



# Smad3 Rabbit mAb

<b>Catalog No</b>	YP-rAb-17514
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human,Mouse,Rat
<b>Applications</b>	WB,IF,IP,ELISA
<b>Gene Name</b>	SMAD3 MADH3
<b>Protein Name</b>	Mothers against decapentaplegic homolog 3
<b>Purification Process</b>	Protein A
<b>Specificity</b>	Endogenous
<b>Formulation</b>	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
<b>Source</b>	Monoclonal, Rabbit,IgG
<b>Dilution</b>	WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200;
<b>Concentration</b>	0.5 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-15° C to -25° C/1 year(Do not lower than -25° C)
<b>Synonyms</b>	SMAD3 ; MADH3 ; Mothers against decapentaplegic homolog 3 ; MAD homolog 3 ; Mad3 ; Mothers against DPP homolog 3 ; hMAD-3 ; JV15-2 ; SMAD family member 3 ; SMAD 3 ; Smad3 ; hSMAD3
<b>Observed Band</b>	52kD
<b>Calculated Molecular Weight</b>	48kD
<b>Cell Pathway</b>	Cytoplasm . Nucleus . Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 (PubMed:15799969, PubMed:21145499). Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1 (PubMed:16751101, PubMed:19289081). Co-localizes with LEMD3 at the nucleus inner membrane (PubMed:15601644). MAPK-mediated phosphorylation appears to have no effect on nuclear import (PubMed:19218245). PDPK1 prevents its nuclear translocation in response to TGF-beta (PubMed:17327236). Localized mainly to the nucleus in the early stages of embryo development with expression becoming evident in the cytoplasm of the inner cell mass at the blastocyst stage (By similarity) . .
<b>Tissue Specificity</b>	Brain,Colon carcinoma,Esophagus tumor,Pancreas,Placenta,Spleen,Umbilical cord blood
<b>Function</b>	Disease:Defects in SMAD3 may be a cause of colorectal cancer (CRC) [MIM:114500].,Domain:The MH2 domain is sufficient to carry protein nuclear

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export.,Function:Transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinase. SMAD3 is a receptor-regulated SMAD (R-SMAD).,PTM:Phosphorylated on serine by TGF-beta and activin type 1 receptor kinases.,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:In the cytoplasm in the absence of ligand. Migration to the nucleus when complexed with Smad4.,subunit:Interacts with HGS. Interacts with NEDD4L in response to TGF-beta. Interacts with TTRAP (By similarity). Interacts with SARA (SMAD anchor for receptor activation); form trimers with another SMAD3 and the co-SMAD SMAD4. Interacts with JUN/FOS, vitamin D receptor, homeobox protein TGIF and TGIF2, PEBP2-alpha C subunit, CREB-binding protein (CBP), p300, SKI, SNON, ATF2, SMURF2, AIP1, DACH1 and TGFB111. Part of a complex consisting of AIP1, ACVR2A, ACVR1B and SMAD3. Found in a complex with SMAD2 and TRIM33 upon addition of TGF-beta. Interacts with SMAD2 and TRIM33. Found in a complex with SMAD3, Ran and XPO4. Interacts with XPO4. Interacts with LBXCOR1 and CORL2.,

### Background

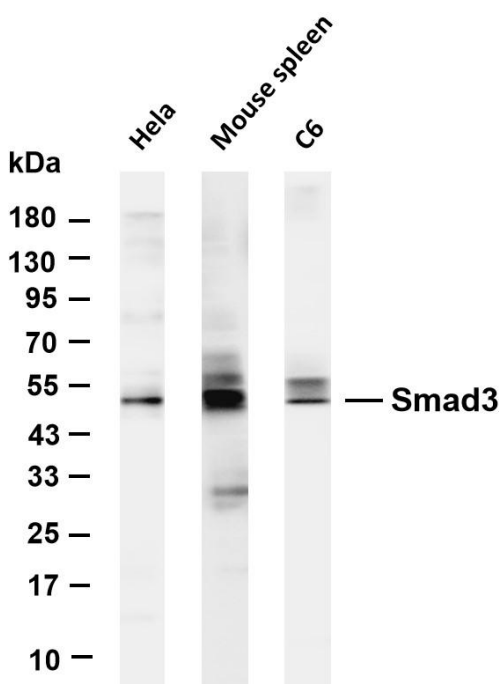
The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein 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, Apr 2009],

### matters needing attention

Avoid repeated freezing and thawing!

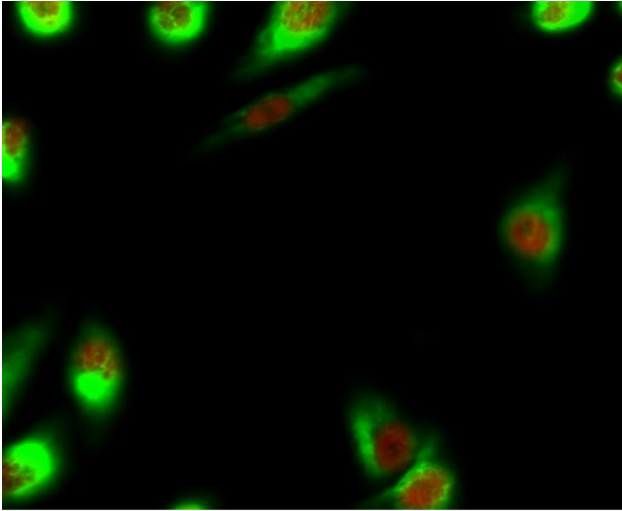
### Usage suggestions

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

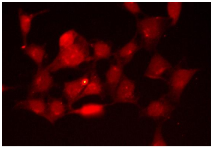


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Smad3 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: HeLa Lane 2: Mouse spleen Lane 3: C6 Predicted band size: 48kDa Observed band size: 52kDa

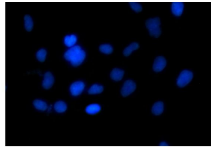




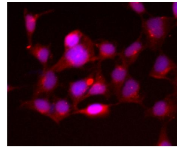
Immunofluorescence analysis of HeLa cell. 1, Smad3 Monoclonal Antibody (red) was diluted at 1:200 (4° overnight).  $\beta$ -actin Monoclonal Antibody (5B7) (green) was diluted at 1:200 (4° overnight). 2, Goat Anti Rabbit Alexa Fluor 594 Catalog:



A



B



C

Immunofluorescence analysis of HEK293. Picture A: SMAD3 antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B

