

Human Surfactant protein D / SP-D ELISA Kit ab213827

1 Image

Overview

Product name Human Surfactant protein D / SP-D ELISA Kit

Detection method Colorimetric

Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	1	16	1.547ng/ml	0.092	= 6%
	2	16	3.58ng/ml	0.221	= 6.2%
	3	16	25.269ng/ml	1.693	= 6.7%

	Inter-assay				
	Sample	n	Mean	SD	CV%
	1	24	1.591ng/ml	0.111	= 7%
	2	24	3.588ng/ml	0.279	= 7.8%
	3	24	23.717ng/ml	1.683	= 7.1%

Sample type Cell culture supernatant, Serum, Cell Lysate, Hep Plasma, EDTA Plasma

Assay type Sandwich (quantitative)

Sensitivity < 20 pg/ml

Range 625 pg/ml - 40000 pg/ml

Assay time 3h 30m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview The Human Surfactant protein D / SP-D Enzyme-Linked Immunosorbent Assay (ELISA) kit (ab213827) is designed for the quantitative measurement of Human Surfactant protein D / SP-D in cell culture supernatants, cell lysates, serum and plasma (heparin, EDTA).

The ELISA kit is based on standard sandwich enzyme-linked immunosorbent assay technology. A

polyclonal antibody from goat specific for Surfactant protein D / SP-D has been pre-coated onto 96-well plates. Standards (Expression system for standard: NSO; Immunogen sequence: A21-F375) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Surfactant protein D / SP-D is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex is added and unbound conjugates are washed away with PBS or TBS buffer. HRP substrate TMB is used to visualize HRP enzymatic reaction. TMB is catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the Human Surfactant protein D / SP-D amount of sample captured in plate.

Notes Surfactant, pulmonary-associated protein D, also known as SFTPD / SP-D, is a protein which in humans is encoded by the SFTPD gene. By fluorescence *in situ* hybridization, the Surfactant protein D / SP-D gene was localized in 10q22.2-q23.1. On the basis of homology with other collectins, potential functions for Surfactant protein D / SP-D include roles in innate immunity and surfactant metabolism. Surfactant protein D / SP-D is produced in the bronchiolar and terminal epithelium of human fetal lung from about 21 weeks of gestation. What's more, SP-A and Surfactant protein D / SP-D act as dual-function surveillance molecules that reverse orientation and function and become initiators of host-defense reactions.

Platform Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	Identifier	1 x 96 tests
ABC Diluent Buffer	Blue Cap	1 x 12ml
Adhesive Plate Seal		4 units
Antibody Diluent Buffer	Green Cap	1 x 12ml
Anti-Human Surfactant protein D / SP-D coated Microplate (12 x 8 wells)		1 unit
Avidin-Biotin-Peroxidase Complex (ABC)		1 x 100µl
Biotinylated anti-Human Surfactant protein D / SP-D antibody		1 x 100µl
Lyophilized recombinant Human Surfactant protein D / SP-D standard		2 vials
Sample Diluent Buffer	Green Cap	1 x 30ml
TMB Color Developing Agent	Black Cap	1 x 10ml
TMB Stop Solution	Yellow Cap	1 x 10ml
Wash Buffer (25X)		1 x 20ml

Function Contributes to the lung's defense against inhaled microorganisms. May participate in the extracellular reorganization or turnover of pulmonary surfactant. Binds strongly maltose residues and to a lesser extent other alpha-glucosyl moieties.

Sequence similarities Belongs to the SFTPD family.

Contains 1 C-type lectin domain.

Contains 1 collagen-like domain.

Post-translational modifications

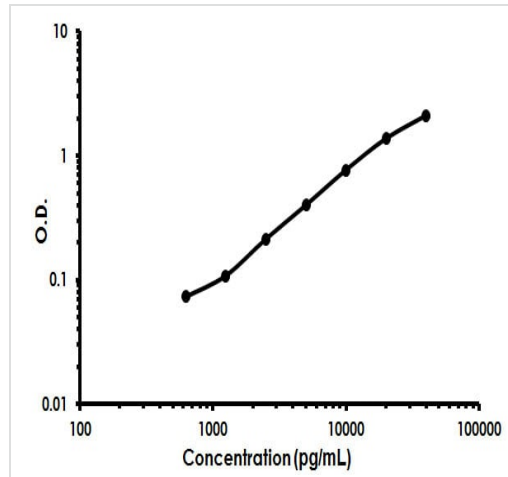
The N-terminus is blocked.

Hydroxylation on proline residues within the sequence motif, GXPG, is most likely to be 4-hydroxy as this fits the requirement for 4-hydroxylation in vertebrates.

Cellular localization

Secreted > extracellular space > extracellular matrix. Secreted > extracellular space > surface film.

Images



Human SP-D ELISA Kit (ab213827) Standard Curve.

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(ab213827) Standard Curve.

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