

SP-C (C-19): sc-7705

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 and 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.

CHROMOSOMAL LOCATION

Genetic locus: SFTPC (human) mapping to 8p21.3; Sftpc (mouse) mapping to 14 D2.

SOURCE

SP-C (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SP-C 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-7705 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SP-C (C-19) is recommended for detection of SP-C precursor of mouse, rat and human 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); non cross-reactive with mature SP-C.

Suitable for use as control antibody for SP-C siRNA (h): sc-36539, SP-C siRNA (m): sc-36540, SP-C shRNA Plasmid (h): sc-36539-SH, SP-C shRNA Plasmid (m): sc-36540-SH, SP-C shRNA (h) Lentiviral Particles: sc-36539-V and SP-C shRNA (m) Lentiviral Particles: sc-36540-V.

Molecular Weight of SP-C precursor: 21 kDa.

Molecular Weight of mature SP-C: 4-11 kDa.

Positive Controls: rat lung extract: sc-2396, A-431 nuclear extract: sc-2122 or mouse lung extract: sc-2390.

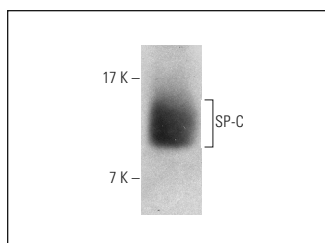
STORAGE

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

RESEARCH USE

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

DATA



SP-C (C-19): sc-7705. Western blot analysis of SP-C expression in rat lung tissue extract.

SELECT PRODUCT CITATIONS

- Shikama, N., et al. 2003. Essential function of p300 acetyltransferase activity in heart, lung and small intestine formation. *EMBO J.* 22: 5175-5185.
- Yu, H., et al. 2007. Selective reconstitution of liver cholesterol biosynthesis promotes lung maturation but does not prevent neonatal lethality in Dhcr7 null mice. *BMC Dev. Biol.* 7: 27.
- Yang, Y., et al. 2008. Phosphatidylinositol 3-kinase mediates bronchioalveolar stem cell expansion in mouse models of oncogenic K-ras-induced lung cancer. *PLoS ONE* 3: e2220.
- Trompouki, E., et al. 2009. Truncation of the catalytic domain of the cyclin-dromatosis tumor suppressor impairs lung maturation. *Neoplasia* 11: 469-476.
- O'Brien, K.B., et al. 2010. CARM1 is required for proper control of proliferation and differentiation of pulmonary epithelial cells. *Development* 137: 2147-2156.
- Zacharek, S.J., et al. 2011. Lung stem cell self-renewal relies on BMI1-dependent control of expression at imprinted loci. *Cell Stem Cell* 9: 272-281.
- Farkas, L., et al. 2011. Cigarette smoke exposure aggravates air space enlargement and alveolar cell apoptosis in Smad3 knockout mice. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 301: L391-L401.
- Banerjee, E.R., et al. 2012. Human embryonic stem cells differentiated to lung lineage-specific cells ameliorate pulmonary fibrosis in a xenograft transplant mouse model. *PLoS ONE* 7: e33165.



Try **SP-C (5E6A9): sc-293169**, our highly recommended monoclonal alternative to SP-C (C-19).