

# Smad5 Antibody

Rabbit mAb

Catalog # AP90261

## Product Information

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<b>Application</b>	WB, IHC, IF, FC, ICC, IHF
<b>Primary Accession</b>	<a href="#">Q99717</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	Dwfc; JV5-1; MADH5; DKFZp781C1895; DKFZp781O1323; SMAD5;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	52258

## Additional Information

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<b>Dilution</b>	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 FC 1:50
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human Smad5
<b>Description</b>	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.
<b>Storage Condition and Buffer</b>	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.

## Protein Information

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<b>Name</b>	SMAD5 ( <a href="#">HGNC:6771</a> )
<b>Synonyms</b>	MADH5
<b>Function</b>	Transcriptional regulator that plays a role in various cellular processes including embryonic development, cell differentiation, angiogenesis and tissue homeostasis (PubMed: <a href="#">12064918</a> , PubMed: <a href="#">16516194</a> ). 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: <a href="#">9442019</a> ). In turn, the hetero-trimeric complex recognizes cis- regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network (PubMed: <a href="#">33510867</a> ). 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**

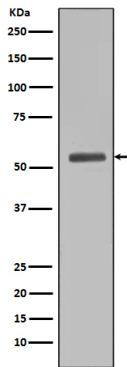
Cytoplasm. Nucleus Mitochondrion. Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4

**Tissue Location**

Ubiquitous.

**Images**

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Western blot analysis of Smad5 expression in HEK293 cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.