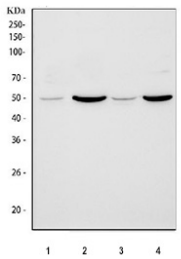
SMAD3 / MADH3 Antibody (R32172)

Catalog No.	Formulation	Size
R32172	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P84022
Localization	Nuclear and cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml
Limitations	This SMAD3 / MADH3 Antibody is available for research use only.



SMAD3 / MADH3 Antibody Human Liver Cancer IHC. Immunohistochemistry was performed on paraffin-embedded human liver cancer tissue using SMAD3 / MADH3 Antibody at 2 ug/ml. Heat-induced epitope retrieval was carried out in pH 8 EDTA buffer, and the tissue was incubated with the primary antibody overnight at 4Â°C. Bound antibody was detected using an HRP-conjugated goat anti-rabbit IgG secondary antibody and DAB chromogen. Strong cytoplasmic staining is observed throughout the liver carcinoma cells, while the surrounding stromal tissue exhibits comparatively low background staining. These results demonstrate that this MADH3 Antibody is suitable for immunohistochemical detection of SMAD3 in formalin-fixed, paraffin-embedded human liver cancer tissue.

Description

SMAD3 (Mothers against decapentaplegic homolog 3, MADH3) is a key intracellular mediator of the transforming growth

factor-beta (TGF-beta) signaling pathway. Belonging to the SMAD family of proteins, SMAD3 functions as a transcription factor that transduces signals from activated TGF-beta receptors to the nucleus. Upon phosphorylation, SMAD3 forms complexes with SMAD4 and regulates the transcription of genes involved in cell growth, differentiation, apoptosis, and immune responses. A SMAD3 / MADH3 Antibody is widely used in research focused on TGF-beta signaling and its role in disease.

SMAD3 is critically involved in maintaining tissue homeostasis and regulating extracellular matrix production. Dysregulation of SMAD3 has been implicated in fibrosis, where persistent TGF-Î² signaling drives excessive collagen deposition and scarring in organs such as the lung, liver, and kidney. A SMAD3 / MADH3 Antibody allows researchers to study protein levels, localization, and activation states, offering insights into pathological remodeling processes.

In addition to fibrotic disease, SMAD3 has been linked to cancer biology, where it can act either as a tumor suppressor or as a promoter of tumor progression, depending on cellular context. It also plays an essential role in immune regulation, influencing T-cell differentiation and inflammatory responses. These diverse functions make SMAD3 a critical target for therapeutic research. Using a SMAD3 antibody supports investigations into these pathways and their potential modulation in disease treatment.

NSJ Bioreagents provides a high-quality SMAD3 / MADH3 Antibody validated for applications such as western blot, immunohistochemistry, and immunofluorescence. By selecting a SMAD3 / MADH3 Antibody from NSJ Bioreagents, researchers can rely on dependable performance for TGF-beta signaling and disease research.

To learn more about this target, explore our SMAD3 Antibody / TGF-beta Signaling Protein Antibody page featuring additional information and antibodies for SMAD3 detection.

Application Notes

Optimal dilution of the SMAD3 / MADH3 Antibody should be determined by the researcher.

Immunogen

Amino acids DHQMNHSMDAGSPNLSPNPMSPAHNNLDLQ of human Mothers against decapentaplegic homolog 3 were used as the immunogen for the SMAD3 / MADH3 Antibody.

Storage

After reconstitution, the SMAD3 / MADH3 Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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