

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	C3a, Mouse, clone 3/11	Expiry date	-
Catalog number	HM1072-20UG		
Lot number	-	Amount	20 µg
Volume	200 µl	Concentration	100 µg/ml
Formulation	0.2 µm filtered in PBS+0.1%BSA	Conjugate	None
Host Species	Rat IgG2a	Purification	Protein G
Endotoxin	<24 EU/mg		
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
				1	4	1,3,5		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

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.

- IA: Plates were coated with goat anti rat IgG-Fc antibody, then incubated with 1:100 hybridoma supernatant to form capture complex for C3a.
- FS: Antibody 3/11 functions as an antagonist. The antibody can be used to block C3a (Ref.4).
- W: A non-reduced sample treatment and 7.5% polyacrylamide gel was used. Proteins were blotted on nitrocellulose, blocked with 5% skimmed milk and incubated with 1:10 culturesupernatant for 1h at RT. The band size of the entire C3 molecule is 190 kDa (Ref.1).
- Negative control: Serum and tissue of C3-/- mice.

General Information

Description	The monoclonal antibody 3/11 recognizes C3a, an activated fragment of the complement protein C3, a 190 kDa protein which is the most abundant complement protein in serum. C3 is the third component of the complement system and plays a central role in the complement cascade. The three pathways of complement activation come together at this key molecule. Cleavage of the pivotal complement component C3 results in the generation of a set of effector molecules which have diverse biological functions. The cleavage product C3b promotes complement activation and the subsequent formation of the membrane attack complex. C3a, the small (ca. 10 kDa) cleavage product possesses anaphylatoxic as well as immunoregulatory properties. It exerts its function through a specific receptor (C3aR), which belongs to the G-protein coupled receptor family. Expression of C3aR has been reported in many cell types including myeloid and non-myeloid cells. Expression of C3aR on haematopoietic stem/progenitor cells has been shown to promote the trafficking/homing of these cells to the BM. Engagement of C3aR on DCs and T cells has been shown to up-regulate these cell functions. The monoclonal antibody 3/11 reacts specifically with the C3a anaphylatoxin, providing a tool for monitoring acute complement activation (C3a generation) in experimental mouse models.
Immunogen	Purified mouse C3
Cross reactivity	C3: Yes; C3c: No
References	<ol style="list-style-type: none"> Mastellos, D et al; Novel monoclonal antibodies against mouse C3 interfering with complement activation: description of fine specificity and applications to various immunoassays. Mol Immunol 2004, 40: 1213 Markiewski, M et al; C3a and C3b activation products of the third component of complement (C3) are critical for normal liver recovery after toxic injury. J Immunol 2004, 173: 747 Park, J et al; Complement activation is critical to airway hyperresponsiveness after acute ozone exposure. Am J Respir Crit Care Med 2004, 169: 726 Nozaki, M et al; Drusen complement components C3a and C5a promote choroidal neovascularization. PNAS 2006, 103: 2328 Pritchard, M et al; Differential contributions of C3, C5 and decay accelerating factor to ethanol-induced fatty liver in mice. Gastroenterology 2007, 132:1117
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
Brenda Teunissen

Date
13/07/2021

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