

# SP-A (C-20): sc-7699

## BACKGROUND

Pulmonary surfactant is primarily responsible for lowering the surface tension at the air-liquid interface in the alveoli, a process that is essential for normal respiration. Pulmonary surfactant is a mixture of phospholipids and proteins, including four distinct surfactant-associated proteins (SPs), SP-A, SP-B, SP-C, SP-D. SP-B and SP-C are predominantly hydrophobic proteins that associate with lipids to promote the absorption of surfactant phospholipids and to reduce the surface tension in the alveoli. SP-A and SP-D are large multimeric proteins belonging to the family of calcium-dependent lectins, designated collectins, which contribute to the innate immune system. Both SP-A and SP-D have been shown to protect against microbial challenge through binding to the lipid components of the bacterial cell wall and facilitating the rapid removal of microbials. In humans, there are four SFTPA genes localized on chromosome 10. Research indicates that the SFTPA genes are differentially regulated by glucocorticoids, Insulin, and cAMP. Expression of two highly similar SP-A proteins, SP-A1 and SP-A2 has been confirmed.

## CHROMOSOMAL LOCATION

Genetic locus: SFTPA1/SFTPA2 (human) mapping to 10q22.3; Sftpa1 (mouse) mapping to 14 B.

## SOURCE

SP-A (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SP-A of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7699 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SP-A (C-20) is recommended for detection of SP-A1 and SP-A2 of human origin and SP-A of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SP-A (C-20) is also recommended for detection of SP-A1 and SP-A2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for SP-A siRNA (h): sc-36535, SP-A siRNA (m): sc-36536, SP-A shRNA Plasmid (h): sc-36535-SH, SP-A shRNA Plasmid (m): sc-36536-SH, SP-A shRNA (h) Lentiviral Particles: sc-36535-V and SP-A shRNA (m) Lentiviral Particles: sc-36536-V.

Molecular Weight of SP-A: 26-38 kDa.

Positive Controls: mouse lung extract: sc-2390.

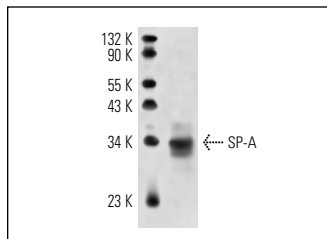
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



SP-A (C-20): sc-7699. Western blot analysis of SP-A expression in mouse lung tissue extract.

## SELECT PRODUCT CITATIONS

- Bonner, J.C., et al. 2002. Susceptibility of cyclooxygenase-2-deficient mice to pulmonary fibrogenesis. *Am. J. Pathol.* 161: 459-470.
- Yasutome, M., et al. 2005. Restoration of Smad4 in BxPC3 pancreatic cancer cells attenuates proliferation without altering angiogenesis. *Clin. Exp. Metastasis* 22: 461-473.
- Su, S.H., et al. 2005. Exercise enhances surfactant-mediated phagocytosis in bronchoalveolar macrophages. *Chin. J. Physiol.* 48: 210-216.
- Li, Y., et al. 2007. Lysosomal acid lipase over-expression disrupts lamellar body genesis and alveolar structure in the lung. *Int. J. Exp. Pathol.* 88: 427-436.
- Sati, L., et al. 2010. Lung surfactant proteins in the early human placenta. *Histochem. Cell Biol.* 133: 85-93.
- Shannahan, J.H., et al. 2012. Subchronic pulmonary pathology, iron overload, and transcriptional activity after Libby amphibole exposure in rat models of cardiovascular disease. *Environ. Health Perspect.* 120: 85-91.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


 MONOS  
Satisfaction  
Guaranteed

Try **SP-A (6F10): sc-80621**, our highly recommended monoclonal alternative to SP-A (C-20).