

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name C3/C3a, Human, clone 2898

Catalog number HM2075-20UG

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.

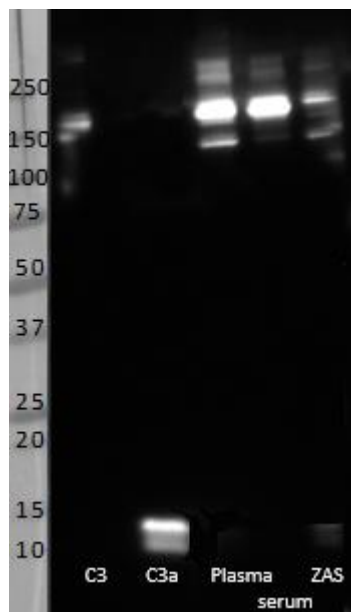
Purification Protein G

Storage 4°C

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #						1		1,2
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 using antibody HM2075. Proteins C3 and C3a were resolved on gel under non-reducing conditions. As well as, EDTA plasma pool, Complement preserved serum and Zymosan activated serum (ZAS).

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 was used for in-house testing. HM2075 recognizes C3 (~190 kDa) and C3a (~10 kDa). Reduced sample treatment and SDS-PAGE can also be used. The band size is ~95 and 8.2 kDa for C3 and C3a respectively (Ref.1).

General Information

Description

The monoclonal antibody 2898 reacts with an epitope on C3a. The antibody reacts both with intact C3 and C3a at C-terminus. 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.

Immunogen	Peptide CARASHLGLA (last nine amino acids of C3a-desArg)
Aliases	Complement protein C3
References	<ol style="list-style-type: none"> 1. Hartmann, H et al; Rapid quantification of C3a and C5a using a combination of chromatographic and immunoassay procedures. J Immunol Meth 1993, 166: 35 2. Smalley, D et al; Proteomic discovery of 21 proteins expressed in human plasma-derived but not platelet-derived microparticles. Thromb Haemost 2007, 97: 67
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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Approved by Manager of QC

Date

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