



# Smad1/5/9 Monoclonal Antibody

|                                    |                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog No</b>                  | YP-mAb-02014                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Reactivity</b>                  | Human;Mouse;Rat                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Applications</b>                | WB                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Gene Name</b>                   | SMAD1/SMAD5/SMAD9                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Immunogen</b>                   | The antiserum was produced against synthesized peptide derived from human Smad1/5/9. AA range:10-59                                                                                                                                                                                                                                                                                     |
| <b>Specificity</b>                 | Smad1/5/9 Monoclonal Antibody detects endogenous levels of Smad1/5/9 protein.                                                                                                                                                                                                                                                                                                           |
| <b>Formulation</b>                 | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>                      | Monoclonal, Mouse,IgG                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Purification</b>                | The antibody was affinity-purified from mouse antiserum by affinity-chromatography using epitope-specific immunogen.                                                                                                                                                                                                                                                                    |
| <b>Dilution</b>                    | WB 1:500-1:2000                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Concentration</b>               | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Storage Stability</b>           | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Synonyms</b>                    | Smad1/Smad5/Smad9;Smad1/5/9;Mothers against decapentaplegic homolog 1/Mothers against decapentaplegic homolog 5/Mothers against decapentaplegic homolog 9;SMAD1;BSP1;MADH1;MADR1;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;hSMAD1;Transforming growth factor-beta-signaling protein |
| <b>Observed Band</b>               | 56kD                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Calculated Molecular Weight</b> | 56kD                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Cell Pathway</b>                | Cytoplasm . Nucleus . Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4 (PubMed:15647271). Co-localizes with LEMD3 at the nucleus inner membrane (PubMed:15647271). Exported from the nucleus to the cytoplasm when dephosphorylated (By similarity). .                                                                                           |
| <b>Tissue Specificity</b>          | Ubiquitous. Highest expression seen in the heart and skeletal muscle.                                                                                                                                                                                                                                                                                                                   |
| <b>Function</b>                    | function:Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. SMAD1 is a receptor-regulated SMAD (R-SMAD).,PTM:Phosphorylated on serine by BMP type 1 receptor kinase., PTM:Ubiquitin-mediated proteolysis by SMAD-specific E3 ubiquitin ligase                                                                                             |



SMURF1.,similarity:Belongs to the dwarfin/SMAD family.,similarity:Contains 1 MH1 (MAD homology 1) domain.,similarity:Contains 1 MH2 (MAD homology 2) domain.,subcellular location:Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4.,subunit:Interacts with HGS, NANOG and ZCCHC12 (By similarity). May form trimers with another SMAD1 and the co-SMAD SMAD4. Interacts with PEBP2-alpha subunit, CREB-binding protein (CBP), p300, SMURF1, SMURF2 and HOXC8. Associates with ZNF423 or ZNF521 in response to BMP2 leading to activate transcription of BMP target genes. Interacts with LBXCOR1.,

#### 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-med

#### matters needing attention

Avoid repeated freezing and thawing!

#### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

### Products Images

Western Blot analysis of various cells using Smad1/5/9 Monoclonal Antibody