HycultBiotech

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Properdin, Human, clone SIM 295-9.3.4		
Catalog number	HM2283-100UG		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG2b	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #								
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

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 1:50.

- W: A non-reduced sample treatment and SDS-Page was used. The band size is 150 kDa.

General Information

Description

The monoclonal antibody SIM 295-9.3.4 reacts with human properdin (factor P), which is a single-chain plasma glycoprotein with an apparent molecular mass of 52-55 kDa. The protein domain structure of properdin consists of six thrombospondin repeat sequences between short N- and C-terminal domains. In blood, properdin exists as a mixture of head-to-tail dimers, trimers and tetramers. The protein is expressed by a variety of leukocytes, including monocytes, T lymphocytes and neutrophils, but also by endothelial cells in which properdin synthesis is induced by certain stress factors. Properdin participates in the alternative pathway of complement activation together with C3 and factors B, D, I and H by prolonging the half-life of the labile C3bBb, which is deposited on immune complexes or foreign surfaces. This permits amplification of C3bBb formation in competition with catabolism of C3b by factor I, which uses factor H as a cofactor. The local amplification process leads to the creation of the alternative pathway C5 convertase, C3bBb3b, and initiates the terminal pathway of complement activation. As a consequence, properdin is consumed by binding to C3bBb, which shows an order of preference of tetramers over trimers over dimers, which corresponds to the functional activity of the oligomeric forms. Deficiency or malfunction of the molecule may lead to severe impairment of alternative pathway activation, depending on the precise nature of the defect. Three types of deficiencies have been described so far: type 1 (or I) is characterized by serum with very low or absent properdin activity in hemolytic assays and <0.1 µg/ml immunoreactive protein; type 2 (or II) is characterized by low but detectable levels of immunoreactive protein (>2 µg/ml) and impairment of some, but not all functional test, and type 3 (or III) has normal levels of immunoreactive but dysfunctional protein (5-25 µg/mL). Lower properdin levels were found in 70% of diabetic patients when compared to nondiabetic controls and is suggested by the authors that patients with low expression of properdin take preventive measures and early treatments against infection. The monoclonal antibody SIM 295-9.3.4 is suitable for flow cytometry, immunohistochemistry, western blotting as well as use in immunoassays.

Immunogen

Purified human Properdin.

Aliases

Factor P

Storage&stability

Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

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Approved by Manager of QC

Date

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