

SMAD2 Antibody
Mouse Monoclonal Antibody
Catalog # ALS15193**Specification**

SMAD2 Antibody - Product Information

Application	WB, IHC
Primary Accession	Q15796
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	52kDa KDa

SMAD2 Antibody - 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

Reconstitution & Storage

Long term: -20°C; Short term: -20°C

Precautions

SMAD2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SMAD2 Antibody - 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:9865696, PubMed:21145499). 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.

Volume

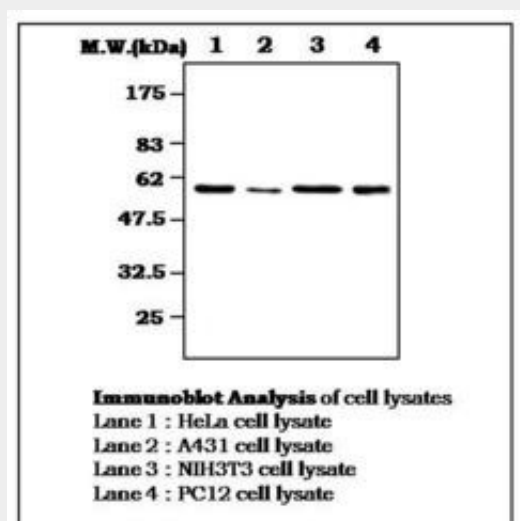
50 μ l

SMAD2 Antibody - Protocols

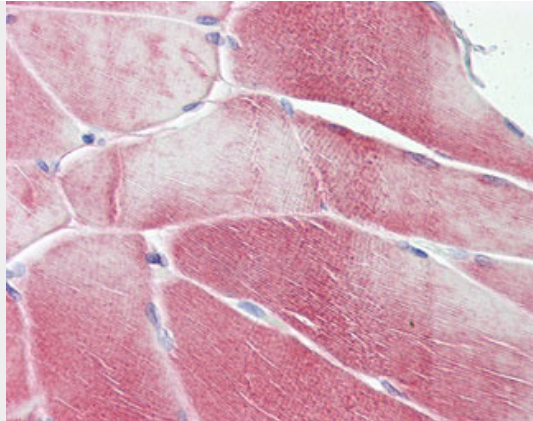
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SMAD2 Antibody - Images



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Anti-SMAD2 antibody IHC of human skeletal muscle.

SMAD2 Antibody - 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.

SMAD2 Antibody - References

Riggins G.J.,et al.Nat. Genet. 13:347-349(1996).
Zhang Y.,et al.Nature 383:168-172(1996).
Eppert K.,et al.Cell 86:543-552(1996).
Liu F.,et al.Genes Dev. 11:3157-3167(1997).
Takenoshita S.,et al.Genomics 48:1-11(1998).