

SMAD1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP21003a

Specification

SMAD1 Antibody (Center) - Product Information

Application WB,E
Primary Accession O15797

Other Accession <u>Q9W7E7</u>, <u>Q56I99</u>, <u>P97588</u>, <u>P70340</u>, <u>Q1IQA2</u>

Reactivity

Predicted Bovine, Mouse, Chicken, Zebrafish

Host Rabbit
Clonality Polyclonal
Isotype Rabbit IgG
Calculated MW 52260

SMAD1 Antibody (Center) - Additional Information

Gene ID 4086

Other Names

Mothers against decapentaplegic homolog 1, MAD homolog 1, Mothers against DPP homolog 1, JV4-1, Mad-related protein 1, SMAD family member 1, SMAD 1, Smad1, hSMAD1, Transforming growth factor-beta-signaling protein 1, BSP-1, SMAD1, BSP1, MADH1, MADR1

Target/Specificity

This SMAD1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 297-330 amino acids from the Central region of human SMAD1.

Dilution

WB~~1:1000

E~~Use at an assay dependent concentration.

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

SMAD1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

SMAD1 Antibody (Center) - Protein Information

Name SMAD1



Synonyms BSP1, MADH1, MADR1

Function Transcriptional modulator that plays a role in various cellular processes, including embryonic development, cell differentiation, and tissue homeostasis (PubMed:9335504). Upon BMP ligand binding to their receptors at the cell surface, is phosphorylated by activated type I BMP receptors (BMPRIs) and associates with SMAD4 to form a heteromeric complex which translocates into the nucleus acting as transcription factor (PubMed:33667543). In turn, the hetero-trimeric complex recognizes cis-regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network (PubMed:33667543). SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1. Positively regulates BMP4-induced expression of odontogenic development regulator MSX1 following IPO7-mediated nuclear import (By similarity).

Cellular Location

Cytoplasm. Nucleus Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4 (PubMed:15647271). Co-localizes with LEMD3 at the nucleus inner membrane (PubMed:15647271). Exported from the nucleus to the cytoplasm when dephosphorylated (By similarity) {ECO:0000250|UniProtKB:P70340, ECO:0000269|PubMed:15647271}

Tissue Location

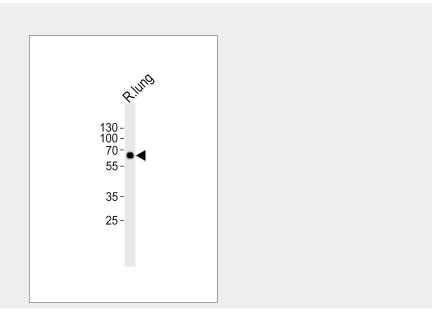
Ubiquitous. Highest expression seen in the heart and skeletal muscle

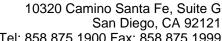
SMAD1 Antibody (Center) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SMAD1 Antibody (Center) - Images







Tel: 858.875.1900 Fax: 858.875.1999

Western blot analysis of lysate from rat lung tissue lysate, using SMAD1 Antibody (Center)(Cat. #AP21003a). AP21003a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.

SMAD1 Antibody (Center) - Background

Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. SMAD1 is a receptor-regulated SMAD (R-SMAD). SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1.

SMAD1 Antibody (Center) - References

Riggins G.J., et al. Nat. Genet. 13:347-349(1996). Liu F., et al. Nature 381:620-623(1996). Hoodless P.A., et al. Cell 85:489-500(1996). Lechleider R.J., et al.J. Biol. Chem. 271:17617-17620(1996). Zhang Y., et al. Nature 383:168-172(1996).