

SP-D Protein, Human (HEK293)

Cat. No.:	HY-P7410
Synonyms:	rHuSurfactant protein-D; SFTPD; PSP-D; COLECT7; SFTP4
Species:	Human
Source:	HEK293
Accession:	P35247 (A21-F375)
Gene ID:	6441
Molecular Weight:	40-45 kDa

PROPERTIES

AA Sequence	<pre> A E M K T Y S H R T M P S A C T L V M C S S V E S G L P G R D G R D G R E G P R G E K G D P G L P G A A G Q A G M P G Q A G P V G P K G D N G S V G E P G P K G D T G P S G P P G P P G V P G P A G R E G P L G K Q G N I G P Q G K P G P K G E A G P K G E V G A P G M Q G S A G A R G L A G P K G E R G V P G E R G V P G N T G A A G S A G A M G P Q G S P G A R G P P G L K G D K G I P G D K G A K G E S G L P D V A S L R Q Q V E A L Q G Q V Q H L Q A A F S Q Y K K V E L F P N G Q S V G E K I F K T A G F V K P F T E A Q L L C T Q A G G Q L A S P R S A A E N A A L Q Q L V V A K N E A A F L S M T D S K T E G K F T Y P T G E S L V Y S N W A P G E P N D D G G S E D C V E I F T N G K W N D R A C G E K R L V V C E F </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against PBS.
Endotoxin Level	<0.2 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Surfactant protein-D (SP-D) participates in the innate response to inhaled microorganisms and organic antigens, and contributes to immune and inflammatory regulation within the lung. SP-D is synthesized and secreted by alveolar and bronchiolar epithelial cells, but is also expressed by epithelial cells lining various exocrine ducts and the mucosa of the
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gastrointestinal and genitourinary tracts. SP-D, a collagenous calcium-dependent lectin (or collectin), binds to surface glycoconjugates expressed by a wide variety of microorganisms, and to oligosaccharides associated with the surface of various complex organic antigens. SP-D also specifically interacts with glycoconjugates and other molecules expressed on the surface of macrophages, neutrophils, and lymphocytes. In addition, SP-D binds to specific surfactant-associated lipids and can influence the organization of lipid mixtures containing phosphatidylinositol *in vitro*^{[1][2]}.

REFERENCES

- [1]. Sorensen GL. Surfactant Protein D in Respiratory and Non-Respiratory Diseases. *Front Med (Lausanne)*. 2018 Feb 8;5:18.
- [2]. Crouch EC. Surfactant protein-D and pulmonary host defense. *Respir Res*. 2000;1(2):93-108. Epub 2000 Aug 25.
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Caution: Product has not been fully validated for medical applications. For research use only.

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