

# SMAD5 Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP51527

## Product Information

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Application	WB
Primary Accession	<a href="#">Q99717</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52258

## Additional Information

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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	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human SMAD5. The exact sequence is proprietary.
Dilution	WB~~1:1000
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

## Protein Information

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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 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: <a href="#">28675158</a> ). Mechanistically, interacts

with hexokinase 1/HK1 and thereby accelerates glycolysis (PubMed:[28675158](#)).

<b>Cellular Location</b>	Cytoplasm. Nucleus Mitochondrion. Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4
<b>Tissue Location</b>	Ubiquitous.

## Background

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

## References

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