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SMAD5 (C-terminus) Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52696

Product Information

Application	WB, ICC, FC
Primary Accession	Q99717
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	52258

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	Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.09% (W/V) sodium azide, 50%,glycerol
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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.

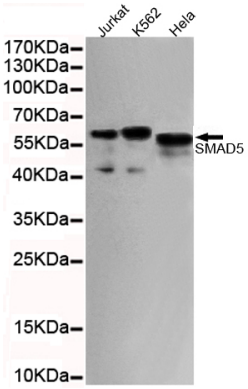
Background

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

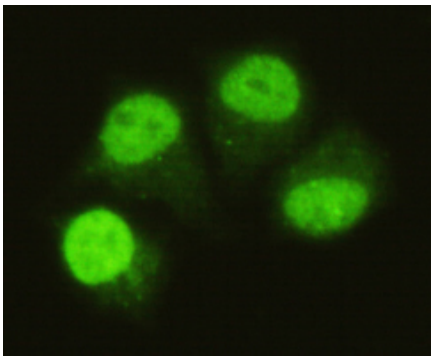
References

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).

Images

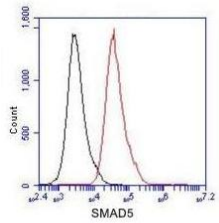


Western blot detection of SMAD5 (C-terminus) in Hela,Jurkat and K562 cell lysates using SMAD5 (C-terminus) mouse mAb (1:1000 diluted).Predicted band size:52KDa.Observed band size:60KDa.



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

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.



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