

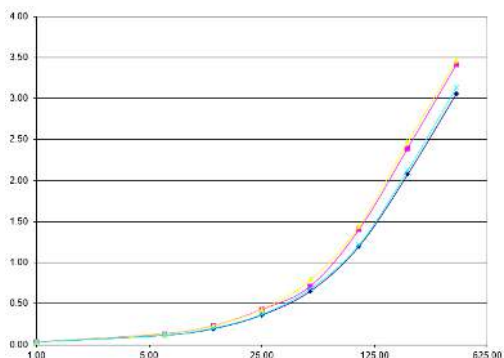
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	SP-D, Rat, clone VIF9		
Catalog number	HM3023-20UG		
Lot number	-	Expiry date	-
Volume	200 µl	Amount	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	Concentration	100 µg/ml
Host Species	Mouse IgG1	Conjugate	None
Endotoxin	N.A.	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #		1						1,2
Yes		•				•		•
No								
N.D.	•		•	•	•		•	

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



IA: Immuno assay experiment with HM3023. HM3023 was used as a detection antibody in different concentrations.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:10.

- IA: HM3023 can be used as capture and detection antibody. It can also be used as detection antibody for Elisa on wells coated with human SP-D.
- W: A non-reduced sample treatment and SDS-Page was used. The band size is ~47 kDa.
- IHC-P: HM3023 cannot be used for staining of paraffin sections of human lung.

General Information

Description

The monoclonal antibody VIF9 recognizes the rat surfactant protein D (SP-D). SP-D belongs to the collectin family. These proteins are oligomeric proteins composed of carbohydrate-recognition domains (CRD) attached to collagenous regions. They are structurally similar to the ficolins although they make use of different CRD structures: C-type lectin domain for the collectins. The anti-microbial effector mechanisms of SP-D are direct opsonization, neutralization, and agglutination. Thus limiting the infection and concurrently orchestrating the subsequent adaptive immune response. The lung is the major site of synthesis of SP-D, where the molecules are produced and secreted onto the epithelial surface by alveolar type II cells and unciliated bronchial epithelial cells. SP-D is also found in different epithelial cells of the gastrointestinal tract and in epithelial cells of exocrine glands. SP-D synthesis and secretion increase significantly after inflammatory stress. Increased amounts of SP-D in lavage and tissue, particularly in type II pneumocytes, in Clara cells and in hyperplastic goblet cells are found in inflamed lungs. The localization of SP-D in endocytic vesicles and in lysosomal granules of alveolar macrophages suggests that a receptor-mediated uptake occurs. SP-D binds to apoptotic neutrophils and enhances their clearance by alveolar macrophages. Monoclonal antibody VIF9 specific for rat surfactant protein D shows significant cross reactivity with human SP-D. Monoclonal

antibody VIF9 stains paraffin sections of rat lung. It cannot be used for staining of paraffin sections of human lung. It can also be used as detection antibody for Elisa on wells coated with human SP-D.

Immunogen	Purified Rat SP-D
Aliases	Pulmonary surfactant-associated protein D, PSP-D, CP-4, Lung surfactant protein D
Gene	Gene name: Sftpd, Sftp4
Cross reactivity	Human: Yes; Mouse: Yes
References	<ol style="list-style-type: none">1. Kasper, M et al; Monoclonal antibodies to surfactant protein D: evaluation of immunoreactivity in normal rat lung and in a radiation-induced fibrosis model. <i>Exp Lung Res</i> 1995, <i>21</i>: 5772. Jain, D et al; Surfactant Protein D Protects against Acute Hyperoxic Lung Injury. <i>Am J Resp Crit Care</i> 2008, <i>17</i>:806
Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC
Brenda Teunissen

Date
11/01/2021

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.