

**SMAD1 Antibody (monoclonal) (M02)****Mouse monoclonal antibody raised against a partial recombinant SMAD1.****Catalog # AT3936a****Specification**

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**SMAD1 Antibody (monoclonal) (M02) - Product Information**

|                   |                           |
|-------------------|---------------------------|
| Application       | IF, WB, IHC, E            |
| Primary Accession | <a href="#">Q15797</a>    |
| Other Accession   | <a href="#">NM_005900</a> |
| Reactivity        | Human                     |
| Host              | mouse                     |
| Clonality         | Monoclonal                |
| Isotype           | IgG1 kappa                |
| Calculated MW     | 52260                     |

**SMAD1 Antibody (monoclonal) (M02) - 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 (NP\_005891, 1 a.a. ~ 110 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

**Dilution**

WB~~1:500~1000

**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) (M02) is for research use only and not for use in diagnostic or therapeutic procedures.

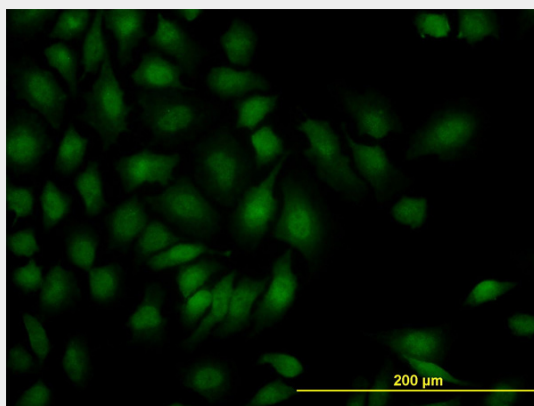
**SMAD1 Antibody (monoclonal) (M02) - Protocols**

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

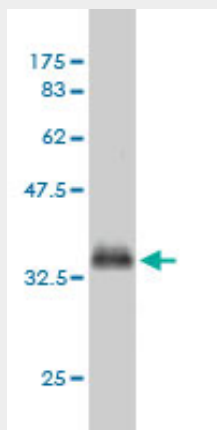
- [Western Blot](#)
- [Blocking Peptides](#)

- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

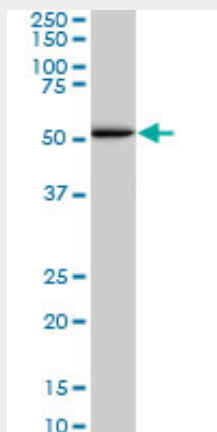
### SMAD1 Antibody (monoclonal) (M02) - Images



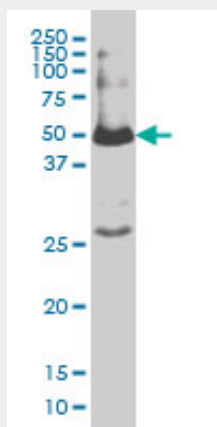
Immunofluorescence of monoclonal antibody to SMAD1 on HeLa cell. [antibody concentration 10 ug/ml]



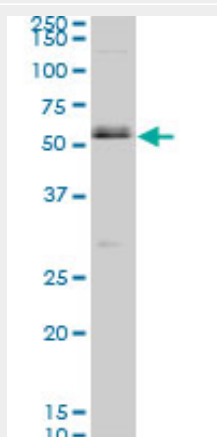
Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (37.84 KDa) .



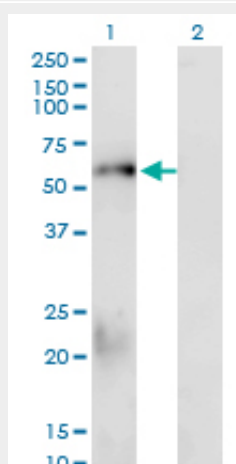
SMAD1 monoclonal antibody (M02), clone 1D3. Western Blot analysis of SMAD1 expression in A-549 ( (Cat # AT3936a )



SMAD1 monoclonal antibody (M02), clone 1D3 Western Blot analysis of SMAD1 expression in IMR-32 ( (Cat # AT3936a )



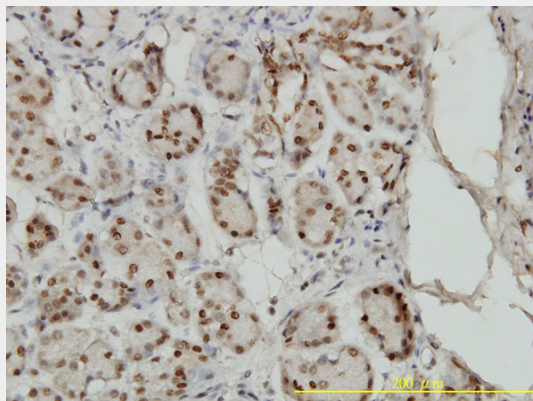
SMAD1 monoclonal antibody (M02), clone 1D3. Western Blot analysis of SMAD1 expression in MES-SA/Dx5 ( (Cat # AT3936a )



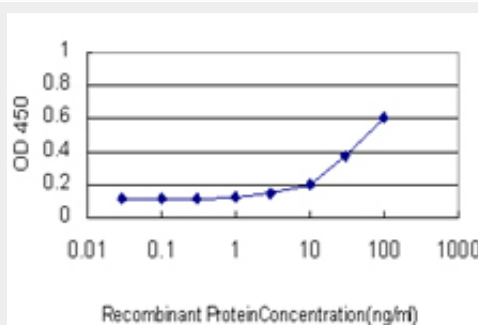
Western Blot analysis of SMAD1 expression in transfected 293T cell line by SMAD1 monoclonal antibody (M02), clone 1D3.

Lane 1: SMAD1 transfected lysate(52.3 KDa).

Lane 2: Non-transfected lysate.



Immunoperoxidase of monoclonal antibody to SMAD1 on formalin-fixed paraffin-embedded human salivary gland tissue. [antibody concentration 3 ug/ml]



Detection limit for recombinant GST tagged SMAD1 is approximately 3ng/ml as a capture antibody.

### SMAD1 Antibody (monoclonal) (M02) - 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.

### SMAD1 Antibody (monoclonal) (M02) - 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 I $\kappa$ B $\alpha$  expression and NF- $\kappa$ B 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.