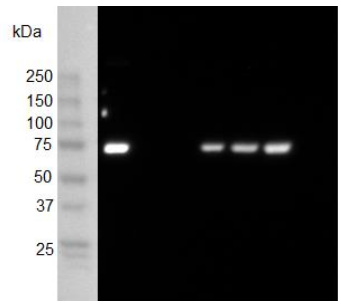
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	C3 (beta-chain), Human, clone 169.5		
Catalog number	HM2377-100ug		
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 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



W: Western blot with antibody HM2377. Positive lanes 2, 5, 6 and 7 show C3, C3b, iC3b and C3c. Negative lanes 3, 4 and 8 were loaded with C3a, C3a des Arg and C3d.

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: the monoclonal antibody is useful for Western blotting under non-reduced conditions. The expected band size is 71 kDa.

General Information

Description

The antibody clone 169.5 recognize the human ß chain in complement C3. The ß chain (71 kDa) is, next to C3, present in the activation products C3b, iC3b and C3c. The complement system plays important roles in both innate and adaptive immune response and can produce an inflammatory and protective reaction to challenges from pathogens before an adaptive response can occur. It consists of a complex family of proteins and receptors which are found in the circulation, in tissues and other body-fluids. There are three pathways of complement activation. The classical pathway is initiated by Immune complexes; the lectin pathway by surface bound lectins; and the AP by all the surfaces that are not specifically protected against it. Each generates a C3 convertase, a serine protease that cleaves the central complement protein C3, and generates the major cleavage fragment C3b. The C3 and C5 convertases are enzymatic complexes that initiate and amplify the activity of the complement pathways and ultimately generate the cytolytic MAC. The synthesis of C3 is tissue-specific and is modulated in response to a variety of stimulatory agents. After cleavage by C3 convertase the anaphylotoxin C3a and activating C3b are formed. When bound to the cell surface C3b forms the start of the terminal pathway of complement by initiating the formation of the C5 convertase. C3 has a molecular weight of app. 185kDa and is the most abundant protein of the complement system with serum protein levels of about 1.3 mg/ml. C3 is primarily produced by the liver but is also generated in macrophages, neutrophils, endothelial and epithelial cells. Due to the high levels in circulation with low biological reactivity, C3 is able to act in a fast and potent way when danger by e.g. pathogens is encountered. Defects in C3 can be unfavorable to the host leading to recurrent infections or auto-immune diseases. Although rare, C3 deficiency has been reported. These patients suffer from recurrent infections of e.g. S.pneumoniae or N.meningitidis due to lack of opsonization, but also impaired DC and Treg

	development. Polymorphism in C3 has been associated with AMD and aHUS. Besides clearance of pathogens, C3 is also important in removal of circulating immune-complexes by assisting the phagocytic capacity of macrophages. Malfunction of this system can lead to development of auto-immune disease and complement deposition in tissues.
Immunogen	Denatured and reduced C3
Cross reactivity	Negative: C3a; C3adg; C3d Positive: C3; C3b; C3c; iC3b
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	11/10/2021

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