

SMAD5 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51527**Specification**

SMAD5 Antibody - Product Information

Application	WB, E
Primary Accession	O99717
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52 KDa

SMAD5 Antibody - 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

Format

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage

Store at -20 °C. Stable for 12 months from date of receipt

SMAD5 Antibody - 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: [12064918](http://www.uniprot.org/citations/12064918)), PubMed: [16516194](http://www.uniprot.org/citations/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 an heteromeric complex which translocates into the nucleus acting as transcription factor (PubMed: [9442019](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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 - 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 - Images**SMAD5 Antibody - Background**

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

SMAD5 Antibody - References

Riggins G.J.,et al.Nat. Genet. 13:347-349(1996).
Hejlik D.P.,et al.Cancer Res. 57:3779-3783(1997).
Zavadil J.,et al.Leukemia 11:1187-1192(1997).
Gemma A.,et al.Oncogene 16:951-956(1998).
Nishimura R.,et al.J. Biol. Chem. 273:1872-1879(1998).