

**Smad5 Polyclonal Antibody**  
Catalog # AP73270**Specification****Smad5 Polyclonal Antibody - Product Information**

Application	<b>WB, IHC-P</b>
Primary Accession	<a href="#">Q99717</a>
Reactivity	<b>Human, Rat</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>

**Smad5 Polyclonal Antibody - Additional Information****Gene ID** 4090**Other Names**

SMAD5; MADH5; Mothers against decapentaplegic homolog 5; MAD homolog 5; Mothers against DPP homolog 5; JV5-1; SMAD family member 5; SMAD 5; Smad5; hSmad5

**Dilution**

WB~~Western Blot: 1/500 - 1/2000. IHC-p: 1:100-300 ELISA: 1/40000. Not yet tested in other applications.

IHC-P~~N/A

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**Smad5 Polyclonal Antibody - Protein Information****Name** SMAD5 ([HGNC:6771](#))**Synonyms** MADH5**Function**

Transcriptional regulator that plays a role in various cellular processes including embryonic development, cell differentiation, angiogenesis and tissue homeostasis (PubMed:[12064918](http://www.uniprot.org/citations/12064918)), PubMed:[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 (BMPRI) 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:<a href="http://www.uniprot.org/citations/28675158" target="\_blank">28675158</a>). Mechanistically, interacts with hexokinase 1/HK1 and thereby accelerates glycolysis (PubMed:<a href="http://www.uniprot.org/citations/28675158" target="\_blank">28675158</a>).

#### Cellular Location

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

#### Tissue Location

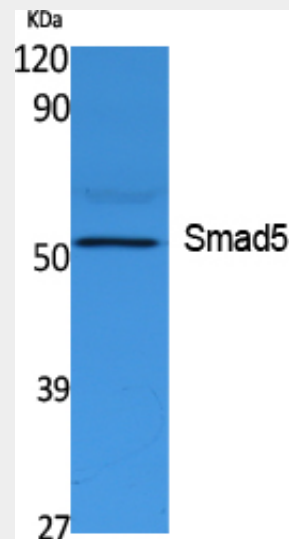
Ubiquitous.

### Smad5 Polyclonal Antibody - Protocols

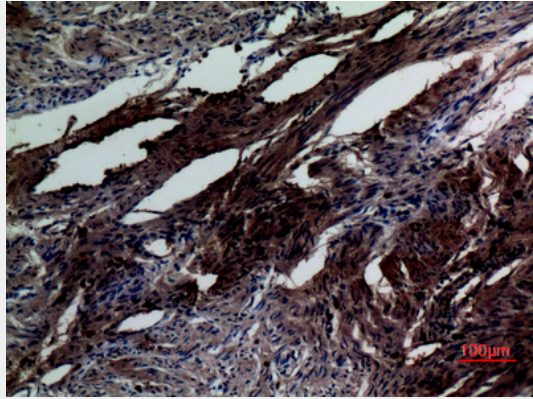
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

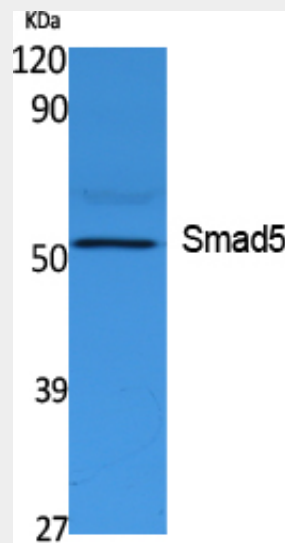
### Smad5 Polyclonal Antibody - Images



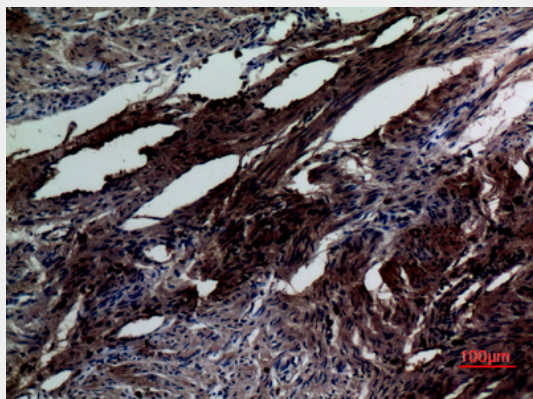
Western Blot analysis of extracts from K562 cells, using Smad5 Polyclonal Antibody.. Secondary antibody was diluted at 1:20000



Immunohistochemical analysis of paraffin-embedded human-uterus, antibody was diluted at 1:100



Western Blot analysis of extracts from K562 cells, using Smad5 Polyclonal Antibody.. Secondary antibody was diluted at 1:20000



Immunohistochemical analysis of paraffin-embedded human-uterus, antibody was diluted at 1:100

### **Smad5 Polyclonal Antibody - Background**

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