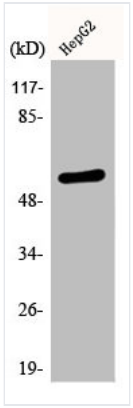
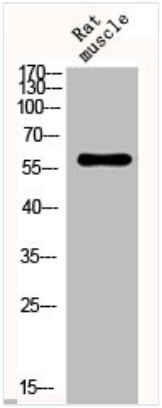
# SMAD2 Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | SMAD2, Polyclonal Antibody |
| **Full Product Name** | Phospho-SMAD2 (S467) Antibody |
| **Product Gene Name** | anti-SMAD2 antibody |
| **Product Synonym Names** | SMAD2; MADH2; MADR2; Mothers against decapentaplegic homolog 2; MAD homolog 2; Mothers against DPP homolog 2; JV18-1; Mad-related protein 2; hMAD-2; SMAD family member 2; SMAD 2; Smad2; hSMAD2 |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human, Mouse, Rat |
| **Form/Format** | Liquid; In Phosphate Buffered Saline, 50% Glycerol, 0.5% BSA and 0.02% Sodium Azide. |
| **Purity/Purification** | Affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. |
| **Preparation and Storage** | Upon receipt, store at -20 degree C or -80 degree C. Avoid repeated freeze. |
| **Molecular Weight** | 52,306 Da |
| **Chromosome Location** | Chromosome: 18; NC_000018.9 (45359466..45457517, complement). Location: 18q21.1 |
| **OMIM** | 601366 |
| **3D Structure** | ModBase 3D Structure for Q15796 |
| **Immunogen** | Synthesized peptide derived from human Smad2 around the phosphorylation site of S467. |
| **Immunogen Species** | Human |
| **Conjugate** | Non-conjugated |
| **Product Categories/Family for anti-SMAD2 antibody** | Signal Transduction |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Applications Tested/Suitable for anti-SMAD2 antibody** | Western Blot (WB), Immunohistochemistry (IHC), ELISA (EIA) |
| **Application Notes for anti-SMAD2 antibody** | WB: 1:500-1:2000<br>IHC: 1:100-1:300<br>ELISA: 1:5000 |
| **Related Product Information for anti-SMAD2 antibody** | MBS7121703 is an antibody targeting SMAD2. Also known as Phospho-SMAD2 (S467) Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit. |
| **Other Notes** | Small volumes of anti-SMAD2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |




**Western Blot (WB) of anti-SMAD2 antibody**
Western Blot analysis of HepG2 cells using Phospho-Smad2 (S467) Polyclonal Antibody




**Western Blot (WB) of anti-SMAD2 antibody**
Western Blot analysis of RAT-MUSCLE cells using Phospho-Smad2 (S467) Polyclonal Antibody

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SMAD2. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 51173730 |
| **NCBI GeneID** | 4087 |
| **NCBI Accession #** | NP_001003652.1 |
| **UniProt Primary Accession #** | Q15796 |
| **UniProt Related Accession #** | Q15796 |
| **GenBank Nucleotide #** | NM_001003652.3 |
| **NCBI Official Full Name** | mothers against decapentaplegic homolog 2 isoform 1 |
| **NCBI Official Synonym Full Names** | SMAD family member 2 |
| **NCBI Official Symbol** | SMAD2 |
| **NCBI Official Synonym Symbols** | JV18; MADH2; MADR2; JV18-1; hMAD-2; hSMAD2 |
| **UniProt Protein Name** | Mothers against decapentaplegic homolog 2 |
| **UniProt Synonym Protein Names** | JV18-1; Mad-related protein 2; hMAD-2; SMAD family member 2 |
| **Protein Family** | Mothers against decapentaplegic |
| **UniProt Gene Name** | SMAD2 |
| **UniProt Synonym Gene Names** | MADH2; MADR2; MAD homolog 2; Mothers against DPP homolog 2; hMAD-2; SMAD 2; Smad2; hSMAD2 |
| **UniProt Entry Name** | SMAD2_HUMAN |
| **NCBI Protein Information** | mothers against decapentaplegic homolog 2; MAD homolog 2; mother against DPP homolog 2; Sma- and Mad-related protein 2; SMAD, mothers against DPP homolog 2 |

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| **NCBI Summary for SMAD2** | 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 have been observed for this gene. [provided by RefSeq, May 2012] |
| **UniProt Comments for SMAD2** | SMAD2: ubiquitously expressed transcription factor phosphorylated and activated by TGF-beta receptor-type kinases. Participates in a wide range of critical processes including morphogenesis, cell-fate determination, proliferation, differentiation and apoptosis. Phosphorylated Smads dimerize with collaborating Smad4 and are translocated into the nucleus, where the transcription of target genes is stimulated. Two alternatively spliced isoforms have been described.<br><br>Protein type: DNA-binding; Transcription factor<br><br>Chromosomal Location of Human Ortholog: 18q21.1<br><br>Cellular Component: nucleoplasm; transcription factor complex; cytoplasm; nuclear chromatin; nucleus; cytosol<br><br>Molecular Function: transcription activator binding; metal ion binding; transcription factor binding; transforming growth factor beta receptor, pathway-specific cytoplasmic mediator activity; phosphatase binding; protein binding; DNA binding; ubiquitin protein ligase binding; double-stranded DNA binding; chromatin binding; SMAD binding; transcription factor activity; transforming growth factor beta receptor binding<br><br>Biological Process: developmental growth; somatic stem cell maintenance; positive regulation of transcription, DNA-dependent; activin receptor signaling pathway; paraxial mesoderm morphogenesis; gastrulation; primary microRNA processing; negative regulation of transcription from RNA polymerase II promoter; palate development; post-embryonic development; anterior/posterior pattern formation; negative regulation of cell proliferation; regulation of transforming growth factor beta receptor signaling pathway; ureteric bud development; transforming growth factor beta receptor signaling pathway; pancreas development; embryonic foregut morphogenesis; response to glucose stimulus; positive regulation of BMP signaling pathway; pericardium development; transcription initiation from RNA polymerase II promoter; cell fate commitment; regulation of binding; transcription, DNA-dependent; in utero embryonic development; common-partner SMAD protein phosphorylation; embryonic cranial skeleton morphogenesis; SMAD protein complex assembly; organ growth; zygotic determination of dorsal/ventral axis; mesoderm formation; endoderm formation; insulin secretion; gene expression; positive regulation of transcription from RNA polymerase II promoter; negative regulation of transcription, DNA-dependent; negative regulation of transforming growth factor beta receptor signaling pathway; lung development |
| **Research Articles on SMAD2** | **1.** The prevalence of SMAD4, SMAD2, and SMAD3 mutations in sporadic CRCs was 8.6% (64 of 744), 3.4% (25 of 744), and 4.3% (32 of 744), respectively. |
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