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SMAD1 Antibody (monoclonal) (M04)

Mouse monoclonal antibody raised against a full length recombinant SMAD1.
Catalog # AT3938a

Product Information

Application	WB, IHC, IF
Primary Accession	Q15797
Other Accession	BC001878
Reactivity	Human, Mouse, Rat
Host	mouse
Clonality	monoclonal
Isotype	IgG2b Kappa
Clone Names	2A1
Calculated MW	52260

Additional Information

Gene ID	4086
Other Names	Mothers against decapentaplegic homolog 1, MAD homolog 1, Mothers against DPP homolog 1, JV4-1, Mad-related protein 1, SMAD family member 1, SMAD 1, Smad1, hSMAD1, Transforming growth factor-beta-signaling protein 1, BSP-1, SMAD1, BSP1, MADH1, MADR1
Target/Specificity	SMAD1 (AAH01878.1, 1 a.a. ~ 465 a.a) full-length 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
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	SMAD1 Antibody (monoclonal) (M04) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

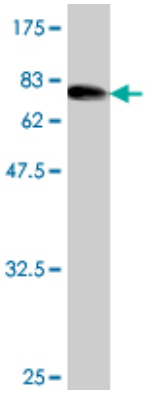
The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signals of the bone morphogenetic proteins (BMPs), which are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. In response to BMP ligands, this protein can be phosphorylated and activated by the BMP receptor kinase. The phosphorylated form of this protein forms a complex with SMAD4, which is important for its function in the transcription regulation. This protein is a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1

and SMURF2, and undergoes ubiquitination and proteasome-mediated degradation. Alternatively spliced transcript variants encoding the same protein have been observed.

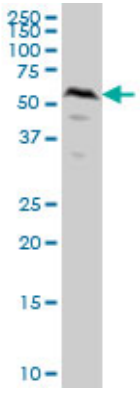
References

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.Smad-dependent and smad-independent induction of id1 by prostacyclin analogues inhibits proliferation of pulmonary artery smooth muscle cells in vitro and in vivo. Yang J, et al. Circ Res, 2010 Jul 23. PMID 20522807.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.Inflammation anergy in human intestinal macrophages is due to Smad-induced IkappaBalpha expression and NF-kappaB inactivation. Smythies LE, et al. J Biol Chem, 2010 Jun 18. PMID 20388715.Autocrine bone morphogenetic protein-9 signals through activin receptor-like kinase-2/Smad1/Smad4 to promote ovarian cancer cell proliferation. Herrera B, et al. Cancer Res, 2009 Dec 15. PMID 19996292.

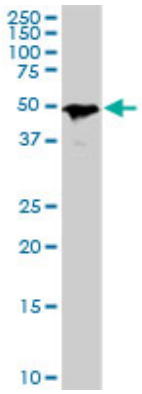
Images



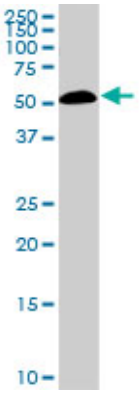
Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (76.89 KDa) .



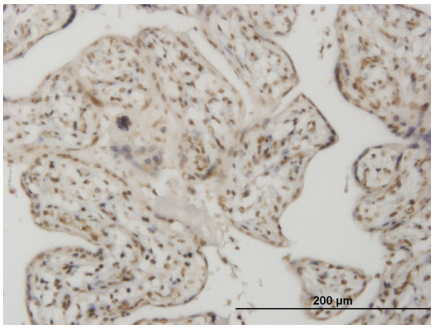
SMAD1 monoclonal antibody (M04), clone 2A1 Western Blot analysis of SMAD1 expression in HeLa ((Cat # AT3938a)



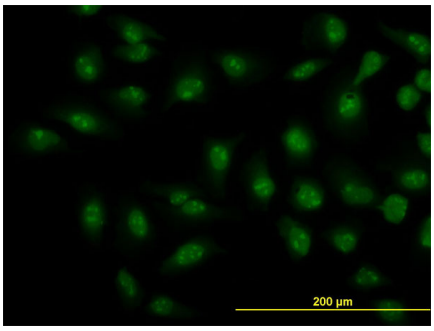
SMAD1 monoclonal antibody (M04), clone 2A1. Western Blot analysis of SMAD1 expression in PC-12 ((Cat # AT3938a)



SMAD1 monoclonal antibody (M04), clone 2A1. Western Blot analysis of SMAD1 expression in NIH/3T3 ((Cat # AT3938a)



Immunoperoxidase of monoclonal antibody to SMAD1 on formalin-fixed paraffin-embedded human placenta. [antibody concentration 1.5 ug/ml]



Immunofluorescence of monoclonal antibody to SMAD1 on HeLa cell. [antibody concentration 10 ug/ml]