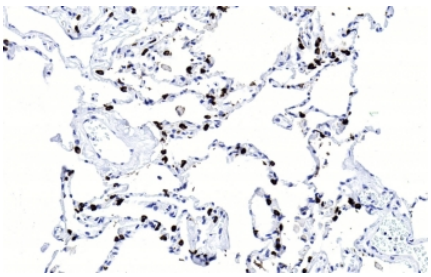
SFTPC Antibody / Prosurfactant Protein C Antibody (F55062)

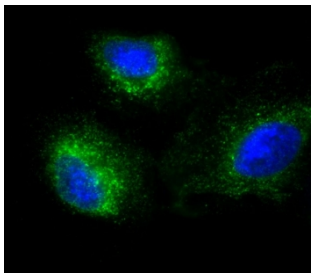
Catalog No.	Formulation	Size
F55062-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F55062-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

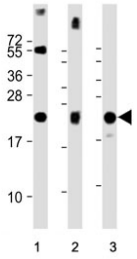
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	P11686
Applications	Western blot: 1:1000-1:2000 Immunofluorescence: 1:25 Immunohistochemistry (FFPE): 1:200 Flow cytometry: 1:25 per million cells in 0.1ml
Limitations	This SFTPC Antibody / Prosurfactant Protein C Antibody is available for research use only.



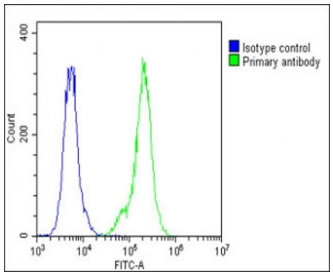
SFTPC Antibody IHC in Human Lung. Immunohistochemistry of FFPE human lung tissue was performed with SFTPC Antibody following heat-induced epitope retrieval by steaming sections in pH 6 citrate buffer for 20 min and cooling prior to staining. Distinct cytoplasmic staining is observed in a subset of cells lining the alveolar spaces, consistent with the restricted pulmonary distribution expected for surfactant protein C. The staining pattern supports detection of prosurfactant protein C in lung tissue.



SFTPC Antibody Immunofluorescence in A549 Cells. Human A549 cells were stained with SFTPC Antibody at 1:25 dilution (green) and counterstained with DAPI (blue). Granular cytoplasmic and perinuclear fluorescence is visible surrounding DAPI-positive nuclei, with minimal nuclear signal. The intracellular staining supports detection of prosurfactant protein C by immunofluorescence.



SFTPC Antibody Western Blot in Human, Mouse and Rat Lung. Western blot testing of human lung (lane 1), mouse lung (lane 2) and rat lung (lane 3) tissue lysates was performed with SFTPC Antibody at 1:1000-1:2000 dilution. A prominent band is detected at approximately 21-23 kDa in all three species, consistent with the predicted molecular weight of ~21 kDa for prosurfactant protein C. An additional higher molecular weight band is visible in the mouse sample. The principal band demonstrates cross-species recognition of prosurfactant protein C in lung tissue.



SFTPC Antibody FACS in A549 Cells. Flow cytometry analysis of fixed and permeabilized human A549 cells was performed with SFTPC Antibody at 1:25 per million cells in 0.1 ml. The primary antibody signal (green) shows a strong rightward shift with clear separation from the isotype control (blue), demonstrating robust intracellular SFTPC detection. The well-separated populations support recognition of prosurfactant protein C by FACS.

Description

SFTPC Antibody recognizes surfactant protein C, a highly hydrophobic pulmonary surfactant protein encoded by the SFTPC gene. SFTPC is synthesized as a larger precursor, commonly called prosurfactant protein C or proSP-C, which undergoes proteolytic processing to generate mature surfactant protein C. Expression is strongly associated with alveolar type II epithelial cells, where the protein is synthesized and processed through the secretory pathway before becoming incorporated into pulmonary surfactant.

Pulmonary surfactant is a lipid-protein mixture that lines the alveolar air-liquid interface and reduces surface tension during respiration. Mature surfactant protein C is a small, extremely hydrophobic protein that associates closely with surfactant phospholipids. It promotes organization and spreading of the lipid film and contributes to the rapid re-establishment of the surfactant layer as alveoli repeatedly expand and contract. These properties help maintain alveolar stability and reduce the work required for breathing.

The SFTPC precursor contains an N-terminal propeptide and a hydrophobic region that ultimately gives rise to mature SP-C. Proper intracellular trafficking and proteolytic maturation of prosurfactant protein C are important for normal surfactant homeostasis. The precursor is transported through specialized compartments in alveolar type II cells before mature protein and surfactant lipids are packaged into lamellar bodies for secretion. Because precursor and processed forms represent different stages of this pathway, SFTPC is also useful for investigating alveolar epithelial differentiation and surfactant biosynthesis.

Variants in SFTPC have been associated with inherited and sporadic interstitial lung disease. Some disease-associated variants interfere with normal folding or processing of prosurfactant protein C, potentially producing intracellular protein accumulation, cellular stress, and dysfunction of alveolar type II cells. SFTPC expression is consequently studied in research involving pulmonary development, alveolar epithelial injury, fibrosis, regeneration, and disorders of surfactant metabolism.

An SFTPC Antibody can therefore support research into alveolar type II cell biology, pulmonary surfactant production, lung epithelial differentiation, and mechanisms affecting the synthesis and processing of prosurfactant protein C. NSJ Bioreagents provides SFTPC antibody reagents for research examining pulmonary biology and surfactant-associated processes.

Browse our primary antibodies for additional research-use antibody products.

Application Notes

Titration of the SFTPC Antibody / Prosurfactant Protein C Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 1-30 from the human protein was used as the immunogen for the SFTPC Antibody.

Storage

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

Alternate Names

SFTPC antibody, Surfactant Protein C antibody, Prosurfactant Protein C antibody, Pulmonary Surfactant-Associated Protein C antibody, SP-C antibody

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