

### **Smad1 Polyclonal Antibody**

**Catalog # AP73530** 

### **Specification**

## **Smad1 Polyclonal Antibody - Product Information**

Application WB
Primary Accession Q15797

Reactivity Human, Mouse, Rat Host Rabbit

Clonality Rabbit Polyclonal

### Smad1 Polyclonal Antibody - Additional Information

**Gene ID 4086** 

### **Other Names**

SMAD1; BSP1; MADH1; MADR1; 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

#### Dilution

WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/20000. Not yet tested in other applications.

#### **Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

#### **Storage Conditions**

-20°C

#### Smad1 Polyclonal Antibody - 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:<a

href="http://www.uniprot.org/citations/9335504" target="\_blank">9335504</a>). 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:<a

href="http://www.uniprot.org/citations/33667543" target="\_blank">33667543</a>). In turn, the hetero-trimeric complex recognizes cis-regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network (PubMed:<a

href="http://www.uniprot.org/citations/33667543" target=" blank">33667543</a>).

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**

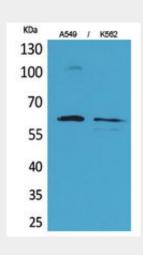
Ubiquitous. Highest expression seen in the heart and skeletal muscle

## **Smad1 Polyclonal 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
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

# Smad1 Polyclonal Antibody - Images



### Smad1 Polyclonal Antibody - 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. May act synergistically with SMAD4 and YY1 in bone morphogenetic protein (BMP)-mediated cardiac-specific gene expression.