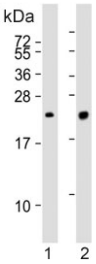
Surfactant Protein C Antibody / SP-C Antibody (F54672)

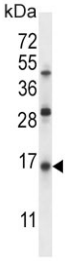
Catalog No.	Formulation	Size
F54672-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54672-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

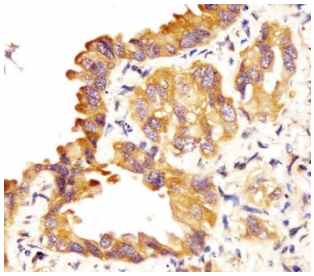
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	P11686
Applications	Western blot: 1:500-1:2000 Immunofluorescence: 1:25 Immunohistochemistry (FFPE): 1:25
Limitations	This Surfactant Protein C Antibody / SP-C Antibody is available for research use only.



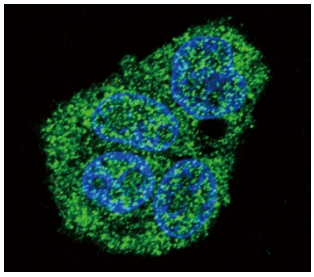
Surfactant Protein C Antibody Western Blot in Human Lung and K562 Cells. Western blot testing of human lung (lane 1) and K562 cell (lane 2) lysates was performed with Surfactant Protein C Antibody. A distinct band is detected at approximately 21 kDa in the K562 sample, consistent with the predicted molecular weight of prosurfactant protein C, while little to no corresponding signal is visible in the lung lane. This result supports detection of pulmonary surfactant-associated protein C by western blot.



Surfactant Protein C Antibody Western Blot in Jurkat Cells. Western blot testing of human Jurkat cell lysate was performed with Surfactant Protein C Antibody. A distinct band is observed at approximately 17 kDa, below the stated predicted molecular weight of ~21 kDa. The lower apparent molecular weight may reflect proteolytic processing of the SFTPC precursor or migration of a processed protein species. This result supports western blot characterization using an SP-C Antibody.



Surfactant Protein C Antibody IHC in Human Lung Adenocarcinoma. Immunohistochemistry of FFPE human lung adenocarcinoma tissue was performed with Surfactant Protein C Antibody following heat-induced epitope retrieval by steaming sections in pH 6 citrate buffer for 20 min and cooling prior to staining. Strong cytoplasmic staining is visible in tumor cells, with heterogeneous staining intensity across the tissue. The staining demonstrates detection of pulmonary surfactant-associated protein C in lung adenocarcinoma tissue.



Surfactant Protein C Antibody Immunofluorescence in HepG2 Cells. Human HepG2 cells were stained with Surfactant Protein C Antibody (green) and counterstained with DAPI (blue). Strong granular cytoplasmic fluorescence surrounds the nuclei, with comparatively little signal in the nuclear compartment. The intracellular staining supports detection of surfactant protein C using an SP-C Antibody by immunofluorescence.

Description

Surfactant Protein C Antibody recognizes surfactant protein C, a highly hydrophobic pulmonary protein encoded by the SFTPC gene. Also known as SP-C, the protein is synthesized primarily by alveolar type II epithelial cells as a larger precursor called prosurfactant protein C, or proSP-C. The precursor undergoes intracellular trafficking and proteolytic processing before mature SP-C is incorporated into pulmonary surfactant and secreted into the alveolar space.

Pulmonary surfactant is a lipid-protein complex that coats the alveolar air-liquid interface and reduces surface tension during respiration. SP-C associates closely with surfactant phospholipids and contributes to the organization, spreading, and stability of the surfactant film. These properties facilitate efficient reformation of the surfactant layer as alveoli repeatedly expand and contract, helping maintain alveolar stability and normal respiratory function.

Surfactant protein C biosynthesis involves several stages of precursor processing. ProSP-C is transported through specialized intracellular compartments in alveolar type II cells before mature protein is packaged with surfactant lipids in lamellar bodies. Expression of SFTPC is strongly associated with the alveolar type II epithelial lineage, making the protein an important marker in studies of lung development, epithelial differentiation, alveolar injury, and regeneration.

Alterations in SFTPC can interfere with normal folding, trafficking, or proteolytic processing of the precursor protein. Disease-associated variants have been linked to disorders of pulmonary surfactant metabolism and forms of interstitial lung disease. Abnormal accumulation of prosurfactant protein C may promote cellular stress and dysfunction of alveolar type II cells, connecting SFTPC biology with research into pulmonary fibrosis and epithelial injury.

A Surfactant Protein C Antibody can support research into pulmonary surfactant biology, alveolar type II cell differentiation, lung epithelial homeostasis, and mechanisms regulating the synthesis and processing of SP-C. NSJ Bioreagents provides antibodies for research investigating pulmonary proteins and processes involved in lung biology.

See our SFTPC Antibody for additional research on surfactant protein C and pulmonary biology.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Surfactant Protein C Antibody / SP-C Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 144-173 from the human protein was used as the immunogen for the Surfactant Protein C Antibody.

Storage

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

Alternate Names

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

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