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SMAD2 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a partial recombinant SMAD2.
Catalog # AT3939a

Product Information

Application	WB, IHC, IF, E
Primary Accession	Q15796
Other Accession	BC025699
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG2a Kappa
Clone Names	4D10
Calculated MW	52306

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
Target/Specificity	SMAD2 (AAH25699, 181 a.a. ~ 280 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 IHC~~1:100~500 IF~~1:50~200 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	SMAD2 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

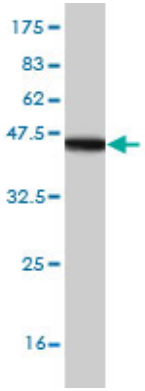
The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated by the TGF-beta receptors. The phosphorylation induces the dissociation of this protein with SARA and the association with the family member SMAD4. The association with SMAD4 is important for the translocation of this protein into the nucleus, where it binds to

target promoters and forms a transcription repressor complex with other cofactors. This protein can also be phosphorylated by activin type 1 receptor kinase, and mediates the signal from the activin. Alternatively spliced transcript variants encoding the same protein have been observed.

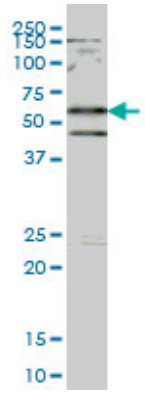
References

Maternal genes and facial clefts in offspring: a comprehensive search for genetic associations in two population-based cleft studies from Scandinavia. Jugessur A, et al. PLoS One, 2010 Jul 9. PMID 20634891.Somatic mutations and germline sequence variants in patients with familial colorectal cancer. Gylfe AE, et al. Int J Cancer, 2010 Jun 29. PMID 20589678.Smad2 and Smad6 as predictors of overall survival in oral squamous cell carcinoma patients. Mangone FR, et al. Mol Cancer, 2010 May 12. PMID 20462450.Induced expression of bone morphogenetic protein-6 and Smads signaling in human monocytes derived dendritic cells during sickle-cell pathology with orthopedic complications. Abhishek K, et al. Biochem Biophys Res Commun, 2010 Jun 11. PMID 20460105.A Large-scale genetic association study of esophageal adenocarcinoma risk. Liu CY, et al. Carcinogenesis, 2010 Jul. PMID 20453000.

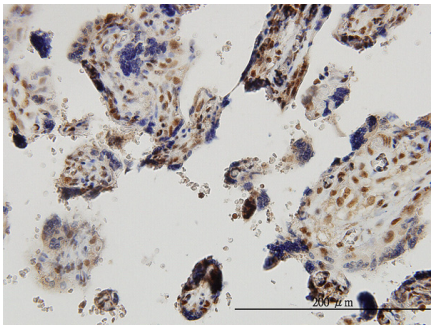
Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (36.63 KDa) .

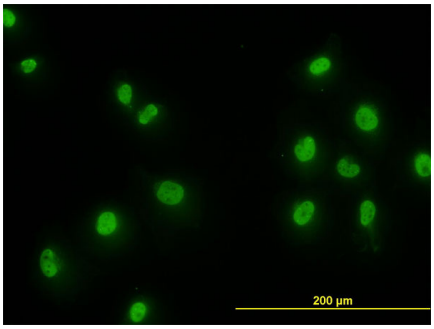


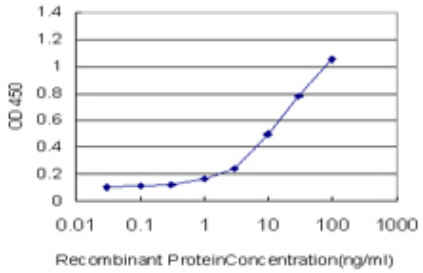
SMAD2 monoclonal antibody (M01), clone 4D10 Western Blot analysis of SMAD2 expression in Hela S3 NE ((Cat # AT3939a)



Immunoperoxidase of monoclonal antibody to SMAD2 on formalin-fixed paraffin-embedded human placenta. [antibody concentration 3 ug/ml]

Immunofluorescence of monoclonal antibody to SMAD2 on HeLa cell. [antibody concentration 10 ug/ml]





Detection limit for recombinant GST tagged SMAD2 is approximately 1ng/ml as a capture antibody.

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