

# SMAD5 antibody - middle region

Rabbit Polyclonal Antibody  
Catalog # AI10301

## Product Information

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<b>Application</b>	WB
<b>Primary Accession</b>	<a href="#">Q99717</a>
<b>Other Accession</b>	<a href="#">NM_001001420</a> , <a href="#">NP_001001420</a>
<b>Reactivity</b>	Human, Mouse, Rat, Zebrafish, Pig, Dog, Bovine
<b>Predicted</b>	Human, Mouse, Rat, Zebrafish, Chicken, Dog, Bovine
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	52258

## Additional Information

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<b>Gene ID</b>	4090
<b>Alias Symbol</b> <b>Other Names</b>	DWFC, JV5-1, MADH5 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
<b>Format</b>	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
<b>Reconstitution &amp; Storage</b>	Add 100 ul of distilled water. Final anti-SMAD5 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
<b>Precautions</b>	SMAD5 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	SMAD5
<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:[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.

**References**

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Langenfeld,E.M., et al., (2006) Oncogene 25 (5), 685-692  
Reconstitution and Storage:For short term use, store at 2-8C up to 1 week. For long term storage, store at -20C in small aliquots to prevent freeze-thaw cycles.

**Images**

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