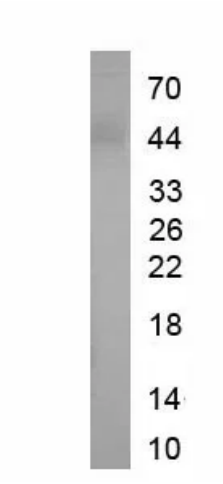
Active Surfactant Associated Protein D (SPD)

Catalog#:PHR12591

概述（Summary）

别称（Alternative Names）	SFTPD; COLEC7; PSP-D; SFTP4; SP-D; Pulmonary Surfactant Protein D; Collectin-7; Lung surfactant protein D
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Ala20-Phe374】
Accession #	P35248
表达宿主（Host）	293F
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	37.1 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Contributes to the lung's defense against inhaled microorganisms, organic antigens and toxins. Interacts with compounds such as bacterial lipopolysaccharides, oligosaccharides and fatty acids and modulates leukocyte action in immune response. May participate in the extracellular reorganization or turnover of pulmonary surfactant. Binds strongly maltose residues and to a lesser extent other alpha-glucosyl moieties.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

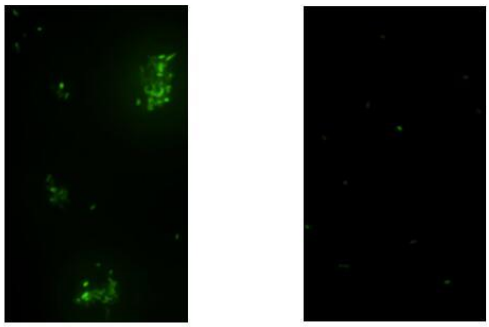


Figure 1. Fluorescence micrograph of FITC-labeled E. coli DH5a after incubation with SP-D.
(A) FITC-labeled E. coli DH5a (7 x 10^8 cells/ml) were incubated with an equal volume of SP-D (10 ug/ml).
(B) FITC-labeled E. coli DH5a without treatment of SP-D.

SP-D (surfactant protein-D) is a 43 kDa member of the collectin family of innate immune modulators. It is constitutively secreted by alveolar lining cells and epithelium associated with tubular structures. Its principal components consist of a collagen-like region and a C-terminal carbohydrate recognition domain (CRD), a structure that further places it in a subset of an expanded group of proteins termed defense collagens. SP-D is known to bind both SIRP alpha and the calreticulin/CD91 complex on macrophages. When the ratio of antigen/pathogen to available CRDs is low, antigen can be bound without occupying all available CRDs. The free CRDs will bind to SIRP alpha, generating a signal that downmodulates the inflammatory response. When virtually all CRDs are occupied by ligand, however, free CRDs are not available for SIRP alpha binding. The activity of the recombinant rat SPD was measured by its ability to bind fluorescein-conjugated E. coli bioparticles. The rrSPD was diluted to 10 ug/ml in assay buffer of 20 mM Tris, 137 mM NaCl, 1 mM CaC12, pH7.4 and fluorescein-conjugated E. coli was diluted to 7*108 cells/ml. Equal volume of 10 ug/ml rrSPD and fluorescein-conjugated E. coli were mixed and incubated at room temperature for 1h. 10 ul mixture was took onto the slide and observed under the fluorescence microscopy. The result was shown in figure 1, the rrSPD could bind fluorescein-conjugated E. coli bioparticles.

注意事项（Note）

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