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Smad5 Antibody
Rabbit mAb
Catalog # AP90261

Specification

Smad5 Antibody - Product Information

Application	**WB, IHC, FC, ICC**
Primary Accession	Q99717
Reactivity	**Rat**
Clonality	**Monoclonal**
Other Names	
Dwfc; JV5-1; MADH5; DKFZp781C1895; DKFZp781O1323; SMAD5;	
Isotype	**Rabbit IgG**
Host	**Rabbit**
Calculated MW	**52258 Da**

Smad5 Antibody - Additional Information

Dilution	**WB~~1:1000 IHC~~1:100~500 FC~~1:10~50 ICC~~N/A**
Purification	**Affinity-chromatography**
Immunogen	**A synthesized peptide derived from human Smad5**
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. 3 Upregulation of Smad5 has been reported to mediate apoptosis of gastric epithelial cells induced by Helicobacter pylori infection. Tissue specificity: Ubiquitous.**
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.**

Smad5 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: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.

Smad5 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 Cytomety
- Cell Culture

Smad5 Antibody - Images

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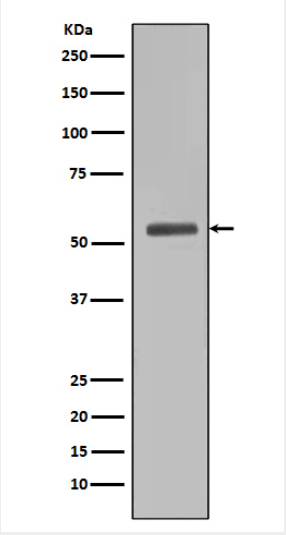

Western blot analysis of Smad5 expression in HEK293 cell lysate.