

Rabbit Anti-Phospho-Smad1 (Ser463) antibody

SL10381R

Product Name Phospho-Smad1 (Ser463)

Chinese Name 磷酸化细胞 Signal transduction 分子 Smad-1 抗体

Alias

Smad1 (phospho S463); Smad1 (phospho Ser463); p-Smad1 (Ser463); Mothers against decapentaplegic homolog 1; BSP 1; BSP1; BSP-1; Dwarfing A; DwfA; hSMAD 1; hSMAD1; JV 41; JV4 1; JV4-1; JV41; MAD mothers against decapentaplegic homolog 1; Mad related protein 1; MADH 1; MADH1; Madr 1; MADR1; Mothers against decapentaplegic homolog 1; Mothers against DPP homolog 1; Sma and Mad related protein 1; SMAD 1; SMAD-1; SMAD family member 1; SMAD mothers against DPP homolog 1 Drosophila; Spinal muscular atrophy distal with upper limb predominance; TGF beta signaling protein 1; Transforming growth factor beta signaling protein 1; SMAD1_HUMAN; MAD homolog 1; Mothers against DPP homolog 1; Mad-related protein 1; SMAD family member 1; Smad1; Transforming growth factor-beta-signaling protein 1.

Product Type Phosphorylated anti

Research Area Tumour Cell biology Signal transduction Stem cells Apoptosis Growth factors and hormones transcriptional regulatory factor

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human, Mouse, Rat, (predicted: Pig,)

WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=2ug/Test
(Paraffin sections need antigen repair)

Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 51kDa

Cellular localization The nucleus cytoplasmic

Form Liquid

Concentration 1mg/ml

immunogen	KLH conjugated Synthesised phosphopeptide derived from human Smad1 around the phosphorylation site of Ser463: IS(p-S)VS
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed

The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signals of the bone morphogenetic proteins (BMPs), which are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. In response to BMP ligands, this protein can be phosphorylated and activated by the BMP receptor kinase. The phosphorylated form of this protein forms a complex with SMAD4, which is important for its function in the transcription regulation. This protein is a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1 and SMURF2, and undergoes ubiquitination and proteasome-mediated degradation. Alternatively spliced transcript variants encoding the same protein have been observed. [provided by RefSeq].

Function:

Product Detail 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.

Subunit:

Interacts with HGS, NANOG and ZCCHC12. May form trimers with another SMAD1 and the co-SMAD SMAD4. Interacts with PEBP2-alpha subunit, CREB-binding protein (CBP), p300, SMURF1, SMURF2 and HOXC8. Associates with ZNF423 or ZNF521 in response to BMP2 leading to activate transcription of BMP target genes. Interacts with SKOR1. Interacts (via MH2 domain) with LEMD3. Binding to LEMD3 results in at least a partial reduction of receptor-mediated phosphorylation. Forms a ternary complex with PSMB4 and OAZ1 before PSMB4 is incorporated into the 20S proteasome.

Subcellular 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.

Tissue Specificity:

Ubiquitous. Highest expression seen in the heart and skeletal muscle.

Post-translational modifications:

Phosphorylated on serine by BMP type 1 receptor kinase.

Ubiquitin-mediated proteolysis by SMAD-specific E3 ubiquitin ligase SMURF1.

DISEASE:

Defects in SMAD1 may be a cause of primary pulmonary hypertension (PPH1) [MIM:178600]. A rare disorder characterized by plexiform lesions of proliferating endothelial cells in pulmonary arterioles. The lesions lead to elevated pulmonary arterial pressure, right ventricular failure, and death. The disease can occur from infancy throughout life and it has a mean age at onset of 36 years. Penetrance is reduced. Although familial PPH1 is rare, cases secondary to known etiologies are more common and include those associated with the appetite-suppressant drugs.

Similarity:

Belongs to the dwarfin/SMAD family.

Contains 1 MH1 (MAD homology 1) domain.

Contains 1 MH2 (MAD homology 2) domain.

SWISS:

Q15797

Gene ID:

4086

Database links:

[Entrez Gene: 4086](#) Human

[Entrez Gene: 17125](#) Mouse

[Entrez Gene: 25671](#) Rat

[Omim: 601595](#) Human

[SwissProt: Q15797](#) Human

[SwissProt: P70340](#) Mouse

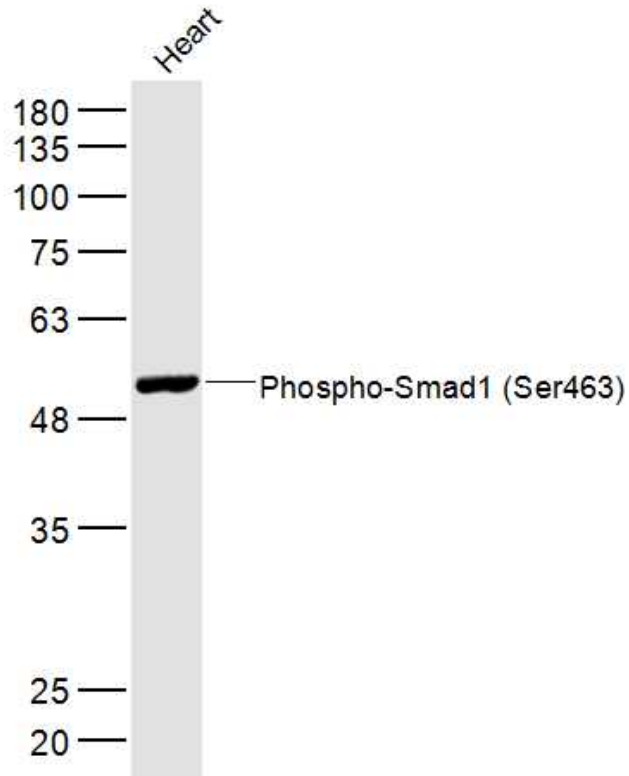
[SwissProt: P97588](#) Rat

[Unigene: 604588](#) Human

[Unigene: 223717](#) Mouse

[Unigene: 10635](#) Rat

**Product
Picture**



Sample:

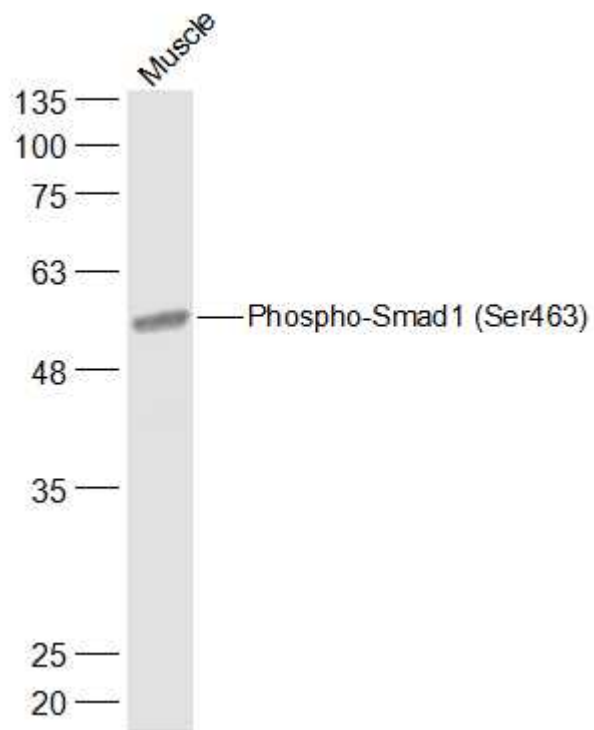
Heart (Mouse) Lysate at 40 ug

Primary: Anti- Phospho-Smad1 (Ser463) (SL10381R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 51 kD

Observed band size: 51 kD



Sample:

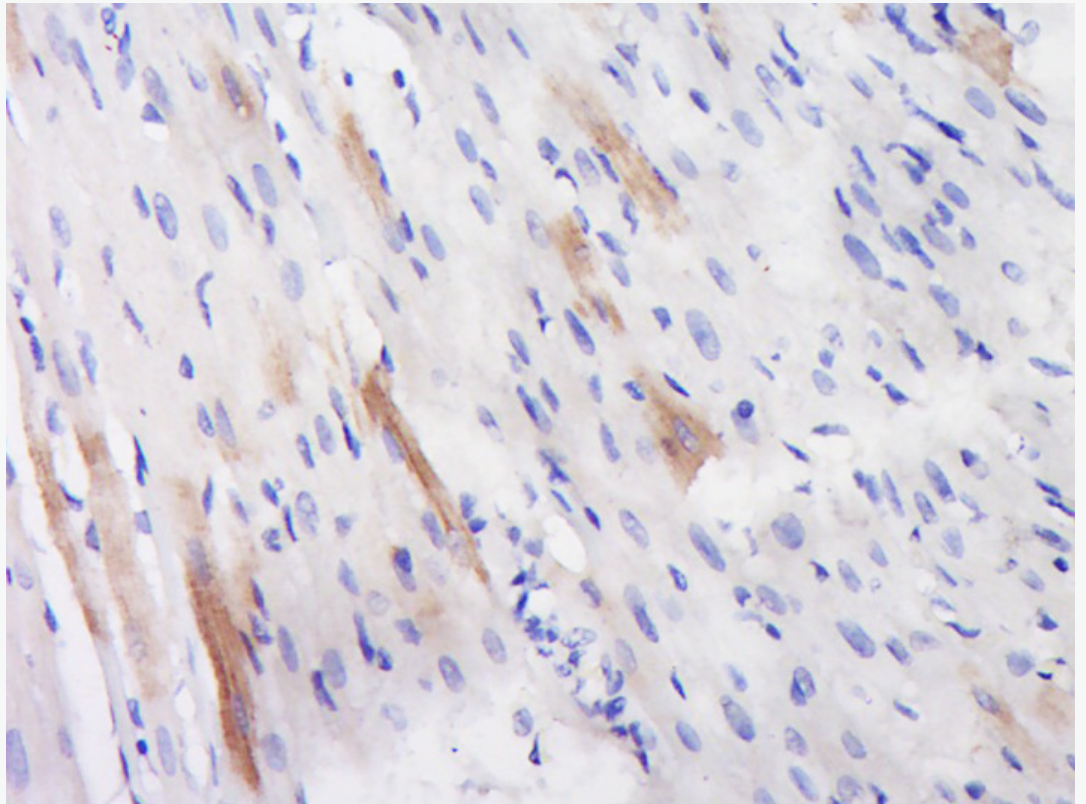
Muscle (Mouse) Lysate at 40 ug

Primary: Anti-Phospho-Smad1 (Ser463) (SL10381R) at 1/500 dilution

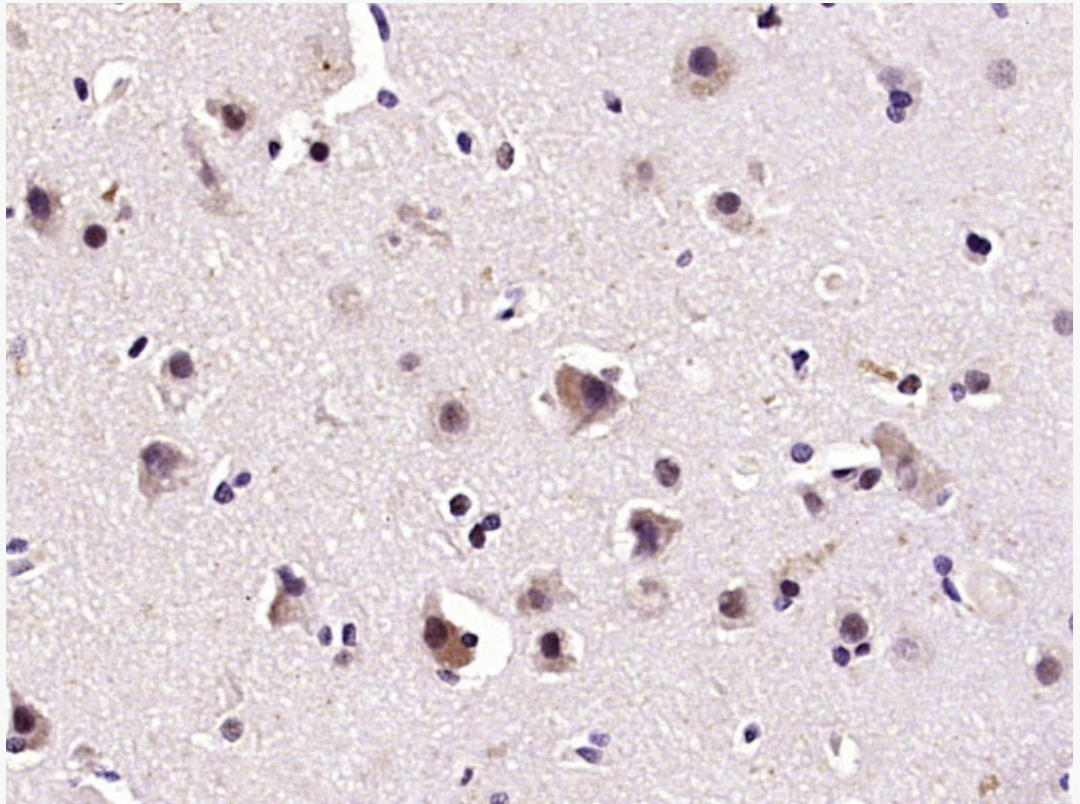
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 51 kD

Observed band size: 51 kD



Paraformaldehyde-fixed, paraffin embedded (Rat heart); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Phospho-Smad1 (Ser463)) Polyclonal Antibody, Unconjugated (SL10381R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (human brain glioma); Antigen retrieval by microwave in sodium citrate buffer (pH6.0) ; Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes; Blocking buffer (3%BSA) at RT for 30min; Antibody incubation with (Smad1 (Ser463)) Polyclonal/Monoclonal Antibody, Unconjugated (SL10381R) at 1:400 overnight at 4°C, followed by conjugation to the secondary antibody (labeled with HRP) and DAB staining.