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# Phospho-Smad1/5/9 (S463/S465/S467) (11L16) Rabbit Monoclonal Antibody

Phospho-Smad1/5/9 (S463/S465/S467) (11L16) Rabbit Monoclonal Antibody
Catalog # AP93680

## Product Information

| | |
|---|---|
| **Application** | WB |
| **Primary Accession** | Q99717 |
| **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 |
| **Storage Conditions** | -20℃ |

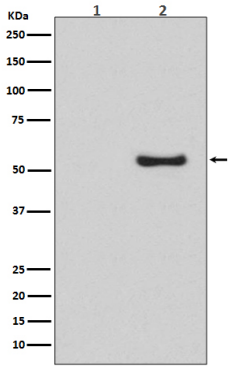
## Protein Information

| | |
|---|---|
| **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:12064918, PubMed:16516194). Upon BMP ligand binding to their receptors at the cell surface, is phosphorylated by activated type I BMP receptors (BMPRIs) and associates with SMAD4 to form a heteromeric complex which translocates into the nucleus acting as transcription factor (PubMed: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). 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




Western blot analysis of Phospho-Smad5 (S463/S465) expression in (1) HeLa cell lysate; (2) HeLa cell treated with BMP-4 lysate.