abcam

ab203309

Anti-Surfactant protein D/SP-D antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human SFTPD aa 300 to C-terminus conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link P35247
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	-

Target data

See full target information SFTPD

Function	Contributes to the lung's defense against inhaled microorganisms, organic antigens and toxins. Interacts with compounds such as bacterial lipopolysaccharides, oligosaccharides and fatty acids and modulates leukocyte action in immune response. May participate in the extracellular reorganization or turnover of pulmonary surfactant. Binds strongly maltose residues and to a lesser extent other alpha-glucosyl moieties.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Surfactant protein D (SP-D) also known as protein D functions as an important component of the innate immune system. It weighs around 43 kDa and is primarily expressed in pulmonary alveoli where lung cells synthesize it. SP-D belongs to the collectin family and has a C-type lectin domain that allows binding to carbohydrate structures on microbial surfaces. This ability enables SP-D to interact directly with various pathogens and infected cells targeting them for clearance. Researchers often study SP-D with 'anti-surfactant' antibodies using methods like the ELISA protocol including versions like ELISA Sp and ELISA Denise.
Biological function summary	SP-D contributes to host defense by enhancing the uptake and elimination of pathogens by immune cells such as macrophages. Part of a larger protein complex SP-D can opsonize bacteria and viruses facilitating phagocytosis. Its role extends to modulating inflammation by affecting the production of pro-inflammatory cytokines. By maintaining homeostasis in surfactant composition it indirectly supports lung function and protects against lung injury. SP-D's function involves communication and transmission of signals within the immune system making it integral to pulmonary immune processes.

Pathways	Surfactant protein D is involved in the regulation of the complement and coagulation cascades as well as the pathogen recognition pathway. It is closely related to other collectins such as surfactant protein A (SP-A) which share similar mechanisms in the immune response. SP-D's interaction within these pathways highlights its role in identifying and neutralizing pathogens. Through its connections with related proteins SP-D plays an important part in modulating immune responses ensuring effective pathogen elimination without excessive inflammation.
Associated diseases and disorders	SP-D has been linked with respiratory diseases such as chronic obstructive pulmonary disease (COPD) and pulmonary fibrosis. These conditions may involve impaired SP-D function or expression levels potentially due to genetic factors or environmental influences. SP-D also interacts with proteins like SP-A in these diseases participating in lung immune responses. Disrupted regulation of SP-D can contribute to chronic inflammatory states in the lungs exacerbating disease progression and leading to compromised lung function. Understanding SP-D's role in these contexts offers potential therapeutic insights for targeting pathological inflammation.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

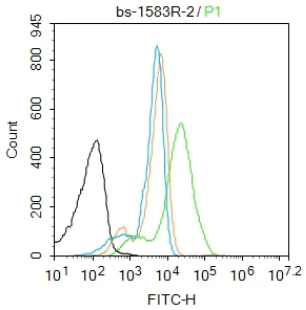
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - Anti-Surfactant protein D/SP-D antibody (ab203309)

Surfactant protein D/SP-D Flow Cytometry staining using rabbit Anti-Surfactant protein D/SP-D antibody

THP-1 cells were fixed with 4% PFA for 10min at room temperature,permeabilized with 0.1% PBST for 20 min at room temperature, and incubated in 5% BSA blocking buffer for 30 min at room temperature. Cells were then stained with SP-D/PSPD Antibody(ab203309) at 1:50 dilution in blocking buffer and incubated for 30 min at room temperature, washed twice with 2%BSA in PBS, followed by secondary antibody incubation for 40 min at room temperature. Acquisitions of 20,000 events were performed. Cells stained with primary antibody (green), and isotype control (orange).

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