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Anti-SMAD5 Antibody

Catalog # AP51527

Product Information

Application	WB
Primary Accession	Q99717
Reactivity	Human, Mouse, Rat, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52258

Additional Information

Gene ID	4090
Other Names	MADH5; Mothers against decapentaplegic homolog 5; MAD homolog 5; Mothers against DPP homolog 5; JV5-1; SMAD family member 5; SMAD 5; Smad5; hSmad5
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human SMAD5. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

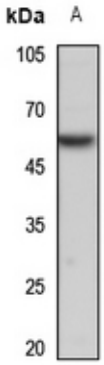
Name	SMAD5 (HGNC:6771)
Synonyms	MADH5
Function	Transcriptional regulator that plays a role in various cellular processes including embryonic development, cell differentiation, angiogenesis and tissue homeostasis (PubMed:12064918, PubMed:16516194). Upon BMP ligand binding to their receptors at the cell surface, is phosphorylated by activated type I BMP receptors (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.

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 analysis of SMAD5 expression in H460 (A) whole cell lysates. (Predicted band size: 52 kD; Observed band size: 60 kD)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.