CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Complement factor H, Human, clone C18/3		
Catalog number	HM2248-20UG		
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 #								
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.

General Information

Description

Monoclonal antibody C18/3 recognizes human complement factor H (CFH). CFH is the first regulatory protein of the alternative pathway of the complement system. There are three pathways of complement activation. The classical pathway is initiated by immune complexes; the alternative pathway which does not require an antibody-antigen interaction for its activation; and the lectin pathway by surface bound mannan binding lectin. Each generates a C3 convertase, a serine protease that cleaves the central complement protein C3, and generates the major cleavage fragment C3b. The complement system mediates a number of essential biological functions that participate in host defense against infection, initiation of the inflammatory reaction, processing and clearance of immune complexes and regulation of the immune response. CFH binds to C3b, accelerates the decay of the alternative pathway C3-convertase (C3bBb) and acts as co-factor for the factor I-mediated proteolytic inactivation of C3b. Human complement factor H is a single-chain serum glycoprotein of 150 kD with a modular structure consisting of a tandem of 20 homologous units of about 60 amino acid, called short consensus repeats (SCR). Numerous functional sites have been identified along the 20 SCR domain structure of factor H. Three C3-binding sites have been identified in SCR1-4, SCR6-10 and SCR13-20 respectively. Three polyanion binding sites like heparin and several glycoaminoglycans have also been identified in the SCR7, 13 and 20. CFH displays an anti-inflammatory function and acts as a ligand for CRP. CFH has two important functional domains that are located at the opposite ends of the protein. The N-terminal fragment of the factor H molecule is an essential fluid phase regulator of the alternative pathway. With the C-terminal domain and SCR7, CFH binds to cell and tissue surface. This mediates its protective role also on host cell surface. CFH is a relatively abundant plasma protein, with a concentration of 0.4-0.8 mg/ml, that is essential to maintain complement homeostasis and to restrict the action of complement to activating surfaces. CFH regulates complement activation both in fluid phase and on cellular surfaces. Genetic analyses reveal a clear association of CFH with different human diseases. These include diseases of the kidney, the atypical form of Hemolytic Uremic Syndrome (aHUS) and membranoproliferative glomerulonephritis (MPGN). Furthermore, CFH is associated with age-related macular degeneration (AMD), a disease of the eye.

References

1. Oppermann M. et al; Quantitation of components of the alternative pathway of complement (APC) by enzyme-linked immunosorbent assays. J Immunol Methods 1990, *133*: 181
2. Oppermann M. et al; Elevated plasma levels of the immunosuppressive complement fragment Ba in renal failure. Kidney Int 1991, *40*: 939
3. Oppermann M et al; Assessment of complement activation *in vivo*. Immunopharm 1991, *24*: 119

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	Date
Brenda Teunissen	09/12/2020

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