

Smad1 Antibody

Rabbit Polyclonal Antibody Catalog # ABV10336

Specification

Smad1 Antibody - Product Information

Application WB
Primary Accession P97588
Reactivity Human
Host Rabbit
Clonality Polyclonal
Isotype Rabbit IgG
Calculated MW 52713

Smad1 Antibody - Additional Information

Gene ID 25671

Application & Usage Western blotting (0.5-4 μg/ml). However,

the optimal concentrations should be determined individually. The antibody recognizes ~50-60 kDa Smad1 from samples of human, mouse, and rat origins. Reactivity to other species has not been

tested.

Other Names

MADR1, JV41, JV4-1, GARS, CMT2D, hSMAD1, HMN5, MADH1, BSP-1, BSP1

Target/Specificity

Smad1

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

 $100~\mu g$ (0.5 mg/ml) affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA, and 0.01% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions



Precautions

Smad1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Smad1 Antibody - Protein Information

Name Smad1

Synonyms Mad1, Madh1

Function

Transcriptional modulator that plays a role in various cellular processes, including embryonic development, cell differentiation, and tissue homeostasis. 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 an 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. Positively regulates BMP4-induced expression of odontogenic development regulator MSX1 following IPO7-mediated nuclear import (By similarity).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q15797}. Nucleus {ECO:0000250|UniProtKB:Q15797}. 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 (By similarity) {ECO:0000250|UniProtKB:P70340, ECO:0000250|UniProtKB:Q15797}

Tissue Location

Ubiquitous; present in liver, lung, stomach and spleen with lower level in heart, testes and skeletal muscle

Smad1 Antibody - Protocols

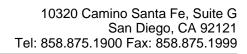
Provided below are standard protocols that you may find useful for product applications.

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

Smad1 Antibody - Images

Smad1 Antibody - Background

Smad proteins, the mammalian homologs of the Drosophila Mothers against dpp (Mad), have been implicated as downstream effectors of TGF β /BMP signaling. Smad1, Smad5, and Smad8 are effectors of BMP2 and BMP4 function while Smad2 and Smad3 are involved in TGF- β and activin-mediated growth modulation. Smad4 has been shown to mediate all of the above activities thro μ gh interaction with various Smad family members. Smad6 and Smad7 regulate the response to activin/TGF β signaling by interfering with TGF β -mediated phosphorylation of other Smad family





members.