

KO-Validated Anti-Phospho-Smad3 (S423 + S425) Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI2433

Product Information

Application	WB, FC
Primary Accession	P84022
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB3215
Calculated MW	48081
Gene Name	SMAD3
Aliases	SMAD3; SMAD Family Member 3; JV15-2; HsT17436; MADH3; Mothers Against Decapentaplegic Homolog 3; Mothers Against DPP Homolog 3; MAD Homolog 3; HMAD-3; HSMAD3; Mad3; MAD, Mothers Against Decapentaplegic Homolog 3 (Drosophila); SMAD, Mothers Against DPP Homolog 3 (Drosophila); MAD, Mothers Against Decapentaplegic Homolog 3; SMAD, Mothers Against DPP Homolog 3; SMA- And MAD-Related Protein 3; Mad Protein Homolog; Mad Homolog JV15-2; HSPC193; SMAD 3; LDS1C; Smad3; LDS3
Immunogen	A synthesized peptide derived from human Phospho-Smad3 (S423 + S425)

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

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}

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