

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name Properdin, Human, clone 3A3E1

Catalog number HM2355-20UG

Lot number xxxxxXxxxx-X

Expiry date MMM YYYY

Volume 200 µl

Amount 20 µg

Formulation 0.2 µm filtered in PBS+0.1%BSA

Concentration 100 µg/ml

Host Species Mouse IgG1

Conjugate None

Endotoxin <24 EU/mg

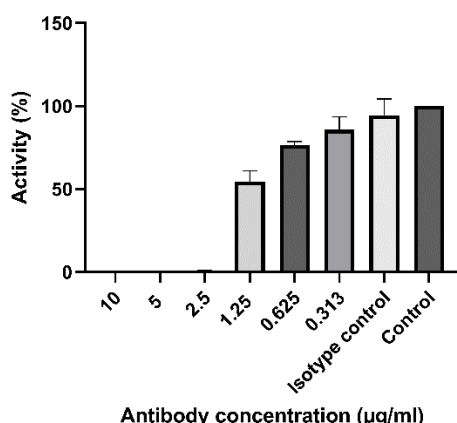
Purification Protein G

Storage 4°C

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #					1			
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



FS: Alternative pathway inhibition by anti Properdin antibody (HM2355).

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 was used. The band size is 52 kDa.
- Positive control: HM2355: Properdin, Human, clone 3A3E1; Negative control: HM2354: Properdin, Human, clone 1G6D2.
- FS: The inhibition of the alternative pathway by HM2355, targeting properdin, was evaluated at varying concentrations using pooled human serum within the HK3012 human Alternative Complement Pathway assay. An isotype control (MOPC-21, BioLegend) was also included to discern isotype-specific interactions. The pooled human serum served as a control.

General Information

Description

Monoclonal antibody HM2355 3A3E1 recognizes human properdin, also called complement factor P. The complement system is the first line of defense against pathogens and facilitates elimination of apoptotic and damaged cells. Positive regulator plasma protein properdin is critical for the alternative pathway of complement. It is a single-chain glycoprotein (ca 53kDa) consisting of six TSR sequences. In the blood it exists as a mixture of preferably head-to-tail trimers, but also dimers and tetramers. The protein is produced by leukocytes, like activated neutrophils monocytes and T-lymphocytes, but also by eg. stressed endothelial cells. Properdin can both initiate and positively regulate the alternative pathway activity together with C3 and factors B, D, I and H. It binds to C3b where it stabilizes the labile C3bBb convertase which is deposited on immune complexes or foreign surfaces. Thereby enhancing the AP by stimulation of amplification of C3bBb-convertase 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. The alternative pathway may account for ca 80% of the terminal pathway activity. Properdin has also been shown to directly limit factor H activity. Recent studies show that properdin is also a pattern-recognition receptor (PRR) able to bind directly to microbial surfaces, apoptotic and necrotic cells (dangerous nonself and altered self). Inappropriate activation or dysregulation of the alternative pathway is a critical factor in development of several autoimmune conditions. Targets opsonized with properdin are labeled for clearance by scavenger cells, even without complement. This makes it a potential therapeutic target in diseases. Recent studies has shown renewed interest in the evaluating role of properdin in disease pathogenesis, like Asthma, arthritis, septic shock, AMD and C3 glomerulopathy. Antibody 3A3E1 can be used in ELISA, western blotting (only non-reduced) and as antibody for functional studies inhibiting the alternative pathway of complement, like the standard erythrocyte AP50 assay.

Immunogen	Human properdin purified from human plasma.
Aliases	Complement factor P
Gene	Gene name: CFP, PFC
References	1. Blatt A et al; Properdin-mediated C5a production enhances stable binding of platelets to granulocytes in human whole blood. J Immunol 2016; 196: 4671
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.

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Approved by Manager of QC

Date

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