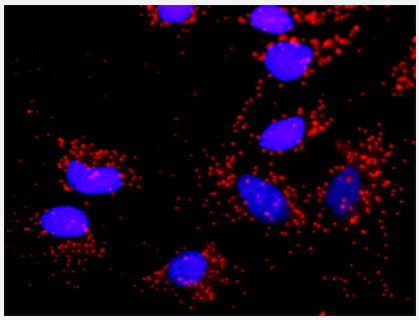
SMAD2 monoclonal antibody (M17), clone 4D4

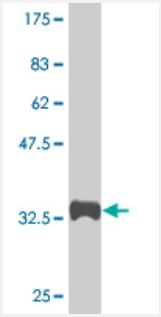
Catalog # H00004087-M17 Size 100 ug

Applications



In situ Proximity Ligation Assay (Cell)

Proximity Ligation Analysis of protein-protein interactions between TP53 and SMAD2. HeLa cells were stained with anti-TP53 rabbit purified polyclonal 1:1200 and anti-SMAD2 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).



Western Blot detection against Immunogen (37.44 KDa) .

Specification

Product Description	Mouse monoclonal antibody raised against a partial recombinant SMAD2.
Immunogen	SMAD2 (NP_005892, 16 a.a. ~ 119 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Sequence	LGWKKSAGGSGGAGGGEQNGQEEKWCEKAVKSLVKKLKKTGRLDELEKAITTQNCNTKCVTIP STCSEIWGLSTPNTIDQWDTTGLYSFSEQTRSLDGRLQVSH
Host	Mouse
Reactivity	Human

Interspecies Antigen Sequence	Rat (98)
Isotype	IgG2b Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (37.44 KDa) .
Storage Buffer	In 1x PBS, pH 7.4
Storage Instruction	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Western Blot (Recombinant protein)

  Protocol Download

- ELISA

- *In situ* Proximity Ligation Assay (Cell)

  Proximity Ligation Analysis of protein-protein interactions between TP53 and SMAD2. HeLa cells were stained with anti-TP53 rabbit purified polyclonal 1:1200 and anti-SMAD2 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).

Gene Info — SMAD2

Entrez GeneID	4087
GeneBank Accession#	NM_005901
Protein Accession#	NP_005892
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

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