

Product datasheet for **AM06653SU-N**

SMAD2 Mouse Monoclonal Antibody [Clone ID: 5G7]

Product data:

Product Type:	Primary Antibodies
Clone Name:	5G7
Applications:	ELISA, FC, IF, IHC, WB
Recommended Dilution:	Western Blot: 1/500 - 1/2000. Immunohistochemistry on paraffin sections: 1/200 - 1/1000. Immunofluorescence: 1/200 - 1/1000. Flow cytometry: 1/200 - 1/400. ELISA: 1/10000.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Purified recombinant fragment of human SMAD2 expressed in E. Coli.
Specificity:	This antibody reacts to SMAD2.
Formulation:	State: Ascites State: Ascitic fluid containing 0.03% sodium azide.
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	52 kDa
Gene Name:	SMAD family member 2
Database Link:	Entrez Gene 4087 Human Q15796



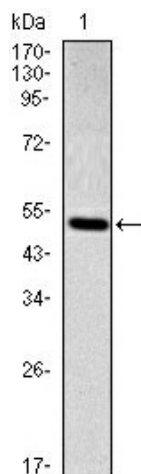
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Background:

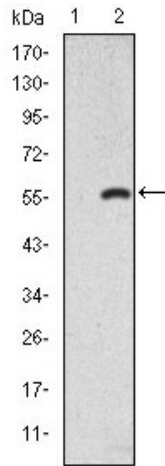
The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the *Drosophila* gene 'mothers against decapentaplegic' (Mad) and the *C. elegans* gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways.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

Synonyms:

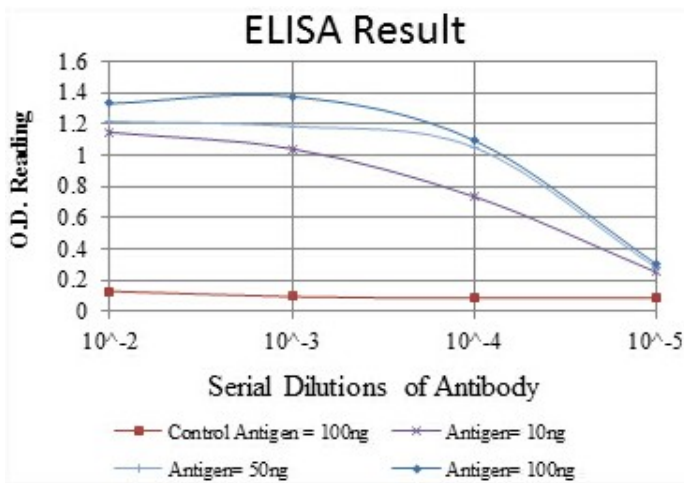
SMAD family member 2, SMAD-2, SMAD 2, MADH2, MAD homolog 2, MADR2, Mad-related protein 2, JV18-1

Product images:

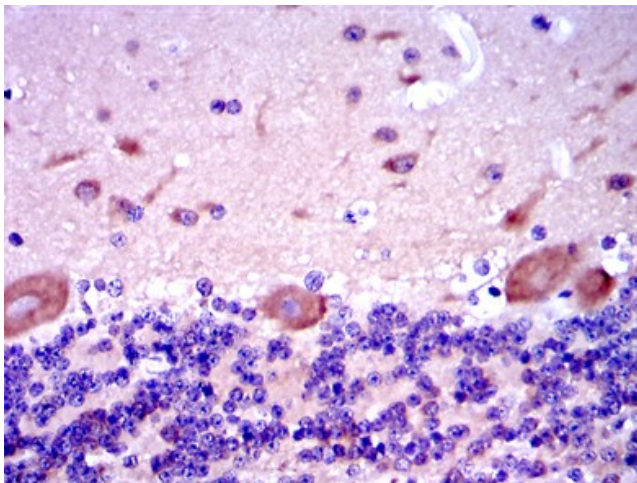
Western blot analysis using SMAD2 mAb against human SMAD2 (AA: 20-254) recombinant protein. (Expected MW is 52.2 kDa)



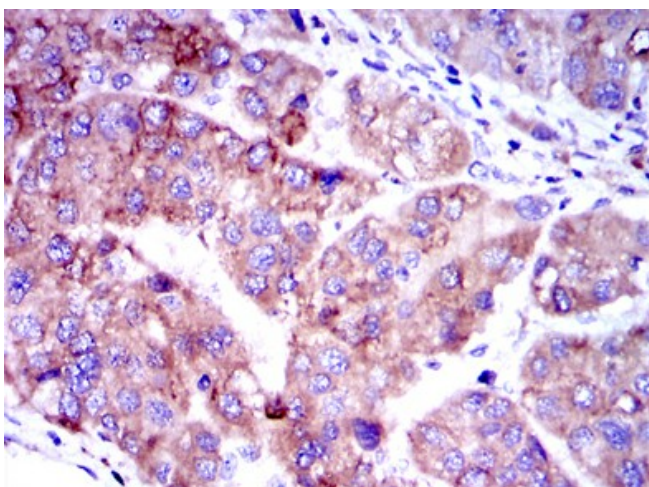
Western blot analysis using SMAD2 mAb against HEK293 (1) and SMAD2 (AA: 20-254)-hlgGfc transfected HEK293 (2) cell lysate.



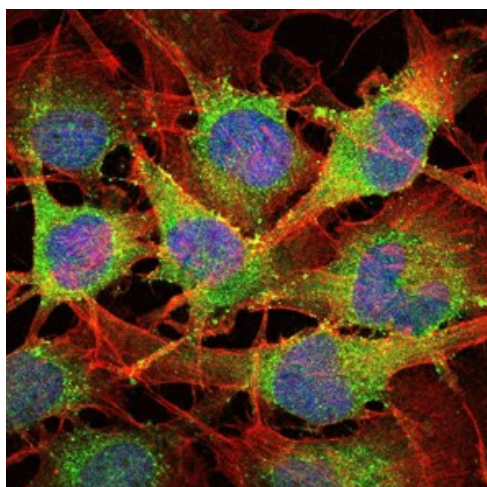
Red: Control Antigen (100ng) Purple: Antigen (10ng) Green: Antigen (50ng) Blue: Antigen (100ng)



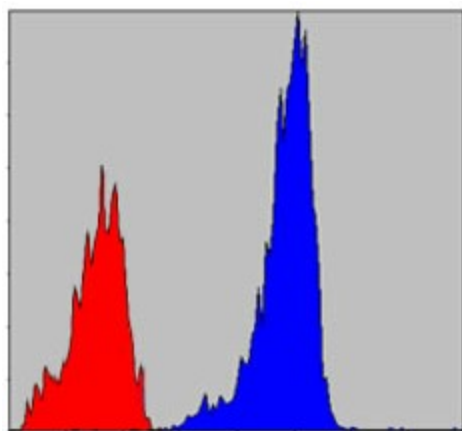
Immunohistochemical analysis of paraffin-embedded human cerebellum tissues using SMAD2 mouse mAb with DAB staining.



Immunohistochemical analysis of paraffin-embedded human liver cancer tissues using SMAD2 mouse mAb with DAB staining.



Immunofluorescence analysis of U251 cells using SMAD2 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



Flow cytometric analysis of NIH/3T3 cells using SMAD2 mouse mAb (blue) and negative control (red).