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Smad3 Antibody

Rabbit mAb
Catalog # AP90080

Product Information

Application	WB, IHC, IF, FC, ICC, IHF
Primary Accession	P84022
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	JV15-2; MADH3; Mad3; Smad 3;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	48081

Additional Information

Dilution	WB 1:1000~1:5000 IHC 1:100~1:500 ICC/IF 1:100~1:500 FC 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Smad3
Description	Smad3 transcription factor phosphorylated and activated by TGF-beta-type receptors. A receptor-regulated Smad (R-smad). Binds directly to consensus DNA-binding elements in the promoters of target genes. In mouse required for establishemnt of the mucosal immune response and proper development of skeleton.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

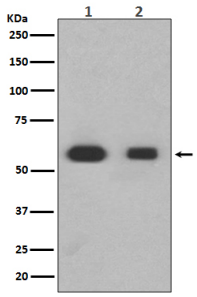
Name	SMAD3
Synonyms	MADH3
Function	Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated 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}

Images



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

Image not found : 202311/AP90080-IHC.jpg

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

Image not found : 202311/AP90080-IF.jpg

Immunofluorescent analysis of Hela cells, using Smad3 Antibody.