

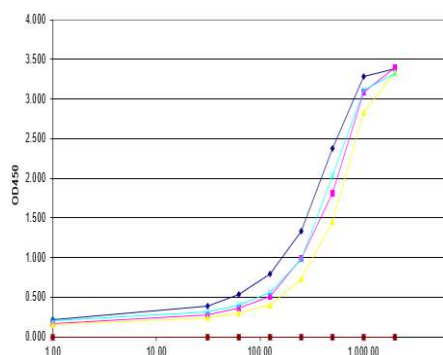
**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	C3/C3a, Human, clone 474		
<b>Catalog number</b>	HM2073-500UG		
<b>Lot number</b>	xxxxxXxxxx-X	<b>Expiry date</b>	MMM YYYY
<b>Volume</b>	xx ml	<b>Amount</b>	500 µg
<b>Formulation</b>	0.2 µm filtered in PBS	<b>Concentration</b>	>0.5 mg/ml
<b>Host Species</b>	Mouse IgG1	<b>Conjugate</b>	None
<b>Endotoxin</b>	N.A.	<b>Purification</b>	Protein G
<b>Storage</b>	4°C		

**Application notes**

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #						1-3		3
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



IA: Specificity test of HM2073. HM2073 was used as a detection antibody in different concentrations.

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: diabetic serum proteins were separated on PAGE-gel and transferred to nitrocellulose.
- Positive control: Human serum; Negative control: C3 deficient serum.

**General Information**
**Description**

Monoclonal antibody 474 reacts with an epitope on C3a. The antibody reacts both with intact C3 as with C3a. The complement system is an important factor in innate immunity. The third complement component, C3, is central to the classical, alternative and lectin pathways of complement activation. The synthesis of C3 is tissue-specific and is modulated in response to a variety of stimulatory agents. During complement activation, C3 is proteolytically cleaved resulting in release of the anaphylatoxic peptide C3a. C3a is a small polypeptide consisting of 74 amino acids (ca.10kDa). C3a itself is very short-lived and in serum cleaved rapidly into the more stable C3a-desArg (also called acylation stimulating protein, ASP). C3a 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. C3a is a mediator of local inflammatory processes. It induces smooth muscle contraction, increases vascular permeability, and causes histamine release from mast cells and basophilic leukocytes. C3a is involved in inflammatory reactions seen in gram-negative bacterial sepsis, trauma, ischemic heart disease, post-dialysis syndrome and a variety of autoimmune diseases. An inherited deficiency of C3 predisposes the person to frequent assaults of bacterial infections. In ulcerative colitis, and idiopathic chronic inflammatory bowel disease, the deposition of C3 in the diseased mucosa has been reported.

<b>Immunogen</b>	C3a
<b>Aliases</b>	Complement component 3
<b>References</b>	<ol style="list-style-type: none"><li>1. Hartmann, H et al; Rapid quantification of C3a and C5a using a combination of chromatographic and immunoassay procedures. <i>J Immunol Methods</i> 1993, <i>166</i>: 35</li><li>2. Stöve, S et al; Re-evaluation of the storage conditions for blood samples which are used for determination of complement activation. <i>J Immunol Methods</i> 1995, <i>182</i>: 1</li><li>3. Li, R et al. Localized-statistical quantification of human serum proteome associated with type 2 diabetes. <i>Plos one</i> 2008, <i>3</i>:e3224</li><li>4. Shi, L et al. Discovery and identification of potential biomarkers of pediatric acute lymphoblastic leukemia. <i>Proteome science</i> 2009, <i>7</i>:7</li></ol>
<b>Storage&amp;stability</b>	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.
<b>Precautions</b>	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

Date

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