

# SP-D (H-120): sc-13980

## 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.

## REFERENCES

1. Glasser, S.W., et al. 1990. Structure and expression of the pulmonary surfactant protein SP-C gene in the mouse. *J. Biol. Chem.* 265: 21986-21991.
2. Hawgood, S., et al. 1991. Structures and properties of the surfactant-associated proteins. *Ann. Rev. Physiol.* 53: 375-394.
3. Johansson, J., et al. T. 1992. Human surfactant polypeptide SP-B. Disulfide bridges, C-terminal end, and peptide analysis of the airway form. *FEBS Letts.* 301: 165-167.

## CHROMOSOMAL LOCATION

Genetic locus: SFTPD (human) mapping to 10q22.3; Sftpd (mouse) mapping to 14 B.

## SOURCE

SP-D (H-120) is a rabbit polyclonal antibody raised against amino acids 1-120 of SP-D 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.

## APPLICATIONS

SP-D (H-120) is recommended for detection of SP-D 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)], immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SP-D siRNA (h): sc-36541, SP-D siRNA (m): sc-36542, SP-D shRNA Plasmid (h): sc-36541-SH, SP-D shRNA Plasmid (m): sc-36542-SH, SP-D shRNA (h) Lentiviral Particles: sc-36541-V and SP-D shRNA (m) Lentiviral Particles: sc-36542-V.

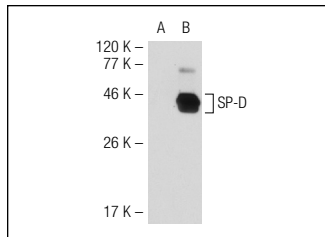
Molecular Weight of SP-D: 43 kDa.

Positive Controls: SP-D (m): 293T Lysate: sc-123722 or rat lung extract: sc-2396 or human lung tissue extract.

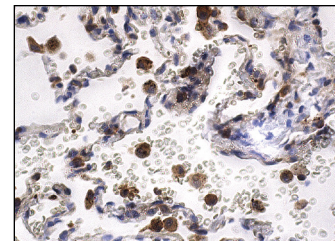
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



SP-D (H-120): sc-13980. Western blot analysis of SP-D expression in non-transfected: sc-117752 (A) and mouse SP-D transfected: sc-123722 (B) 293T whole cell lysates.



SP-D (H-120): sc-13980. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of pneumocytes and macrophages.

## SELECT PRODUCT CITATIONS

1. Breuille-Fouché, M., et al. 2010. Secreted surfactant protein A from fetal membranes induces stress fibers in cultured human myometrial cells. *Am. J. Physiol. Endocrinol. Metab.* 298: E1188-E1197.
2. Sati, L., et al. 2010. Lung surfactant proteins in the early human placenta. *Histochem. Cell Biol.* 133: 85-93.

## 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.

## PROTOCOLS

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



Try **SP-D (C-6): sc-25324** or **SP-D (1A10A9): sc-53138**, our highly recommended monoclonal alternatives to SP-D (H-120).