# abcam

# Product datasheet

# Anti-Prosurfactant Protein C antibody [EPR19839] - BSA and Azide free ab271991



#### Overview

Product name Anti-Prosurfactant Protein C antibody [EPR19839] - BSA and Azide free

**Description**Rabbit monoclonal [EPR19839] to Prosurfactant Protein C - BSA and Azide free

Host species Rabbit

Tested applications Suitable for: IP, IHC-Fr, IHC-P, WB

Species reactivity Reacts with: Mouse

**Immunogen** Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.

Positive control WB: Mouse lung lysate. IHC-P: Mouse lung tissue. IHC-Fr: Mouse lung tissue. IP: Mouse lung

lysate.

**General notes** ab271991 is the carrier-free version of <u>ab211326</u>.

Our <u>carrier-free</u> antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.

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 <u>conjugation kits</u> 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.

This product is compatible with the Maxpar<sup>®</sup> Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar<sup>®</sup> is a trademark of Fluidigm Canada Inc.

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 production

For more information see here.

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

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#### **Properties**

Form Liquid

**Storage instructions** Shipped at 4°C. Store at +4°C. Do Not Freeze.

Storage buffer pH: 7.2

Constituent: PBS

Carrier free Yes

Purity Protein A purified

ClonalityMonoclonalClone numberEPR19839

**Isotype** IgG

#### **Applications**

# The Abpromise guarantee

Our Abpromise guarantee covers the use of ab271991 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IP		Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration. Antigen retrieval: Heated citrate solution (10mM citrate PH 6.0 + 0.05% Tween-20).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Predicted molecular weight: 21 kDa.

### **Target**

**Function** 

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

Involvement in disease

Defects in SFTPC are the cause of pulmonary surfactant metabolism dysfunction type 2 (SMDP2) [MIM:610913]; also called pulmonary alveolar proteinosis due to surfactant protein C deficiency. A rare disease associated with progressive respiratory insufficiency and lung disease with a variable clinical course, due to impaired surfactant homeostasis. It is characterized by alveolar filling with floccular material that stains positive using the periodic acid-Schiff method and is derived from surfactant phospholipids and protein components. Excessive lipoproteins accumulation in the alveoli results in severe respiratory distress.

Genetic variations in SFTPC are a cause of susceptibility to respiratory distress syndrome in premature infants (RDS) [MIM:267450]; also known as RDS in prematurity. RDS is a lung disease affecting usually premature newborn infants. It is characterized by deficient gas exchange, diffuse

atelectasis, high-permeability lung edema and fibrin-rich alveolar deposits called 'hyaline membranes'.

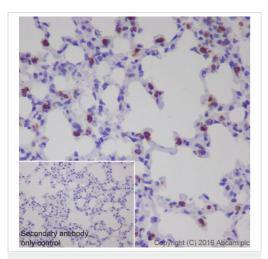
Sequence similarities

Contains 1 BRICHOS domain.

**Cellular localization** 

Secreted > extracellular space > surface film.

#### **Images**



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-Prosurfactant Protein C antibody [EPR19839] - BSA and Azide free (ab271991)

Immunohistochemical analysis of paraffin-embedded mouse lung tissue labeling Prosurfactant Protein C with <u>ab211326</u> at 1/2000 dilution, followed by Goat Anti-Rabbit lgG H&L (HRP) (<u>ab97051</u>) at 1/500 dilution.

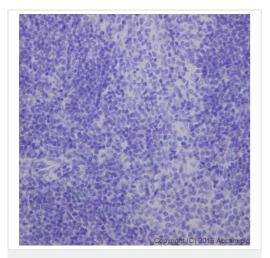
Cytoplasmic staining on alveolar type II cells of mouse lung is observed [PMID: 15186480].

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit lgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab211326).



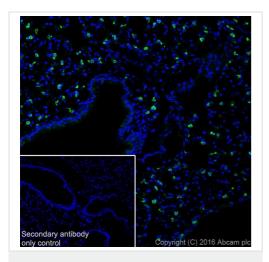
Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-Prosurfactant Protein C antibody [EPR19839] - BSA and Azide free (ab271991)

Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling Prosurfactant Protein C with <u>ab211326</u> at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (<u>ab97051</u>) at 1/500 dilution.

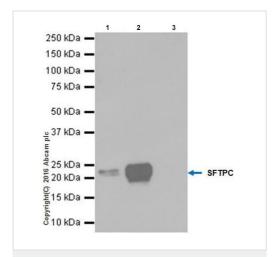
**Negative control:** no staining on mouse spleen. [PMID: 15186480]. Counter stained with Hematoxylin.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab211326).



Immunohistochemistry (Frozen sections) - Anti-Prosurfactant Protein C antibody [EPR19839] - BSA and Azide free (ab271991)



Immunoprecipitation - Anti-Prosurfactant Protein C antibody [EPR19839] - BSA and Azide free (ab271991)

Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100 permeabilized frozen mouse lung tissue labeling Prosurfactant Protein C with <u>ab211326</u> at 1/500 dilution, followed by Goat anti-rabbit lgG (Alexa Fluor<sup>®</sup> 488) (<u>ab150077</u>) secondary antibody at 1/1000 dilution (green).

Cytoplasmic staining on alveolar type II cells of mouse lung is observed [PMID: 23967208].

The nuclear counterstain is DAPI (blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat anti-rabbit lgG (Alexa Fluor<sup>®</sup> 488) (ab150077) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab211326).

SP-C was immunoprecipitated from 0.35 mg of mouse lung lysate with **ab211326** at 1/40 dilution.

Western blot was performed from the immunoprecipitate using **ab211326** at 1/1000 dilution.

VeriBlot for IP Detection Reagent (HRP) (<u>ab131366</u>), was used for detection at 1/10,000 dilution.

Lane 1: Mouse lung lysate, 10ug (Input).

Lane 2: <u>ab211326</u> IP in mouse lung lysate.

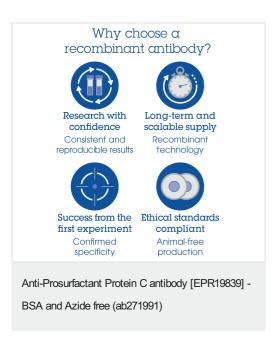
Lane 3: Rabbit monoclonal  $\lg G$  ( $\underline{ab172730}$ ) instead of  $\underline{ab211326}$  in mouse lung lysate.

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

Exposure time: 5 seconds.

The banding pattern represents pro- and mature forms of SFTPC.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab211326).



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