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

Rabbit monoclonal antibody
Catalog # AGI2433

Specification

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

Application	**WB, FC**
Primary Accession	P84022
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 61 kDa; observed, 60 kDa KDa**
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)**

KO-Validated Anti-Phospho-Smad3 (S423 + S425) 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

KO-Validated Anti-Phospho-Smad3 (S423 + S425) 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.

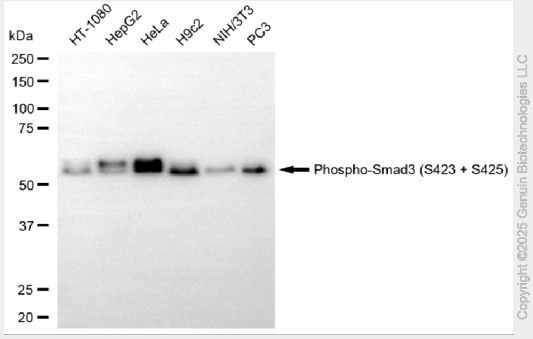
Cellular Location
Cytoplasm. Nucleus. Note=Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 (PubMed:15799969, PubMed:21145499). Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported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

KO-Validated Anti-Phospho-Smad3 (S423 + S425) 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 Cytomety
- Cell Culture

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



Western blotting analysis using anti-phospho-Smad3 (S423 + S425) antibody (Cat#AGI2433). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-phospho-Smad3 (S423 + S425) antibody (Cat#AGI2433, 1:5,000) and

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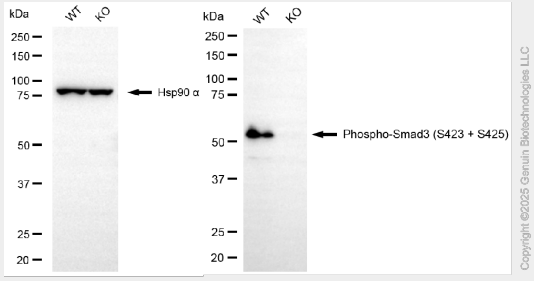
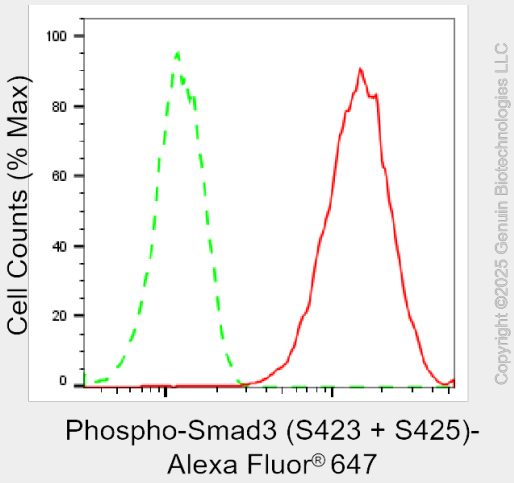
HRP-conjugated goat anti rabbit secondary antibody respectively.



Western blotting analysis using anti-phospho-smad3 (S423 + S425) antibody (Cat#AGI2433). Phospho-smad3 (S423 + S425) expression in wild-type (WT) and SMAD3 knockout (KO) HSHC cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-phospho-smad3 (S423 + S425) antibody (Cat#AGI2433, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Phospho-Smad3 (S423 + S425) expression in HAP-1 cells using anti-Phospho-Smad3 (S423 + S425) antibody (Cat#AGI2433, 1:2,000). Green, isotype control; red, Phospho-Smad3 (S423 + S425).