

# Phospho-Smad5 (S463/465) (4Q4) Rabbit Monoclonal Antibody

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Catalog # AP93649

## Product Information

Application	WB, IHC, IF, ICC
Primary Accession	<a href="#">Q99717</a>
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Calculated MW	52258

## 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
Dilution	WB~~1:1000 IHC~~1:100~500 IF~~1:50~200 ICC~~N/A
Storage Conditions	-20°C

## Protein Information

Name	SMAD5
Synonyms	MADH5
Function	<p>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:<a href="#">28675158</a>).</p>
Cellular Location	Cytoplasm. Nucleus Mitochondrion. Note=Cytoplasmic in the absence of

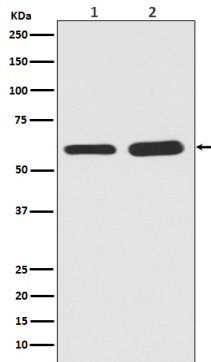
ligand. Migrates to the nucleus when complexed with SMAD4

**Tissue Location**

Ubiquitous.

**Images**

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Western blot analysis of Phospho-Smad5 in (1)Mouse brain tissue lysate; (2)Rat brain tissue lysate.

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