



Recombinant Protein Technical Manual

Recombinant Mouse SFTPD/SP-D Protein (His Tag)

RPES3862

Product Data:

Product SKU: RPES3862

Size: 50µg

Species: Mouse

Expression host: HEK293 Cells

Uniprot: NP_033186.1

Protein Information:

Molecular Mass: 37.2 kDa

AP Molecular Mass: 45 kDa

Tag: C-His

Bio-activity:

Purity: > 97 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU per µg of the protein as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: COLEC7; Collectin 7; Lung surfactant protein D; PSPD; Pulmonary surfactant-associated protein D; SFTPD; SPD; SP-D; SP-Dpulmonary surfactant apoprotein; surfactant protein D; surfactant, pulmonary-associated protein D;SFTP4

Immunogen Information:

Sequence: Met 1-Phe 374

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.