

Anti-Smad2 Rabbit Monoclonal Antibody

Catalog # ABO13585

Product Information

Application	WB, IF, ICC, FC
Primary Accession	Q15796
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-Smad2 Rabbit Monoclonal Antibody . Tested in WB, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

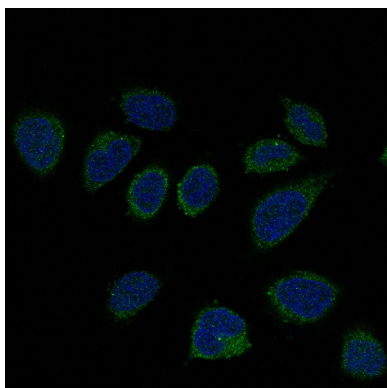
Gene ID	4087
Other Names	Mothers against decapentaplegic homolog 2, MAD homolog 2, Mothers against DPP homolog 2, JV18-1, Mad-related protein 2, hMAD-2, SMAD family member 2, SMAD 2, Smad2, hSMAD2, SMAD2, MADH2, MADR2
Calculated MW	52306
Application Details	WB 1:500-1:2000 ICC/IF 1:50-1:200 FC 1:50
Subcellular Localization	Cytoplasm. Nucleus. Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4. On dephosphorylation by phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1.
Tissue Specificity	Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta..
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: ACI-19
Immunogen	A synthesized peptide derived from human Smad2
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at

4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

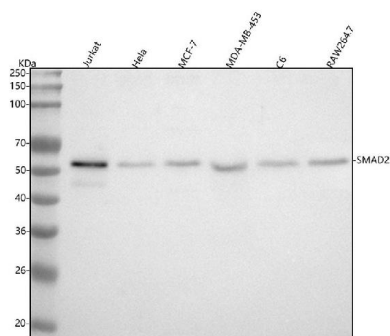
Name	SMAD2 (HGNC:6768)
Synonyms	MADH2, MADR2
Function	Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many 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.

Images



Immunofluorescent analysis of HeLa cells, using Smad2 Antibody.

Figure 1. Western blot analysis of SMAD2 using anti-SMAD2 antibody (M00090-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Jurkat whole cell lysates, Lane 2: human HeLa whole cell lysates,



Lane 3: human MCF-7 whole cell lysates,
 Lane 4: human MDA-MB-453 whole cell lysates,
 Lane 5: rat C6 whole cell lysates,
 Lane 6: mouse RAW264.7 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SMAD2 antigen affinity purified monoclonal antibody (Catalog # M00090-1) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for SMAD2 at approximately 52 kDa. The expected band size for SMAD2 is at 52 kDa.

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