

SP-D (IIIH3): sc-52730

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

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3. Johansson, J. Jornvall, H. and Curstedt, T. 1992. Human surfactant polypeptide SP-B. Disulfide bridges, C-terminal end and peptide analysis of the airway form. *FEBS Lett.* 301: 165-167.
4. Crouch, E., Rust, K., Veile, R., Donis-Keller, H. and Grosso, L. 1993. Genomic organization of human surfactant protein D (SP-D). SP-D is encoded on chromosome 10q22.2-23.1. *J. Biol. Chem.* 268: 2976-2983.
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CHROMOSOMAL LOCATION

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

SOURCE

SP-D (IIIH3) is a mouse monoclonal antibody raised against SP-D.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

SP-D (IIIH3) 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

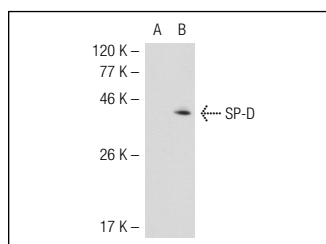
Molecular Weight of SP-D: 43 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA



SP-D (IIIH3): sc-52730. 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.

RESEARCH USE

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