10320 Camino Santa Fe, Suite G
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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.

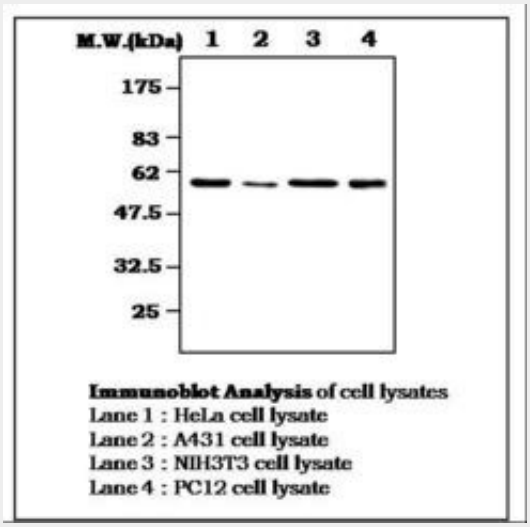
Volume
50 µl

SMAD2 Antibody - Protocols

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

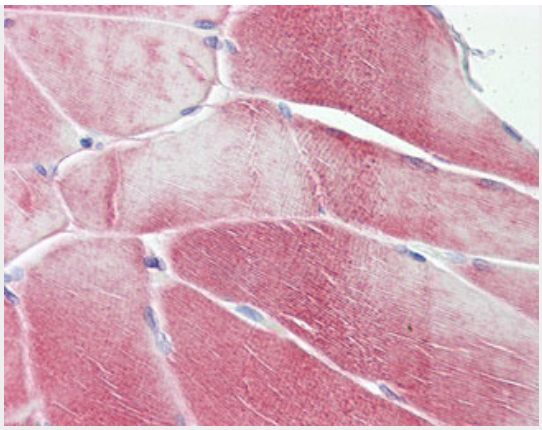
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SMAD2 Antibody - Images



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Anti-SMAD2 antibody IHC of human skeletal muscle.

SMAD2 Antibody - Background

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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).