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Anti-SMAD7 Antibody

Catalog # AP51971

Product Information

Application	WB, IF/IC
Primary Accession	O15105
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	46426

Additional Information

Gene ID	4092
Other Names	MADH7; MADH8; Mothers against decapentaplegic homolog 7; MAD homolog 7; Mothers against DPP homolog 7; Mothers against decapentaplegic homolog 8; MAD homolog 8; Mothers against DPP homolog 8; SMAD family member 7; SMAD 7; Smad7; hSMAD7
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human SMAD7. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IF/IC~~N/A
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	SMAD7 (HGNC:6773)
Synonyms	MADH7, MADH8
Function	Antagonist of signaling by TGF-beta (transforming growth factor) type 1 receptor superfamily members; has been shown to inhibit TGF-beta (Transforming growth factor) and activin signaling by associating with their receptors thus preventing SMAD2 access (PubMed:21791611). Functions as an adapter to recruit SMURF2 to the TGF-beta receptor complex. Also acts by recruiting the PPP1R15A-PP1 complex to TGFBR1, which promotes its dephosphorylation. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.
Cellular Location	Nucleus. Cytoplasm. Note=Interaction with NEDD4L or RNF111 induces

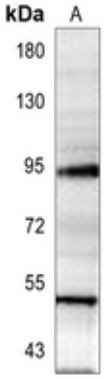
translocation from the nucleus to the cytoplasm (PubMed:16601693). TGF-beta stimulates its translocation from the nucleus to the cytoplasm. PDPK1 inhibits its translocation from the nucleus to the cytoplasm in response to TGF-beta (PubMed:17327236)

Tissue Location Ubiquitous with higher expression in the lung and vascular endothelium

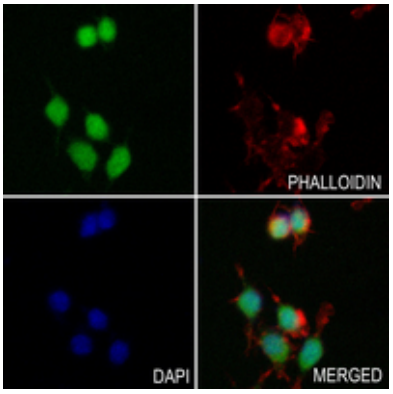
References

Hayashi H.,et al.Cell 89:1165-1173(1997).
Topper J.N.,et al.Proc. Natl. Acad. Sci. U.S.A. 94:9314-9319(1997).
Nakao A.,et al.Nature 389:631-635(1997).
Hagiwara K.,et al.Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images



Western blot analysis of SMAD7 expression in PC3 (A) whole cell lysates. (Predicted band size: 46 kD; Observed band size: 50 kD)



Immunofluorescent analysis of SMAD7 staining in RAW264.7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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