

Recombinant Mouse Lung surfactant protein D/SFTPD Protein

Catalog No.: RP01479 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	20390	P50404

Tags

C-His

Synonyms

SP-D;Sfpd;Sftp4;AI573415;SFTPD

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Calculated MW	Observed MW
36.49 kDa	40-55 kDa

Endotoxin

<0.1EU/μg

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Surfactant pulmonary-associated protein D, also known as SFTPD and SP-D, is a member of the collectin family of C-type lectins that is synthesized in many tissues including respiratory epithelial cells in the lung, and contains one C-type lectin domain and one collagen-like domain. The polymorphic variation in the N-terminal domain of the SP-D molecule influences oligomerization, function, and the concentration of the molecule in serum. SFTPD is produced primarily by alveolar type II cells and nonciliated bronchiolar cells in the lung and is constitutively secreted into the alveoli where it influences surfactant homeostasis, effector cell functions, and host defense. It is upregulated in a variety of inflammatory and infectious conditions including Pneumocystis pneumonia and asthma. SFTPD is humoral molecules of the innate immune system, and is considered a functional candidate in chronic periodontitis. Besides, it is involved in the development of acute and chronic inflammation of the lung. Several human lung diseases are characterized by decreased levels of bronchoalveolar SFTPD. Thus, recombinant SFTPD has been proposed as a therapeutical option for cystic fibrosis, neonatal lung disease and smoking-induced emphysema. Furthermore, SFTPD serum levels can be used as disease activity markers for interstitial lung diseases.

Basic Information

Description

Recombinant Mouse Lung surfactant protein D/SFTPD Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ala20-Phe374) of mouse SFTPD/SP-D/SFTP4 (Accession #NP_033186.1) fused with a 6×His tag at the C-terminus.

Bio-Activity

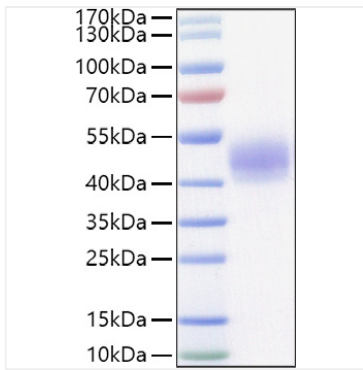
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Mouse Lung surfactant protein D/SFTPD Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 40-50kDa.