10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Smad3 Rabbit Monoclonal Antibody

Catalog # ABO13573

Product Information

Application	WB, IHC, IF, ICC, FC
Primary Accession	P84022
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.

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
Application Details	WB 1:1000-1:5000 IHC 1:100-1:500 ICC/IF 1:100-1:500 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.
Source	Eukaryota
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.
Clone Names	Clone: FG-19
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.

Protein Information

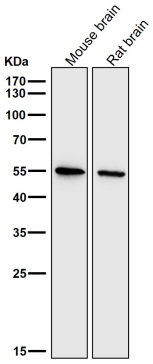
Name SMAD3 (HGNC:6769)

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.

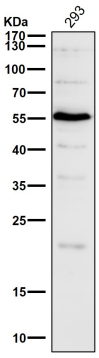
Cellular Location Cytoplasm. Nucleus Note=Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 (PubMed:15799969, PubMed:21145499). Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported 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}

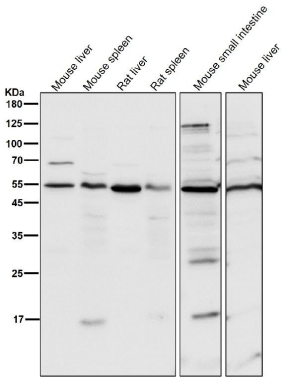
Images



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.





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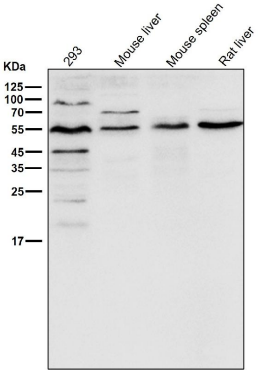
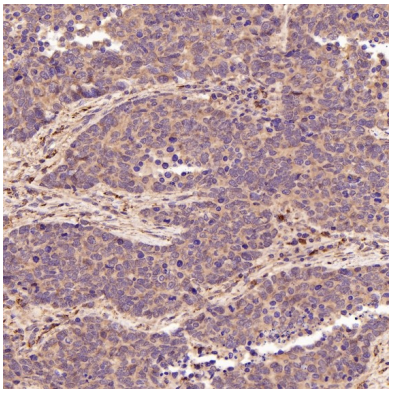
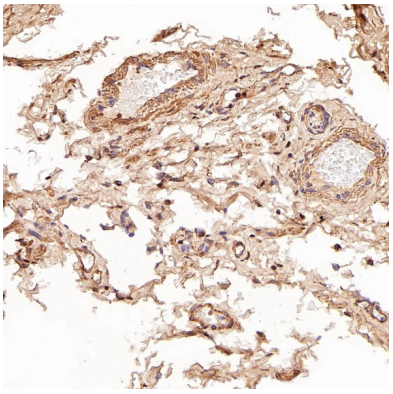


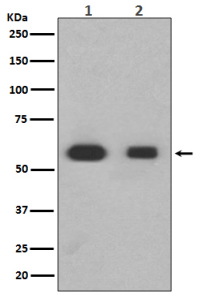
All lanes use the Antibody at 1:7k dilution for 1 hour at room temperature.



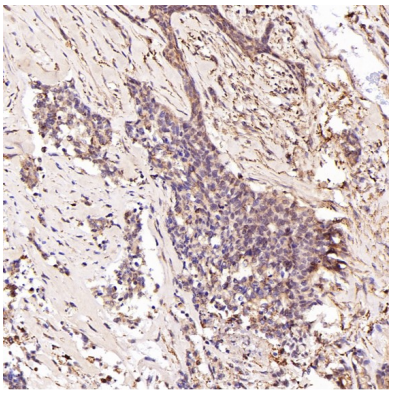
Immunohistochemical analysis of paraffin-embedded Human lung large cell cancer, using the Antibody at 1:500 dilution.

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

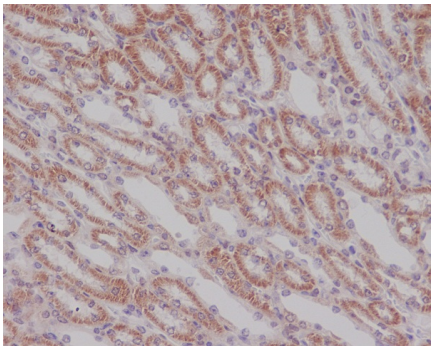




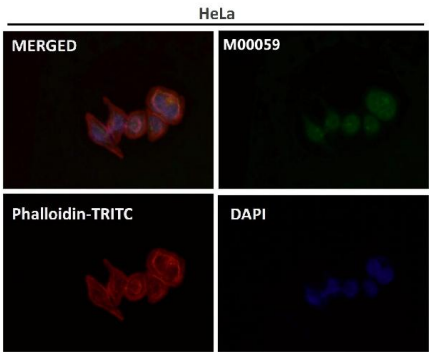
Western blot analysis of Smad3 expression in (1) Jurkat cell lysate; (2) Rat liver lysate.



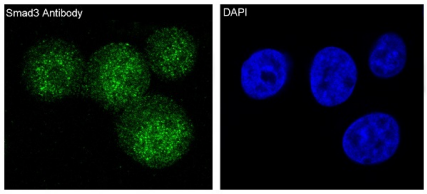
Immunohistochemical analysis of paraffin-embedded Human breast cancer, using the Antibody at 1:500 dilution.



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



Immunofluorescent analysis using the Antibody at 1:150 dilution.



Immunofluorescent analysis of Hela cells, using Smad3 Antibody.