Datasheet for ABIN1097568

SFTPD Protein (AA 21-375) (His tag)

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Overview

Quantity:	50 µg
Target:	SFTPD
Protein Characteristics:	AA 21-375
Origin:	Human
Source:	Human Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SFTPD protein is labelled with His tag.

Product Details

Purpose:	Recombinant Human Pulmonary Surfactant-Associated Protein D/PSP-D (C-6His)
Sequence:	AGMKTYSHRT MPSACTLVMC SSVESGLPGR DGRDGREGPR GEKGDPGLPG AAGQAGMPGQ AGPVGPKGDN GSVGEPGPKG DTGPSGPPGP PGVPGPAGRE GPLGKQGNIG PQGKPGPKGE AGPKGEVGAP GMQGSAGARG LAGPKGERGV PGERGVPGNT GAAGSAGAMG PQGSPGARGP PGLKGDKGIP GDKGAKGESG LPDVASLRQQ VEALQGQVQH LQAAFSQYKK VELFPNGQSV GEKIFKTAGF VKPFTEAQLL CTQAGGQLAS PRSAAENAAL QQLVVAKNEA AFLSMTDSKT EGKFTYPTGE SLVYSNWAPG KPNDDGGSED CVEIFTNGKW NDRACGEKRL VVCEFVDHHH HHH
Characteristics:	Recombinant Human Pulmonary Surfactant-Associated Protein D/SP-D produced by transfected human cells is a secreted protein with sequence (Ala21-Phe375) of Human SFTPD fused with a polyhistidine tag at the C-terminus.
Purity:	> 95 % as determined by reducing SDS-PAGE.
Sterility:	0.2 µm filtered

Product Details

Endotoxin Level:	Less than 0.1 ng/µg (1 IEU/µg) as determined by LAL test

Target Details

Target:	SFTPD
Alternative Name:	sp-d (SFTPD Products)
Sub Type:	Fusionprotein
Background:	Surfactant Pulmonary-Associated Protein D (SP-D) is a 43 kDa member of the collectin family of innate immune modulators. Its principal components consist of a collagen-like region and a C-terminal carbohydrate recognition domain (CRD), a structure that places it in a subset of pattern recognition proteins termed defense collagens. SP-D is constitutively secreted by alveolar lining cells and epithelium associated with tubular structures and induced in cardiac smooth muscle and endothelial cells. It binds both secreted and transmembrane proteins that transduce its function. It binds human neutrophil defensins, modulating influenza anti-viral defense. It binds MD-2/LY96, a secreted protein that cooperates with Toll-like receptors (TLRs) in the response of macrophages to bacterial lipopolysaccharides (LPS) or cell wall components. It also binds macrophage CD14 and TLRs directly, blocking binding of LPS and down-regulating TNF-alpha secretion. SP-D binding of both SIRPalpha and the calreticulin/CD91 complex on macrophages allows for a graded response to environmental challenge via the following mechanism: 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 SIRPalpha, generating a signal that downmodulates the inflammatory response. When virtually all CRDs are occupied by ligand, however, free CRDs are not available for SIRPalpha binding. Instead, the dodecamer is thought to rearrange, exposing the N-termini of all four linked trimers which bind to the calreticulin/CD91 complex and initiate inflammation. Thus, SP-D provides a mechanism for the clearance of small antigenic insults without the need for a damaging inflammatory response. Alternative Names: Pulmonary Surfactant-Associated Protein D, PSP-D, SP-D, Collectin-7, Lung Surfactant Protein D, SFTPD, COLEC7, PSPD, SFTP4
Molecular Weight:	36.46 kDa
UniProt:	P35247

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	It is not recommended to reconstitute to a concentration less than 100 µg/mL. Dissolve the lyophilized protein in ddH2O. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.
Buffer:	Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.2.
Handling Advice:	Always centrifuge tubes before opening. Do not mix by vortex or pipetting.
Storage:	4 °C/-20 °C/-80 °C
Storage Comment:	Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Expiry Date:	3 months