

Smad5 Antibody
Rabbit mAb
Catalog # AP90261

Specification

Smad5 Antibody - Product Information

Application	WB, IHC, FC, ICC
Primary Accession	Q99717
Reactivity	Rat
Clonality	Monoclonal

Other Names

Dwfc; JV5-1; MADH5; DKFZp781C1895; DKFZp781O1323; SMAD5;

Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	52258 Da

Smad5 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Smad5
Description	Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. Smad5 is a receptor-regulated Smad (R-Smad). Smad5 is required for normal development of the cardiovascular system in vivo; lack of the Smad5 gene results in apoptosis of cardiac myocytes. 3 Upregulation of Smad5 has been reported to mediate apoptosis of gastric epithelial cells induced by Helicobacter pylori infection. Tissue specificity: Ubiquitous.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

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:<a

<http://www.uniprot.org/citations/12064918> target="_blank">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 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

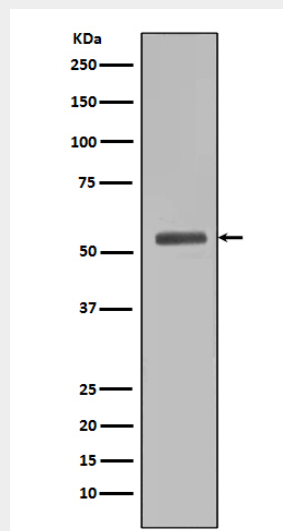
Ubiquitous.

Smad5 Antibody - 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



Western blot analysis of Smad5 expression in HEK293 cell lysate.