

**Phospho-Smad5 (S463/465) Antibody**  
**Rabbit mAb**  
**Catalog # AP90177****Specification****Phospho-Smad5 (S463/465) Antibody - Product Information**

Application	WB, IHC, ICC
Primary Accession	<a href="#">Q99717</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
hSmad5; JV5-1 ; MADH5; SMAD5; MusMLP ;SMAD family member 5;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	52258 Da

**Phospho-Smad5 (S463/465) Antibody - Additional Information**

Dilution	WB~~1:1000 IHC~~1:100~500 ICC~~N/A
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Phospho-Smad5 (S463/465)
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.
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.

**Phospho-Smad5 (S463/465) 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 href="http://www.uniprot.org/citations/12064918" target="\_blank">12064918</a>, PubMed:<a

[16516194](http://www.uniprot.org/citations/16516194)). Upon BMP ligand binding to their receptors at the cell surface, is phosphorylated by activated type I BMP receptors (BMPRIIs) and associates with SMAD4 to form a heteromeric complex which translocates into the nucleus acting as transcription factor (PubMed:[9442019](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/28675158)). Mechanistically, interacts with hexokinase 1/HK1 and thereby accelerates glycolysis (PubMed:[28675158](http://www.uniprot.org/citations/28675158)).

#### Cellular Location

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

#### Tissue Location

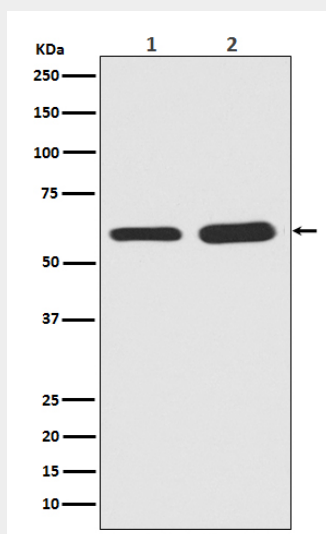
Ubiquitous.

### Phospho-Smad5 (S463/465) 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](#)

### Phospho-Smad5 (S463/465) Antibody - Images



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

lysate.