10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SMAD2 Antibody (monoclonal) (M05)

Mouse monoclonal antibody raised against a partial recombinant SMAD2.
Catalog # AT3940a

Product Information

Application	WB, IHC, IF, E
Primary Accession	Q15796
Other Accession	BC025699
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG2b Kappa
Clone Names	3G9
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) (M05) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

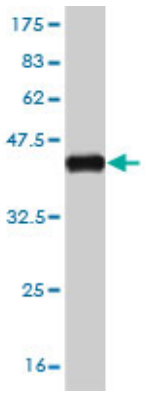
The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. 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.

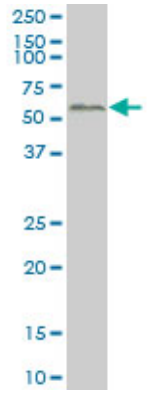
References

1.Altered expression of p120catenin predicts poor outcome in invasive breast cancer.Talvinen K, Tuikkala J, Nykanen M, Nieminen A, Anttinen J, Nevalainen OS, Hurme S, Kuopio T, Kronqvist P.J Cancer Res Clin Oncol. 2010 Feb 12. [Epub ahead of print]

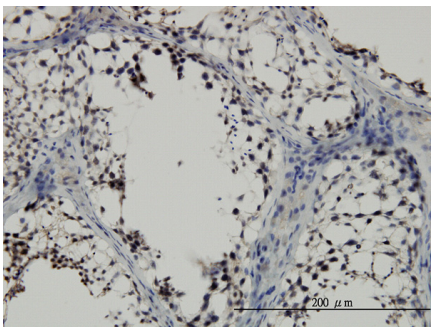
Images



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

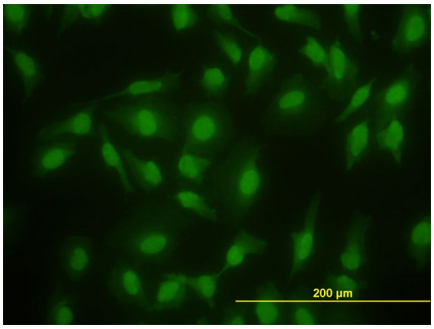


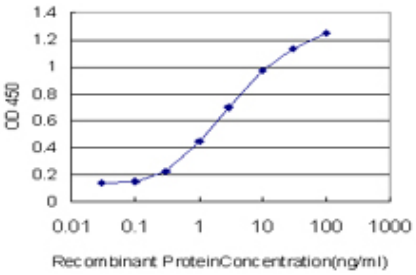
SMAD2 monoclonal antibody (M05), clone 3G9 Western Blot analysis of SMAD2 expression in Hela S3 NE ((Cat # AT3940a)



Immunoperoxidase of monoclonal antibody to SMAD2 on formalin-fixed paraffin-embedded human testis. [antibody concentration 5 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 0.1ng/ml as a capture antibody.