouse lung tissue at 1:500.



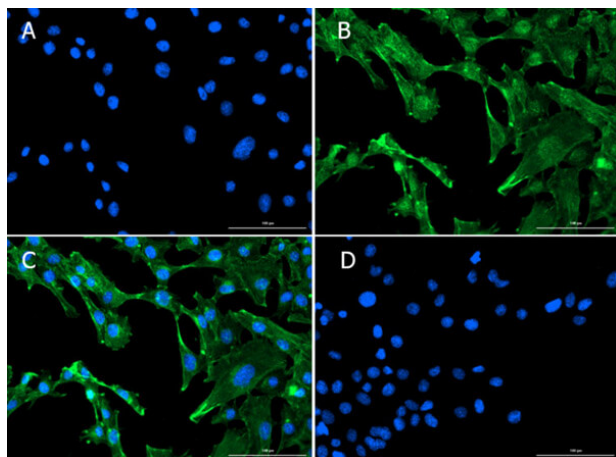
Immunohistochemistry

Immunohistochemistry of Rabbit Anti-Smad1 Antibody.
 Tissue: Mouse Testis. Fixative: none. Antigen Retrieval: HIER using citrate buffer for 20mins. Primary Antibody: Anti-Smad1 at 1:400 for 30mins at RT. Secondary Antibody: Anti-Rabbit poly HRP IgG Ready-to-Use for 8mins at RT. Counterstain: Hematoxylin. Substrate: DAB. Analysis Report: Membranous/cytoplasmic staining is seen in the epithelial cells lining the epididymis.



Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-Smad1 Antibody. Cells: C2C12 cells. Fixative: 100% MeOH. Permeabilization: 0.3% Triton X-100. Primary Antibody: Anti-Smad1 at 5µg/mL overnight at 2-8°C. Secondary Antibody: Donkey Anti-Rabbit IgG DyLight™488 (p/n 611-741-127) at 5µg/mL for 1hr at RT. Nuclear Counterstain: DAPI. Staining: (A) DAPI. (B) Anti-Smad1 + DyLight™488. (C) Merge A+B. (D) Secondary Only. Expected localization: Nucleus, Plasma membrane, and Cytosol.



Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-Smad1 Antibody. Cells: C2C12 cells. Fixative: 100% MeOH. Permeabilization: 0.3% Triton X-100. Primary Antibody: Anti-Smad1 at 10µg/mL overnight at 2-8°C. Secondary Antibody: Donkey Anti-Rabbit IgG DyLight™488 (p/n 611-741-127) at 5µg/mL for 1hr at RT. Nuclear Counterstain: DAPI. Staining: (A) DAPI. (B) Anti-Smad1 + DyLight™488. (C) Merge A+B. (D) Secondary Only. Expected localization: Nucleus, Plasma membrane, and Cytosol.

Disclaimer

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