

SMAD5 Antibody(Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19805c

Specification

SMAD5 Antibody(Center) - Product Information

Application	WB,E
Primary Accession	O99717
Other Accession	O9R1V3 , P97454 , NP_005894.3
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	52258
Antigen Region	241-269

SMAD5 Antibody(Center) - Additional Information

Gene ID 4090

Other Names

Mothers against decapentaplegic homolog 5, MAD homolog 5, Mothers against DPP homolog 5, JVS-1, SMAD family member 5, SMAD 5, Smad5, hSmad5, SMAD5, MADH5

Target/Specificity

This SMAD5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 241-269 amino acids from the Central region of human SMAD5.

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

SMAD5 Antibody(Center) is for research use only and not for use in diagnostic or therapeutic procedures.

SMAD5 Antibody(Center) - Protein Information

Name SMAD5 ([HGNC:6771](#))

Synonyms MADH5

Function Transcriptional regulator that plays a role in various cellular processes including embryonic development, cell differentiation, angiogenesis and tissue homeostasis (PubMed:[12064918](#), PubMed:[16516194](#)). Upon BMP ligand binding to their receptors at the cell surface, is phosphorylated by activated type I BMP receptors (BMPRI) and associates with SMAD4 to form a heteromeric complex which translocates into the nucleus acting as transcription factor (PubMed:[9442019](#)). In turn, the hetero-trimeric complex recognizes cis- regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network (PubMed:[33510867](#)). Non- phosphorylated SMAD5 has a cytoplasmic role in energy metabolism regulation by promoting mitochondrial respiration and glycolysis in response to cytoplasmic pH changes (PubMed:[28675158](#)). Mechanistically, interacts with hexokinase 1/HK1 and thereby accelerates glycolysis (PubMed:[28675158](#)).

Cellular Location

Cytoplasm. Nucleus Mitochondrion. Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4

Tissue Location

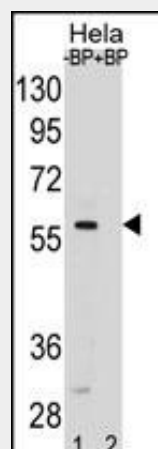
Ubiquitous.

SMAD5 Antibody(Center) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SMAD5 Antibody(Center) - Images



SMAD5 Antibody (Center) (Cat. #AP19805c) pre-incubated without(lane 1) and with(lane 2) blocking peptide in HeLa cell line lysate. SMAD5 Antibody (Center) (arrow) was detected using the purified Pab.

SMAD5 Antibody(Center) - Background

Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. SMAD5 is a receptor-regulated SMAD (R-SMAD).

SMAD5 Antibody(Center) - References

Yang, J., et al. *Circ. Res.* 107(2):252-262(2010)
Tao, S., et al. *Dev. Growth Differ.* 52(4):335-342(2010)
Middlebrook, B.S., et al. *Endocrinology* 150(12):5208-5217(2009)
Su, D., et al. *J. Biol. Chem.* 284(18):12153-12164(2009)
McKnight, A.J., et al. *Diabetologia* 52(5):844-849(2009)