10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SMAD5 antibody - middle region
Rabbit Polyclonal Antibody
Catalog # AI10301

Specification

SMAD5 antibody - middle region - Product Information

Application	**WB**
Primary Accession	Q99717
Other Accession	NM_001001420, NP_001001420
Reactivity	**Human, Mouse, Rat, Zebrafish, Pig, Sheep, Horse, Bovine, Dog**
Predicted	**Human, Mouse, Rat, Zebrafish, Chicken, Bovine, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**51kDa KDa**

SMAD5 antibody - middle region - Additional Information

Gene ID 4090

Alias Symbol	**DWFC, JV5-1, MADH5**

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

Format
Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage
Add 100 ul of distilled water. Final anti-SMAD5 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

Precautions
SMAD5 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

SMAD5 antibody - middle region - 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

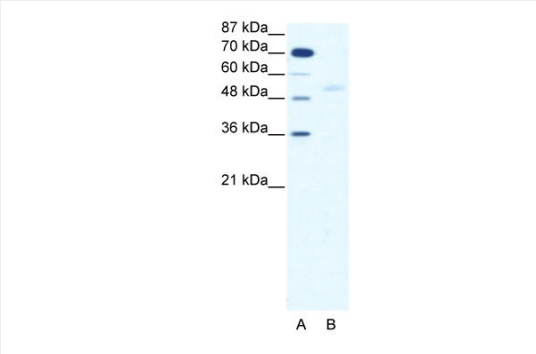
Tissue Location
Ubiquitous.

SMAD5 antibody - middle region - 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 - middle region - Images



WB Suggested Anti-SMAD5 Antibody
Titration: 2.5 µg/ml
Positive Control: HepG2 Whole Cell

SMAD5 antibody - middle region - References

Langenfeld,E.M., et al., (2006) Oncogene 25 (5), 685-692Reconstitution and Storage:For short term use, store at 2-8C up to 1 week. For long term storage, store at -20C in small aliquots to prevent

freeze-thaw cycles.