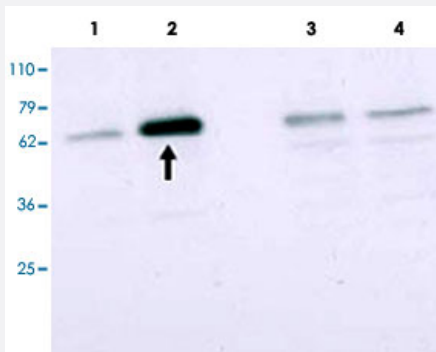


# SMAD2 polyclonal antibody

Catalog # PAB11262      Size 100 ug

## Applications

### Western Blot



Western blot using SMAD2 polyclonal antibody (Cat # PAB11262) to detect over-expressed SMAD2 in COS cells (arrow).

Lane 1 shows mock infection of COS cells with lentiviral vector alone.

Lane 2 shows detection of SMAD2 in lysates of COS transfected with SMAD2.

Lane 3 contains lysates of MDA-MB231 cells treated with vehicle.

Lane 4 contains lysate of MDA-MB231 cells treated with TGF beta.

The expected MW for SMAD2 is 52 kDa.

The membrane was probed with the primary antibody at a 1:2500 dilution.

Personal Communication Kathleen Flanders, CCR-NCI, Bethesda, MD.

## Specification

<b>Product Description</b>	Rabbit polyclonal antibody raised against synthetic peptide of SMAD2.
<b>Immunogen</b>	A synthetic peptide corresponding to internal region of human SMAD2.
<b>Host</b>	Rabbit
<b>Reactivity</b>	Human, Mouse, Rat
<b>Specificity</b>	This antibody is Smad2 specific, and reactivity to other Smad proteins (specifically Smad1, Smad3, Smad4, and Smad7) is not detected in over-expressed cell lysates.
<b>Form</b>	Liquid
<b>Quality Control Testing</b>	Antibody Reactive Against Synthetic Peptide.
<b>Recommend Usage</b>	ELISA (1:100000) Western Blot (1:1000-1:3000) The optimal working dilution should be determined by the end user.

Storage Buffer	In 20 mM KH <sub>2</sub> PO <sub>4</sub> , 150 mM NaCl, pH 7.2 (0.01% sodium azide)
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

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- Enzyme-linked Immunoabsorbent Assay

## Gene Info — SMAD2

Entrez GeneID	<a href="#">4087</a>
Protein Accession#	<a href="#">NP_005892:Q15796</a>
Gene Name	SMAD2
Gene Alias	JV18, JV18-1, MADH2, MADR2, MGC22139, MGC34440, hMAD-2, hSMAD2
Gene Description	SMAD family member 2
Omim ID	<a href="#">601366</a>
Gene Ontology	<a href="#">Hyperlink</a>

## Gene Summary

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. [provided by RefSeq]

## Other Designations

MAD, mothers against decapentaplegic homolog 2|Mad protein homolog|Mad, mothers against decapentaplegic homolog 2|Mad-related protein 2|SMAD, mothers against DPP homolog 2|Sma- and Mad-related protein 2|mother against DPP homolog 2

## Publication Reference

- [Effect of the different phosphorylated Smad2 protein localizations on the invasive breast carcinoma phenotype.](#)

Liapis G, Mylona E, Alexandrou P, Giannopoulou I, Nikolaou I, Markaki S, Keramopoulos A, Nakopoulou L.  
APMIS: Acta Pathologica, Microbiologica, et Immunologica Scandinavica 2007 Feb; 115(2):104.

- [High TGFbeta-Smad activity confers poor prognosis in glioma patients and promotes cell proliferation depending on the methylation of the PDGF-B gene.](#)

Bruna A, Darken RS, Rojo F, Ocana A, Penuelas S, Arias A, Paris R, Tortosa A, Mora J, Baselga J, Seoane J.  
Cancer Cell 2007 Feb; 11(2):147.

Application: IHC, Human, Human glioma sections

- [Leptin augments myofibroblastic conversion and fibrogenic activity of human peritoneal mesothelial cells: a functional implication for peritoneal fibrosis.](#)

Yang AH, Huang SW, Chen JY, Lin JK, Chen CY.  
Nephrology, Dialysis, Transplantation 2007 Mar; 22(3):756.

Application: WB-Ce, Human, Human peritoneal mesothelial cells

## Pathway

- [Adherens junction](#)
- [Cell cycle](#)

- [Colorectal cancer](#)
- [Pancreatic cancer](#)
- [Pathways in cancer](#)
- [TGF-beta signaling pathway](#)
- [Wnt signaling pathway](#)

## Disease

- [Adenocarcinoma](#)
- [Cleft Lip](#)
- [Cleft Palate](#)
- [Colitis](#)
- [Colorectal Neoplasms](#)
- [Esophageal Neoplasms](#)
- [Genetic Predisposition to Disease](#)
- [Hypertension](#)
- [Inflammatory Bowel Diseases](#)
- [Liver Cirrhosis](#)
- [Obesity](#)
- [Osteoporosis](#)
- [Ovarian Failure](#)
- [Pancreatic cancer](#)
- [Pancreatic Neoplasms](#)
- [Polycystic Ovary Syndrome](#)
- [Puberty](#)
- [Thrombophilia](#)
- [Tobacco Use Disorder](#)