

SMAD5 (C-terminus) Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52696

Specification

SMAD5 (C-terminus) Antibody - Product Information

Application	WB, ICC, FC
Primary Accession	Q99717
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	60 KDa

SMAD5 (C-terminus) Antibody - Additional Information

Gene ID 4090

Other Names

DKFZp781C1895;DKFZp781O1323;Dwfc;hSmad 5;hSmad5;JV5 1;JV5-1;MAD homolog 5;MAD mothers against decapentaplegic homolog 5;MAD, mothers against decapentaplegic homolog 5;MADH 5;MADH5;Mothers against decapentaplegic homolog 5;Mothers against DPP homolog 5;MusMLP; SMA and MAD related protein 5;SMAD 5;SMAD family member 5;SMAD mothers against DPP homolog 5;Smad5;Smad5;SMAD5_HUMAN.

Dilution

WB~~1:1000

ICC~~1:75

FC~~1:100

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Storage

Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

SMAD5 (C-terminus) 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, PubMed: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). 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

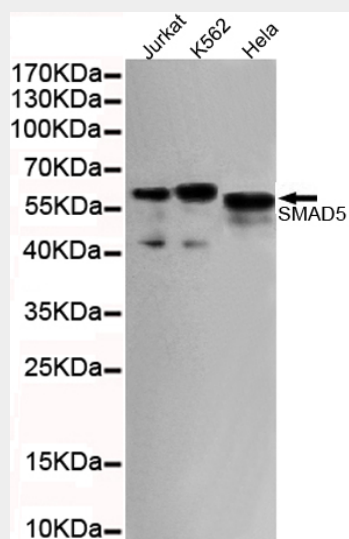
Ubiquitous.

SMAD5 (C-terminus) Antibody - Protocols

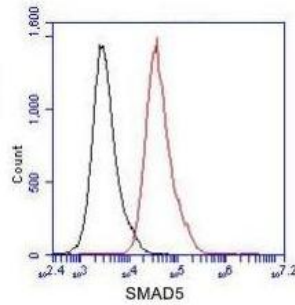
Provided below are standard protocols that you may find useful for product applications.

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

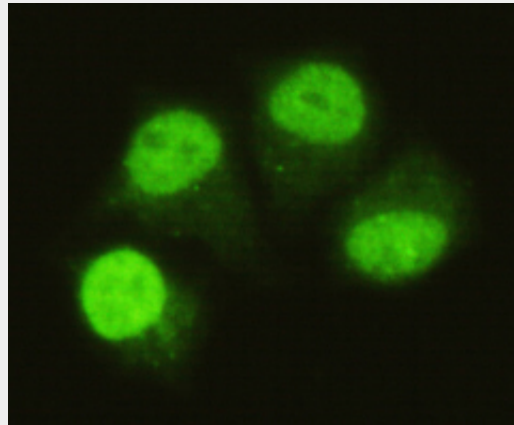
SMAD5 (C-terminus) Antibody - Images



Western blot detection of SMAD5 (C-terminus) in HeLa, Jurkat and K562 cell lysates using SMAD5 (C-terminus) mouse mAb (1:1000 diluted). Predicted band size: 52KDa. Observed band size: 60KDa.



Flow Cytometry analysis of Jurkat cells stained with SMAD5 (red, 1/100 dilution), followed by FITC-conjugated goat anti-mouse IgG. Black line histogram represents the isotype control, normal mouse IgG.



Immunocytochemistry of HeLa cells using anti-SMAD5 (C-terminus) mouse mAb diluted 1:75.

SMAD5 (C-terminus) Antibody - Background

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

SMAD5 (C-terminus) Antibody - References

- Riggins G.J., et al. *Nat. Genet.* 13:347-349(1996).
- Hejlik D.P., et al. *Cancer Res.* 57:3779-3783(1997).
- Zavadil J., et al. *Leukemia* 11:1187-1192(1997).
- Gemma A., et al. *Oncogene* 16:951-956(1998).
- Nishimura R., et al. *J. Biol. Chem.* 273:1872-1879(1998).