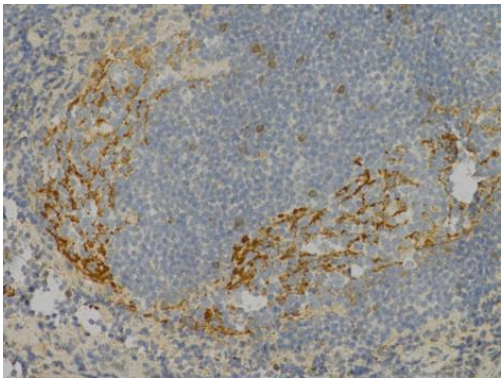
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	C3c, Human, clone F1-4		
Catalog number	HM2318-20UG		
Lot number	xxxxxXxxxx-X	**Expiry date**	MMM YYYY
Volume	200 µl	**Amount**	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+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	
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



IHC-F: frozen human tonsil sections. Antibody HM2318 was used in a 1:100 dilution.

W: Western blot analysis performed with human C3c protein with antibody clone F-14 (HM2M2318) at 2 µg/ml.

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: Non-reduced sample treatment and SDS-Page was used. It is recommended to perform the WB non-reduced. The band sizes are ~140 kDa.
- IHC-F: Immunohistochemistry was performed with an automated, validated and accredited staining system (Ventana Benchmark ULTRA, Ventana Medical Systems, USA) using Ultraview or Optiview universal DAB detection Kit. Incubation was followed by hematoxylin II counter stain for 12 minutes and then a blue colouring reagent for 8 minutes according to the manufactures instructions.

General Information

Description

Antibody F1-4 recognizes a unique epitope exclusively present on human complement C3c. 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. There are three pathways of complement activation: the classical pathway is initiated by immune complexes, the lectin pathway by surface bound mannan binding lectin and the alternative pathway by all the surfaces that are not specifically protected against it. Each of the complement pathway generates a C3 convertase, a serine protease that cleaves the central complement protein C3, and generates the major cleavage fragment C3b. C3b is an opsonin and part of one of the main convertases that drives the complement cascade. In the presence of complement regulatory molecules C3b may be further degraded sequentially to iC3b, C3c, C3dg and C3d. The disadvantage of most complement biomarkers is their short half-life, making reliable sample collection and measurements difficult. Unlike other C3 fragments, C3c does not bind to other structures, like pathogens, cell surface (receptors) and other plasma proteins.

Therefore, C3c is a stable complement biomarker which will appear in the fluid phase only, without interference of other C3 based products. The measurement of C3c provides evidence of (uncontrolled) complement activation and can be used as an indicator of an inflammatory state. The complement is a key element of the innate immune system. In appropriate activation is pathologic and leads eg. To various autoimmune diseases, like HUS. There are also indications that C3 is associated with the cardiovascular system and Parkinson's disease, making C3c a reliable and useful biomarker. Antibody F1-4 only reacts with C3c and does not cross-react with other C3 fragments. The antibody can be used in ELISA, western blotting and immunoprecipitation.

Immunogen Synthetic peptide representing the last 16 C-terminal (NKTVAVRTLDPERLGR) residues of C3c alpha domain 1 coupled onto PPD (purified protein derivate, Statens Serum Institut).

Aliases Complement component 3, C3c

References

1. Palarasah_Y et al. Generation of a C3c specific monoclonal antibody and assessment of C3c as a putative inflammatory marker derived from complement factor C3. J of Imm methodss 2010-*362*: 142

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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Date

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