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Anti-SMAD2 (pS467) Antibody

Rabbit polyclonal antibody to SMAD2 (pS467)
Catalog # AP60396

Product Information

Application	WB, E, IF/IC, IHC
Primary Accession	Q15796
Other Accession	Q62432
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Monkey, Pig, Chicken, Bovine, SARS
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52306

Additional Information

Gene ID	4087
Other Names	MADH2; MADR2; Mothers against decapentaplegic homolog 2; MAD homolog 2; Mothers against DPP homolog 2; JV18-1; Mad-related protein 2; hMAD-2; SMAD family member 2; SMAD 2; Smad2; hSMAD2
Target/Specificity	Recognizes endogenous levels of SMAD2 (pS467) protein.
Dilution	WB~~E (1/5000 - 1/10000), WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) E~~E (1/5000 - 1/10000), WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IF/IC~~N/A IHC~~E (1/5000 - 1/10000), WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

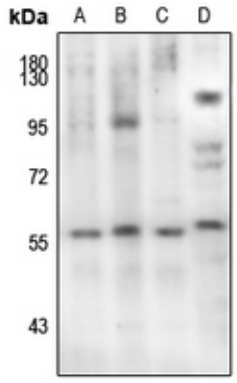
Name	SMAD2
Synonyms	MADH2, MADR2
Function	Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD2/SMAD4 complex, activates transcription. Promotes TGFB1-mediated transcription of odontoblastic differentiation genes in dental papilla cells (By similarity). Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a

	negative regulator. May act as a tumor suppressor in colorectal carcinoma (PubMed:8752209).
Cellular Location	Cytoplasm. Nucleus. Note=Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 or with IPO7 (PubMed:21145499, PubMed:9865696). On dephosphorylation by phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1 (PubMed:16751101, PubMed:19289081). Localized mainly to the nucleus in the early stages of embryo development with expression becoming evident in the cytoplasm at the blastocyst and epiblast stages (By similarity). {ECO:0000250|UniProtKB:Q62432, ECO:0000269|PubMed:16751101, ECO:0000269|PubMed:19289081, ECO:0000269|PubMed:21145499, ECO:0000269|PubMed:9865696}
Tissue Location	Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta.

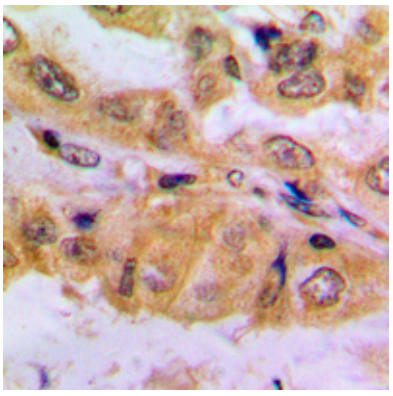
Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human SMAD2 (pS467). The exact sequence is proprietary.

Images

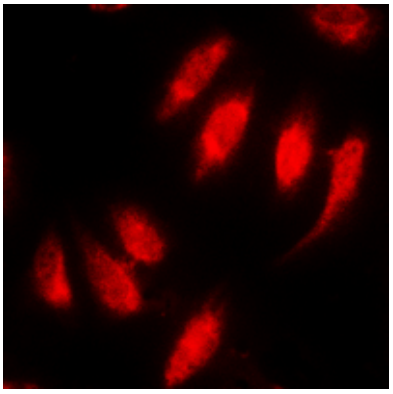


Western blot analysis of SMAD2 (pS467) expression in MCF7 (A), A375 (B), A549 (C), rat heart (D) whole cell lysates.

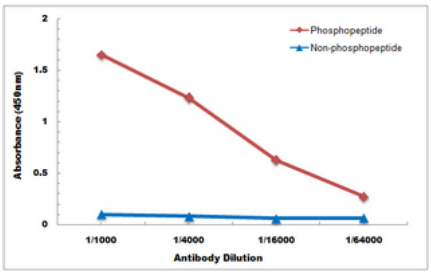


Immunohistochemical analysis of SMAD2 (pS467) staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of SMAD2 (pS467) staining in HeLa 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 DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.



Direct ELISA antibody dose-response curve using Anti-SMAD2 (pS467) Antibody. Antigen (phosphopeptide and non-phosphopeptide) concentration is 5 ug/ml. Goat Anti-Rabbit IgG (H&L) - HRP was used as the secondary antibody, and signal was developed by TMB substrate.