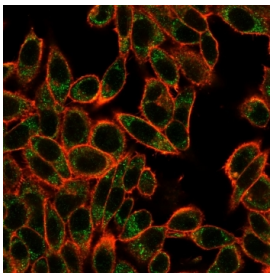
SMAD3 Antibody [clone PCRP-SMAD3-1A2] (V9231)

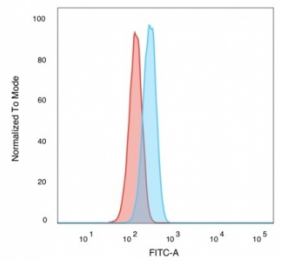
Catalog No.	Formulation	Size
V9231-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9231-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20
V9231SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100

Bulk quote request

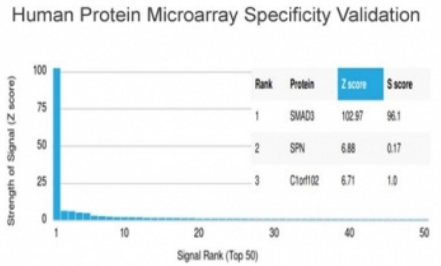
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1
Clone Name	PCRP-SMAD3-1A2
Purity	Protein A/G affinity
UniProt	P84022
Localization	Cytoplasm, Nucleus
Applications	Flow Cytometry : 1-2ug/million cells Immunofluorescence : 1-2ug/ml
Limitations	This SMAD3 antibody is available for research use only.



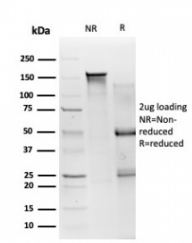
Immunofluorescent staining of PFA-fixed human HeLa cells using SMAD3 antibody (green, clone PCRP-SMAD3-1A2) and phalloidin (red).



FACS staining of PFA-fixed human HeLa cells with SMAD3 antibody (blue, clone PCRP-SMAD3-1A2), and unstained cells (red).



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using SMAD3 antibody (clone PCRP-SMAD3-1A2). These results demonstrate the foremost specificity of the PCRP-SMAD3-1A2 mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



SDS-PAGE analysis of purified, BSA-free SMAD3 antibody (PCRP-SMAD3-1A2) as confirmation of integrity and purity.

Description

SMAD3 antibody detects SMAD family member 3, a transcriptional mediator encoded by the SMAD3 gene. SMAD3 is a key intracellular effector of the TGF-beta signaling pathway, where it regulates transcription of genes involved in proliferation, differentiation, and immune regulation. Because SMAD3 plays critical roles in fibrosis, cancer, and immune signaling, SMAD3 antibody is essential in oncology, immunology, and developmental biology.

SMAD3 is phosphorylated by activated TGF-beta receptor kinases, after which it forms complexes with SMAD4 and translocates to the nucleus. There, it regulates transcription of genes associated with extracellular matrix remodeling, immune suppression, and growth arrest. Dysregulation of SMAD3 signaling contributes to fibrotic diseases and tumor progression, making it a central target of biomedical research.

The SMAD3 antibody clone PCRP-SMAD3-1A2 provides reproducible and specific detection of this transcription factor. Clone PCRP-SMAD3-1A2 has been cited in peer-reviewed publications examining TGF-beta signaling, immune regulation, and fibrosis. Its applications include immunoblotting, immunohistochemistry, and functional pathway studies, where precise detection of SMAD3 is required.

Research using clone PCRP-SMAD3-1A2 has highlighted how SMAD3 contributes to pathological fibrosis in the lung, liver, and kidney. In oncology, this antibody has clarified how altered SMAD3 activity promotes tumor progression by supporting immune evasion and angiogenesis. Beyond pathology, studies have used SMAD3 detection to examine developmental processes, including tissue remodeling and differentiation driven by TGF-beta signals.

NSJ Bioreagents supplies this SMAD3 antibody to support oncology, immunology, and fibrosis research. Alternate designations include SMAD family member 3 antibody, TGF-beta signaling mediator antibody, transcription factor SMAD3 antibody, extracellular matrix regulator antibody, and immune modulation protein antibody.

Application Notes

Optimal dilution of the SMAD3 antibody should be determined by the researcher.

Immunogen

Recombinant full-length human SMAD3 protein was used as the immunogen for the SMAD3 antibody.

Storage

Aliquot the SMAD3 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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