

SMAD1/SMAD2/SMAD3/SMAD5 polyclonal antibody

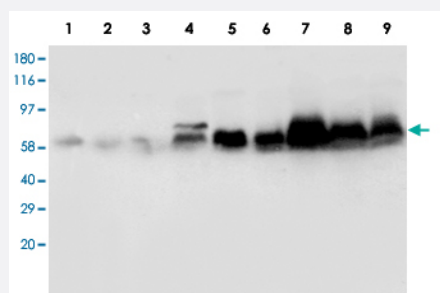
Catalog # PAB17216 Size 100 ug

Applications

Western Blot

Western blot analysis of cell and tissue extracts with SMAD1/SMAD2/SMAD3/SMAD5 polyclonal antibody (Cat # PAB17216).

- Lane 1 : rat heart.
 Lane 2 : rat skeletal muscle.
 Lane 3 : rat kidney tissue.
 Lane 4 : rat brain.
 Lane 5 : MM453 cell.
 Lane 6 : MM231 cell.
 Lane 7 : HeLa cell.
 Lane 8 : SMMC cell.
 Lane 9 : SW620 cell.



Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of SMAD1/SMAD2/SMAD3/SMAD5.
Immunogen	A synthetic peptide corresponding to amino acids 442-456 at C-terminus of human SMAD1/SMAD2 /SMAD3/SMAD5.
Sequence	GPLQWLDKVLTMGS
Host	Rabbit
Reactivity	Human, Rat
Form	Lyophilized
Purification	Affinity purification
Isotype	IgG

Recommend Usage	Western Blot (1 ug/mL) The optimal working dilution should be determined by the end user.
Storage Buffer	Lyophilized from 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ (5 mg BSA, 0.05 mg sodium azide, 0.05 mg Thimerosal)
Storage Instruction	Store at -20°C on dry atmosphere. After reconstitution with 200 uL of deionized water and concentration will be 500 ug/mL, store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide and thimerosal: POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

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Gene Info — SMAD1

Entrez GeneID	4086
Gene Name	SMAD1
Gene Alias	BSP1, JV4-1, JV41, MADH1, MADR1
Gene Description	SMAD family member 1
Omim ID	601595
Gene Ontology	Hyperlink

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 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. [provided by RefSeq]

Other Designations

MAD, mothers against decapentaplegic homolog 1|Mad-related protein 1|SMAD, mothers against DPP homolog 1|Sma- and Mad-related protein 1|TGF-beta signaling protein 1|mothers against DPP homolog 1|transforming growth factor-beta signaling protein 1

Gene Info — SMAD2

Entrez GeneID

[4087](#)

Gene Name

SMAD2

Gene Alias

JV18, JV18-1, MADH2, MADR2, MGC22139, MGC34440, hMAD-2, hSMAD2

Gene Description

SMAD family member 2

Omim ID

[601366](#)

Gene Ontology

[Hyperlink](#)

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

Gene Info — SMAD3

Entrez GeneID	4088
Gene Name	SMAD3
Gene Alias	DKFZp586N0721, DKFZp686J10186, HSPC193, HsT17436, JV15-2, MADH3, MGC60396
Gene Description	SMAD family member 3
Omim ID	603109
Gene Ontology	Hyperlink
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 functions as a transcriptional modulator activated by transforming growth factor-beta and is thought to play a role in the regulation of carcinogenesis. [provided by RefSeq]
Other Designations	MAD, mothers against decapentaplegic homolog 3 SMA- and MAD-related protein 3 SMAD, mothers against DPP homolog 3 mad homolog JV15-2 mad protein homolog mothers against decapentaplegic homolog 3

Gene Info — SMAD5

Entrez GeneID	4090
Gene Name	SMAD5
Gene Alias	DKFZp781C1895, DKFZp781O1323, Dwfc, JV5-1, MADH5
Gene Description	SMAD family member 5
Omim ID	603110
Gene Ontology	Hyperlink
Gene Summary	mothers against decapentaplegic homolog 5 SMA- and MAD-related protein 5 SMAD
Other Designations	MAD homolog 5 MAD, mothers against decapentaplegic homolog 5 SMA- and MAD-related protein 5 SMAD, mothers against DPP homolog 5 mothers against decapentaplegic homolog 5 mothers against decapentaplegic, drosophila, homolog of, 5

Publication Reference

- [A SMAD ubiquitin ligase targets the BMP pathway and affects embryonic pattern formation.](#)

Zhu H, Kavsak P, Abdollah S, Wrana JL, Thomsen GH.

Nature 1999 Aug; 400(6745):687.

Pathway

- [Adherens junction](#)
- [Adherens junction](#)
- [Cell cycle](#)
- [Cell cycle](#)
- [Chronic myeloid leukemia](#)
- [Colorectal cancer](#)
- [Colorectal cancer](#)
- [Pancreatic cancer](#)
- [Pancreatic cancer](#)
- [Pathways in cancer](#)
- [Pathways in cancer](#)
- [TGF-beta signaling pathway](#)
- [TGF-beta signaling pathway](#)
- [TGF-beta signaling pathway](#)
- [TGF-beta signaling pathway](#)
- [Wnt signaling pathway](#)
- [Wnt signaling pathway](#)

Disease

- [Adenocarcinoma](#)
- [Alzheimer disease](#)
- [Anemia](#)
- [Asthma](#)
- [Bacteremia](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Cleft Lip](#)
- [Cleft Lip](#)
- [Cleft Lip](#)
- [Cleft Palate](#)
- [Cleft Palate](#)
- [Cleft Palate](#)
- [Colitis](#)
- [Colorectal Neoplasms](#)
- [Coronary Artery Disease](#)
- [Crohn Disease](#)
- [Diabetes Mellitus](#)
- [Diabetes Mellitus](#)
- [Diabetes Mellitus](#)
- [Diabetic Nephropathies](#)
- [Diabetic Nephropathies](#)
- [Diabetic Nephropathies](#)
- [Esophageal Neoplasms](#)

- [Genetic Predisposition to Disease](#)
- [Genetic Predisposition to Disease](#)
- [Genetic Predisposition to Disease](#)
- [Genetic Predisposition to Disease](#)
- [Graft vs Host Disease](#)
- [Head and Neck Neoplasms](#)
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- [Hemochromatosis](#)
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- [Inflammatory Bowel Diseases](#)
- [Keloid](#)
- [Kidney Failure](#)
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- [Liver Cirrhosis](#)
- [Liver Cirrhosis](#)
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- [Neoplasms](#)
- [Obesity](#)

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- [Osteoporosis](#)
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- [Ovarian cancer](#)
- [Ovarian Failure](#)
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- [Ovarian Failure](#)
- [Ovarian Neoplasms](#)
- [Pancreatic cancer](#)
- [Pancreatic cancer](#)
- [Pancreatic Neoplasms](#)
- [Pancreatic Neoplasms](#)
- [Polycystic Ovary Syndrome](#)
- [Polycystic Ovary Syndrome](#)
- [Polycystic Ovary Syndrome](#)
- [Polycystic Ovary Syndrome](#)
- [Prostate cancer](#)
- [Prostatic Neoplasms](#)
- [Puberty](#)
- [Puberty](#)
- [Puberty](#)

- [Puberty](#)
- [Pulmonary Disease](#)
- [Thrombophilia](#)
- [Thrombophilia](#)
- [Thrombophilia](#)
- [Thrombophilia](#)
- [Tobacco Use Disorder](#)
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