

**Anti-Smad3 Rabbit Monoclonal Antibody**  
Catalog # ABO13573**Specification****Anti-Smad3 Rabbit Monoclonal Antibody - Product Information**

Application	WB, IHC, IF, ICC, FC
Primary Accession	<a href="#">P84022</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

**Description**

Anti-Smad3 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

**Anti-Smad3 Rabbit Monoclonal Antibody - Additional Information**

**Gene ID** 4088

**Other Names**

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, SMAD3, MADH3

**Calculated MW**

48081 MW KDa

**Application Details**

WB 1:1000-1:5000<br>IHC 1:100-1:500<br>ICC/IF 1:100-1:500<br>FC 1:50

**Subcellular Localization**

Cytoplasm. Nucleus. Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4. Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1. Co-localizes with LEMD3 at the nucleus inner membrane. MAPK-mediated phosphorylation appears to have no effect on nuclear import. PDPK1 prevents its nuclear translocation in response to TGF-beta.

**Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**

A synthesized peptide derived from human Smad3

**Purification**

Affinity-chromatography

Storage

Store at -20°C for one year. For short term

**storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

## **Anti-Smad3 Rabbit Monoclonal Antibody - Protein Information**

**Name** SMAD3

**Synonyms** MADH3

### **Function**

Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD3/SMAD4 complex, activates transcription. Also can form a SMAD3/SMAD4/JUN/FOS complex at the AP- 1/SMAD site to regulate TGF-beta-mediated transcription. Has an inhibitory effect on wound healing probably by modulating both growth and migration of primary keratinocytes and by altering the TGF-mediated chemotaxis of monocytes. This effect on wound healing appears to be hormone-sensitive. Regulator of chondrogenesis and osteogenesis and inhibits early healing of bone fractures. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.

### **Cellular Location**

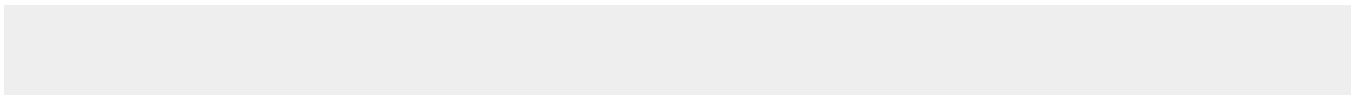
Cytoplasm. Nucleus. Note=Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 (PubMed:15799969, PubMed:21145499). Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus 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) {ECO:0000250|UniProtKB:Q8BUN5, ECO:0000269|PubMed:15601644, ECO:0000269|PubMed:15799969, ECO:0000269|PubMed:16751101, ECO:0000269|PubMed:17327236, ECO:0000269|PubMed:19218245, ECO:0000269|PubMed:19289081, ECO:0000269|PubMed:21145499}

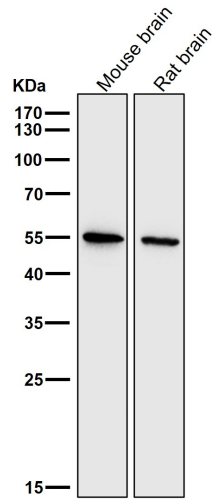
## **Anti-Smad3 Rabbit Monoclonal Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

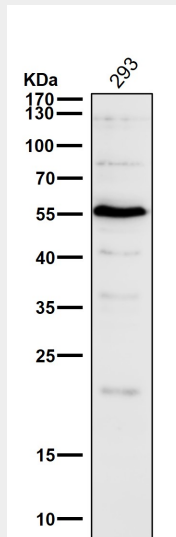
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## **Anti-Smad3 Rabbit Monoclonal Antibody - Images**

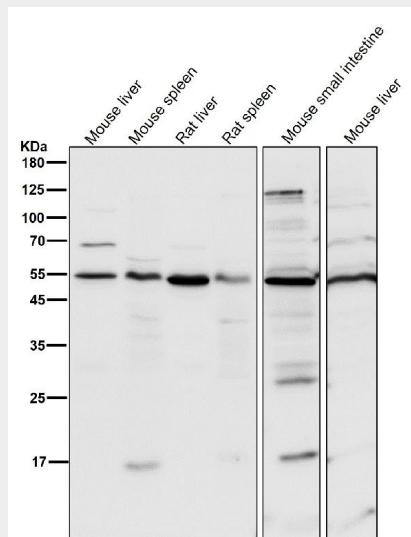




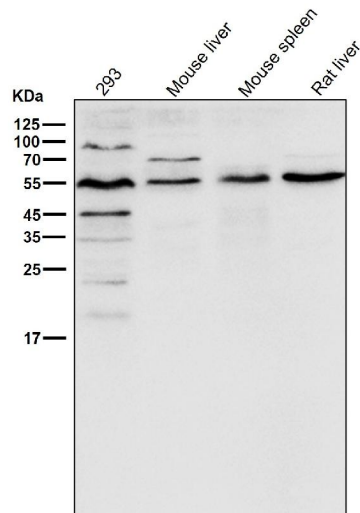
All lanes use the Antibody at 1:5K dilution for 1 hour at room temperature.



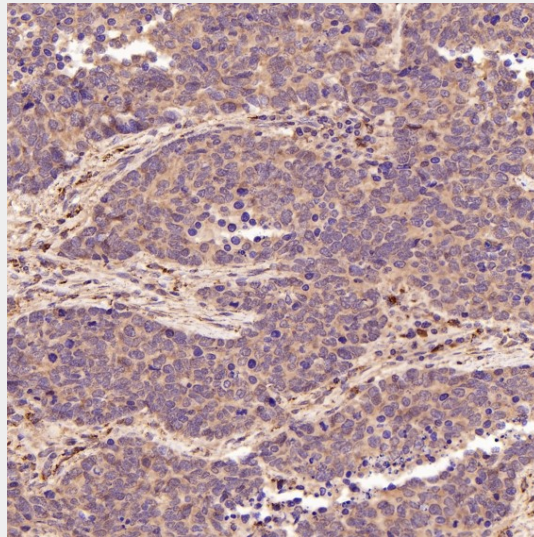
All lanes use the Antibody at 1:3K dilution for 1 hour at room temperature.



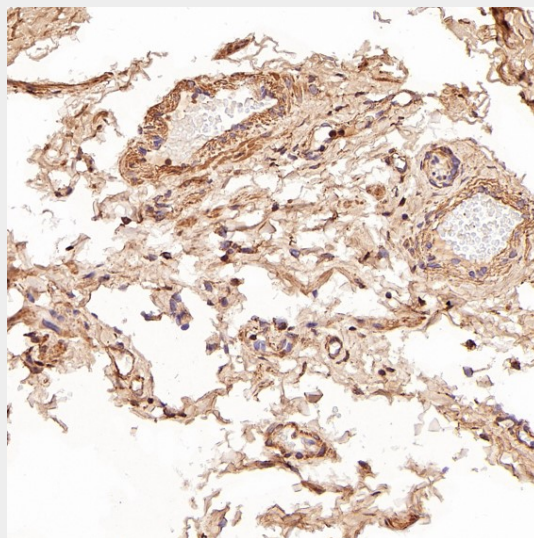
All lanes use the Antibody at 1:5k dilution for 1 hour at room temperature.



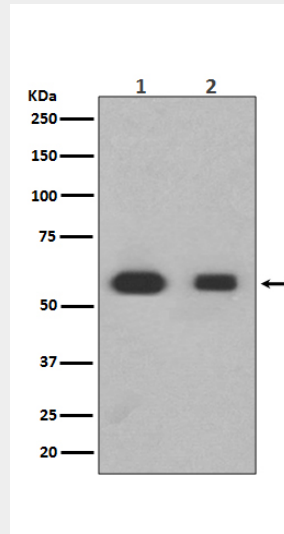
All lanes use the Antibody at 1:7k dilution for 1 hour at room temperature.



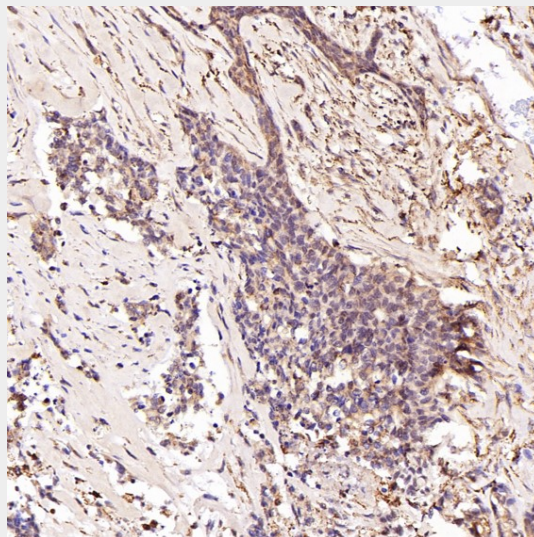
Immunohistochemical analysis of paraffin-embedded Human lung large cell cancer, using the Antibody at 1:500 dilution.



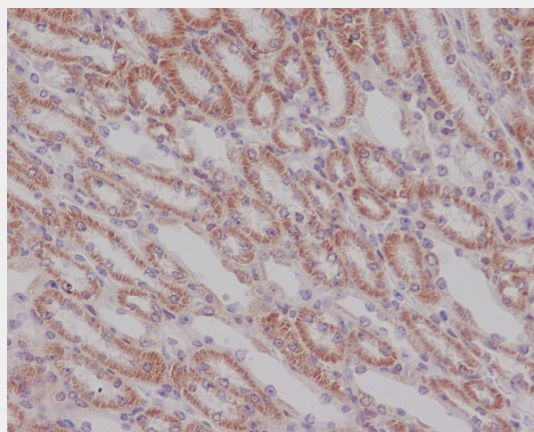
Immunohistochemical analysis of paraffin-embedded Human testis cancer, using the Antibody at 1:500 dilution.



Western blot analysis of Smad3 expression in (1) Jurkat cell lysate; (2) Rat liver lysate.

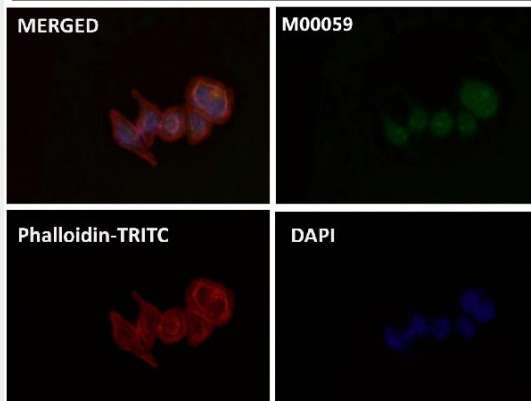


Immunohistochemical analysis of paraffin-embedded Human breast cancer, using the Antibody at 1:500 dilution.

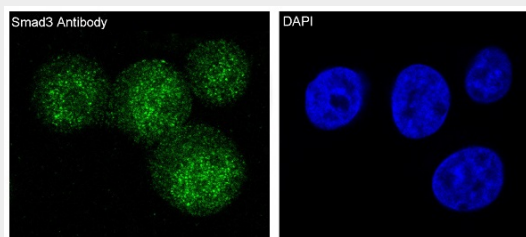


Immunohistochemical analysis of paraffin-embedded mouse kidney, using Smad3 Antibody.

HeLa



Immunofluorescent analysis using the Antibody at 1:150 dilution.



Immunofluorescent analysis of HeLa cells, using Smad3 Antibody.