10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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

Specification

SMAD5 Antibody(Center) - Product Information

Application	**WB,E**
Primary Accession	Q99717
Other Accession	Q9R1V3, 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, JV5-1, 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

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

Synonyms MADH5

Function Transcriptional regulator that plays a role in various cellular processes including embryonic development, cell differentiation, angiogenesis and tissue homeostasis (PubMed:16516194, PubMed:12064918). 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 (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

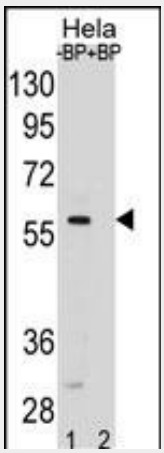
Tissue Location
Ubiquitous.

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 Cytomety
- 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.

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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)