

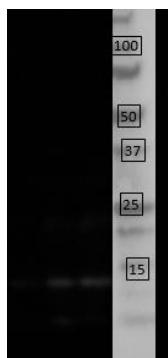
**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	C5/C5a des-arg, Human, clone 2942		
<b>Catalog number</b>	HM2078-20UG		
<b>Lot number</b>	-	<b>Expiry date</b>	-
<b>Volume</b>	200 µl	<b>Amount</b>	20 µg
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA	<b>Concentration</b>	100 µg/ml
<b>Host Species</b>	Mouse IgG2a	<b>Conjugate</b>	None
<b>Endotoxin</b>	<24 EU/mg	<b>Purification</b>	Protein G
<b>Storage</b>	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



W: Specificity test of HM2078. HM2078 was used in different concentrations and recognizes C5a (14kDa).

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 reduced sample treatment and SDS-Page was used. The band size is 14 kDa .
- IHC-F: Tissue sections were fixed in Histochoice MB and treated with levamisole to quench endogenous alkaline phosphatases. As negative control the primary antibody was omitted (Ref.1).
- Positive control: Eye tissue of patient with AMD (Ref.1); Negative control: Eye tissue of patient without AMD (Ref.1).
- General comment: Please notice that under given conditions it is known that C5 can expose epitopes normally only found in the cleaved activation products (ref.2).

**General Information**
**Description**

Monoclonal antibody 2942 reacts with a neo-epitope on human C5a/C5a des-Arg that is formed by proteolytic cleavage of C5 into C5a and C5b during complement activation. C5a is a single chain glycopeptide composed of 74-amino-acids, which is rapidly converted to the less potent derivate C5a des-Arg upon removal of the C-terminal arginine by carboxypeptidase B. C5a acts as a potent anaphylatoxin by binding to its high affinity receptor C5aR (or CD88) on the membrane of target cells inducing smooth muscle contraction, increased vascular permeability, degranulation of mast cells and basophils, and the release of lysosomal enzymes. In addition C5a stimulates the directed migration of neutrophils, eosinophils, basophils and monocytes. C5a is involved in inflammatory reactions seen in gram-negative bacterial sepsis, trauma, ischemic heart disease, post-dialysis syndrome and a variety of autoimmune diseases. Elevation of C5a is associated with increased cardiovascular risk in patients with advanced atherosclerosis. Also, C5a is closely associated with the capillary leak syndrome in leukemic children after bone marrow transplantation. C5a is also a marker in urine for predicting the onset of acute graft rejection after kidney transplantation and has been shown

to be present in extracellular deposits in patients suffering from age-related macular degeneration (AMD). Please be aware that under given conditions it is known that C5 can expose epitopes normally only found in the cleaved activation products (ref.2).

**References**

1. Nozaki, M et al; Drusen complement components C3a and C5a promote choroidal neovascularisation. PNAS 2006, *103*: 2328
2. Nilsson, P et al, A novel human whole blood model preventing fibrin formation reveals that thrombin does not cleave C5 under physiological conditions. Abstract Mol Immunol 2018, *102*: 194

**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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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  
16/11/2020

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).