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Smad7 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6753C

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	O15105
Other Accession	O88406
Reactivity	Human
Predicted	Rat, Mouse, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18598
Calculated MW	46426
Antigen Region	195-224

Additional Information

Gene ID	4092
Other Names	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, SMAD7, MADH7, MADH8
Target/Specificity	This Smad7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 195-224 amino acids from the Central region of human Smad7.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Smad7 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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

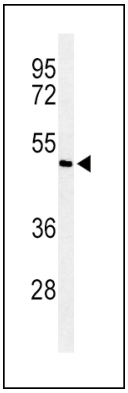
Background

Smad7 is a member of the MAD-related family of molecules. MAD-related proteins are a recently identified family of intracellular proteins that are thought to be essential components in the signaling pathways of the serine/threonine kinase receptors of the transforming growth factor beta super family.

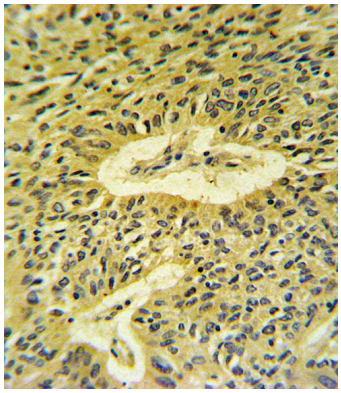
References

Hirata,H., et.al., Cancer 115 (19), 4488-4503 (2009)

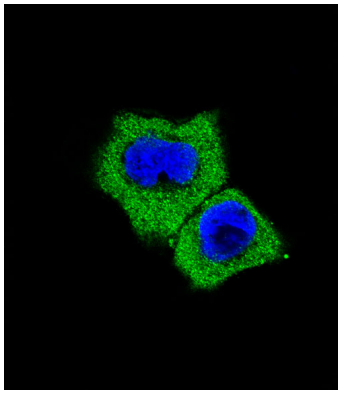
Images



Western blot analysis of Smad7 Antibody (Center) (Cat. #AP6753c) in ZR-75-1 cell line lysates (35ug/lane). Smad7 (arrow) was detected using the purified Pab.



Smad7 Antibody (Center) (Cat. #AP6753c) IHC analysis in formalin fixed and paraffin embedded lung carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the Smad7 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



"Fluorescent confocal image of A431 cell stained with Smad7 Antibody (Center)(Cat#AP6753c). A431 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with Smad7 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min).Smad7 immunoreactivity is localized to cytoplasm significantly. "

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