

ARG54119 anti-Smad 2 antibody

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes Smad 2
Tested Reactivity	Hu, Mk
Tested Application	ICC/IF, WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Target Name	Smad 2
Species	Human
Immunogen	Purified recombinant human Smad2 protein fragments expressed in E.coli.
Conjugation	Un-conjugated
Alternate Names	SMAD family member 2; MADR2; MADH2; Mothers against decapentaplegic homolog 2; JV18; Smad2; hMAD-2; Mad-related protein 2; hSMAD2; Mothers against DPP homolog 2; JV18-1; MAD homolog 2; SMAD 2

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:100
	WB	1:500
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

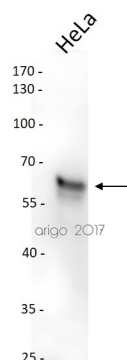
Form	Liquid
Buffer	Ascites
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 4087 Human
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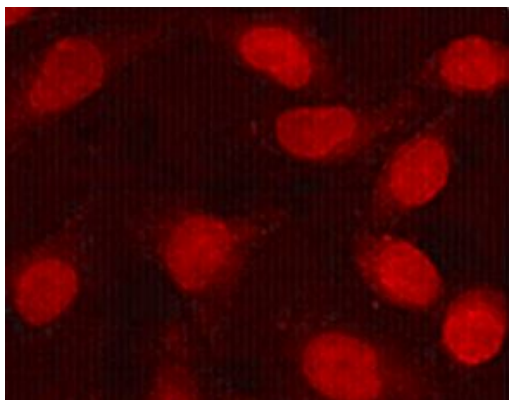
Gene Symbol	SMAD2
Gene Full Name	SMAD family member 2
Background	Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD2/SMAD4 complex, activates transcription. May act as a tumor suppressor in colorectal carcinoma. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.
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. May act as a tumor suppressor in colorectal carcinoma. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator. [UniProt]
Research Area	Cancer antibody; Developmental Biology antibody; Gene Regulation antibody; Signaling Transduction antibody
Calculated Mw	52 kDa
PTM	Phosphorylated on one or several of Thr-220, Ser-245, Ser-250, and Ser-255. In response to TGF-beta, phosphorylated on Ser-465/467 by TGF-beta and activin type 1 receptor kinases. TGF-beta-induced Ser-465/467 phosphorylation declines progressively in a KMT5A-dependent manner. Able to interact with SMURF2 when phosphorylated on Ser-465/467, recruiting other proteins, such as SNON, for degradation. In response to decorin, the naturally occurring inhibitor of TGF-beta signaling, phosphorylated on Ser-240 by CaMK2. Phosphorylated by MAPK3 upon EGF stimulation; which increases transcriptional activity and stability, and is blocked by calmodulin. Phosphorylated by PDPK1. In response to TGF-beta, ubiquitinated by NEDD4L; which promotes its degradation. Monoubiquitinated, leading to prevent DNA-binding (By similarity). Deubiquitination by USP15 alleviates inhibition and promotes activation of TGF-beta target genes (PubMed:21947082). Ubiquitinated by RNF111, leading to its degradation: only SMAD2 proteins that are 'in use' are targeted by RNF111, RNF111 playing a key role in activating SMAD2 and regulating its turnover (By similarity). Acetylated on Lys-19 by coactivators in response to TGF-beta signaling, which increases transcriptional activity. Isoform short: Acetylation increases DNA binding activity in vitro and enhances its association with target promoters in vivo. Acetylation in the nucleus by EP300 is enhanced by TGF-beta.
Cellular Localization	Cytoplasm. Nucleus.

Images



ARG54119 anti-Smad 2 antibody WB image

Western blot: 20 µg of HeLa cell lysate stained with ARG54119 anti-Smad 2 antibody at 1:500 dilution.



ARG54119 anti-Smad 2 antibody ICC/IF image

Immunofluorescence: HeLa cells fixed with 1% Paraformaldehyde and stained with ARG54119 anti-Smad 2 antibody at 1:100 dilution.