abcam

ab259667

Anti-Prosurfactant Protein C antibody [EPR21012-72] - BSA and Azide free (Capture)

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR21012-72
Purification technique	Affinity purification Protein A
Specificity	This antibody has been tested with overexpressing Prosurfactant Protein C samples in Western blot, ICC/IF and Flow cytometry

Reactivity data

WB

Tested

Species	Transfected cell lysate - Human
Dilution info	1/1000

Notes	-

Species	Transfected cell lysate - Mouse
Dilution info	1/1000
Notes	-

Predicted

Species	Mouse, Human
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line - Human, Transfected cell line - Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Transfected cell line - Human
Dilution info	1/5000
Notes	-

Species	Transfected cell line - Mouse
Dilution info	1/5000
Notes	-

Predicted

Species	Mouse, Human
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Transfected cell lysate - Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Transfected cell line - Human
Dilution info	1/10000
Notes	-

Species	Transfected cell line - Mouse
Dilution info	1/10000
Notes	-

Predicted

Species	Mouse, Human
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Transfected cell lysate - Mouse
Dilution info	-
Notes	-

sELISA

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.

Notes	-

Predicted

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Transfected cell lysate - Mouse, Transfected cell line - Human, Transfected cell line - Mouse
Dilution info	-
Notes	-

Target data

See full target information Sftpc

Function	Pulmonary surfactant associated proteins promote alveolar stability by lowering the surface tension at the air-liquid interface in the peripheral air spaces.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab259667 is a BSA and Azide Free antibody supplied in an unconjugated format and it is suitable for sandwich ELISAs to quantify Mouse SFTPC. The recommended pair for sandwich ELISA is:
Capture: ab259667, Mouse SFTPC Capture Antibody (unconjugated)
Detector: ab259668, Mouse SFTPC Detector Antibody (unconjugated)
The reference range value is 117.19 - 7500 pg/ml.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Sandwich ELISA
The recommended antibody orientation is based on internal optimization for ELISA-based assays. Antibody orientation is assay dependent and needs to be optimized for each assay type. Please note that the range provided for this antibody is only an estimation based on the performance of the product using the recommended antibody pair. Performance of the antibody pair will depend on the specific characteristics of your assay. We guarantee the product works in sandwich ELISA, but we do not guarantee the sensitivity or dynamic range of the antibody in your assay.

Supplementary info

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

Activity summary	Prosurfactant Protein C (Pro-SP-C) often referred to as SPC or by its abbreviated form SP-C is a hydrophobic peptide critical for lung function. This protein has a mass of approximately 21 kDa and is expressed prominently in the alveolar type II cells of the lung tissue. Beyond its full-length variant various pro forms such as proSP-C are studied for their roles during protein maturation and trafficking. These pro forms are essential for producing the mature functional SP-C a critical component of lung surfactant which reduces surface tension in alveoli and prevents lung collapse.
Biological function summary	In surfactant homeostasis Prosurfactant Protein C associates with surfactant protein complexes where it interacts with phospholipids like phosphatidylcholine to stabilize the alveolar structures. As part of this complex it aids in reducing surface tension at the air-liquid interface in the alveoli and contributes to the host defense system by fostering pathogen clearance and modulating inflammation. The intricate processing of Pro-SP-C into its mature form involves fucosylation and other post-translational modifications which are key for functional surfactant activity.

Pathways	The role of Prosurfactant Protein C is integral to the surfactant metabolism pathway affecting lung function and homeostasis. This pathway is important for proper respiratory mechanics and is closely linked to other surfactant proteins like SP-B and SP-D. These proteins work together within the lipid-protein matrix of the surfactant to ensure proper alveolar deflation and reinflation during respiration. Disruption within these pathways can have significant impact on lung health and respiratory physiology.
Associated diseases and disorders	Mutations or dysfunctions in Prosurfactant Protein C are linked to interstitial lung diseases including pulmonary alveolar proteinosis and idiopathic pulmonary fibrosis. These conditions often result from misfolded proteins or improper surfactant metabolism leading to compromised lung function. Connections with disorders like these highlight interactions between Prosurfactant Protein C and C-reactive protein uncovering underlying inflammatory processes. Therapy and research often target these protein interactions and modifications as understanding them holds potential for strategic intervention in surfactant-related pathologies.

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

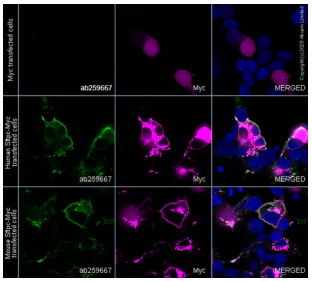
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

5 product images



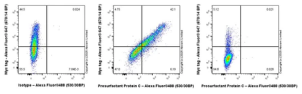
Immunocytochemistry/ Immunofluorescence - Anti-Prosurfactant Protein C antibody [EPR21012-72] - BSA and Azide free (Capture) (ab259667)

Prosurfactant Protein C Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Prosurfactant Protein C antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HEK-293T cells transfected with an empty expression vector containing a myc-His-tag®; HEK-293T cells transfected with a mouse SFTPC expression vector containing a myc-His-tag®; HEK-293T cells transfected with a human SFTPC expression vector containing a myc-His-tag® cells labeling Prosurfactant Protein C with ab259667 at 1/5000 dilution following ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (Green).

Confocal image showing cytoplasmic staining in 293T cells (shown in green) transfected a mouse SFTPC expression vectorcontaining a myc-His-tag® and 293T cells transfected a human SFTPC expression vector containing a myc-His-tag®. The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab223894 Anti-Myc tag mouse monoclonal antibody (Alexa Fluor® 594) was used to counterstain at 1/100 dilution (Magenta). The nuclear counterstain was DAPI (Blue).



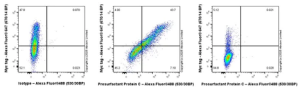
Flow Cytometry (Intracellular) - Anti-Prosurfactant Protein C antibody [EPR21012-72] - BSA and Azide free (Capture) (ab259667)

Prosurfactant Protein C Flow Cytometry (Intracellular) staining using rabbit Anti-Prosurfactant Protein C antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized 293T cells transfected with a human SFTPC expression vector containing a myc-His-tag® (Middle); 293T cells transfected with an empty expression vector containing a myc-His-tag® (Right) cells labelling Prosurfactant Protein C with ab259667 at 1/10000 dilution (0.01 ug) / Middle and right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells were co-stained with anti-myc conjugated to Alexa Fluor®647.



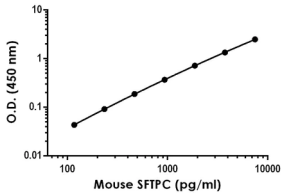
Flow Cytometry (Intracellular) - Anti-Prosurfactant Protein C antibody [EPR21012-72] - BSA and Azide free (Capture) (ab259667)

Prosurfactant Protein C Flow Cytometry (Intracellular) staining using rabbit Anti-Prosurfactant Protein C antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized 293T cells transfected with a mouse SFTPC expression vector containing a myc-His-tag® (Middle); 293T cells transfected with an empty expression vector containing a myc-His-tag® (Right) cells labelling Prosurfactant Protein C with ab259667 at 1/10000 dilution (0.01 ug) / Middle and right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

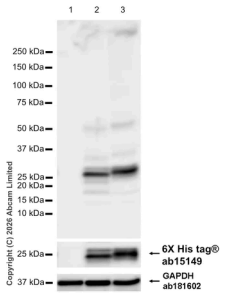
Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells were co-stained with anti-myc conjugated to Alexa Fluor®647.



Sandwich ELISA - Anti-Prosurfactant Protein C antibody [EPR21012-72] - BSA and Azide free (Capture) (ab259667)

Representative standard curve from corresponding SimpleStep ELISA® Kit (ab252366).



Western blot - Anti-Prosurfactant Protein C antibody [EPR21012-72] - BSA and Azide free (Capture) (ab259667)

Prosurfactant Protein C Western blot staining using rabbit Anti-Prosurfactant Protein C antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) was used at 1/200000 dilution (36KDa).

All lanes:
Western blot - Anti-Prosurfactant Protein C antibody [EPR21012-72] - BSA and Azide free (Capture) (ab259667) at 1/1000 dilution

Lane 1:
293T (human embryonic kidney epithelial cell) transfected with an empty vector containing a His-tag, whole cell lysate at 20 µg

Lane 2:
293T transfected with a human SFTPC expression vector containing a His-tag, whole cell lysate at 20 µg

Lane 3:
293T transfected with a mouse SFTPC expression vector containing a His-tag, whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 21 kDa

Exposure time: 4s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.