

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	C3aR, Mouse, clone 14D4	<b>Expiry date</b>	-
<b>Catalog number</b>	HM1123-20UG	<b>Amount</b>	20 µg
<b>Lot number</b>	-	<b>Concentration</b>	100 µg/ml
<b>Volume</b>	200 µl	<b>Conjugate</b>	None
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	<b>Purification</b>	Protein G
<b>Host Species</b>	Rat IgG2a		
<b>Endotoxin</b>	N.A.		
<b>Storage</b>	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*

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.

- FC: Antibody 14D4 stains the extracellular domain of C3aR when RBL-2H3 transfectants and human monocytes are used. Primary antibody concentrations were 5µg/ml. (Ref.1)
- IHC-F: Tissue sections were fixed in acetone. To block unspecific binding of Abs, sections were incubated with PBS and heat aggregated human IgG at 300 µg/ml (Ref.1).

**General Information**

<b>Description</b>	The monoclonal antibody 14D4 reacts with mouse C3aR, which is a member of the rhodopsin superfamily of 7-transmembrane G protein-coupled receptors, with a molecular weight of approximately 54 kDa. Expression of C3aR has been demonstrated on a wide variety of immune cells, including monocytes, macrophages, dendritic cells, neutrophils, basophils, eosinophils, mast cells, T lymphocytes and B lymphocytes. In addition, C3aR is found on cells of the central nervous system, lungs and kidney. In the course of complement activation C3aR functions as the cell surface receptor for C3a, which is the C-terminal 77 amino acid cleavage product of C3. C3a, possesses both anaphylatoxic and immunoregulatory properties, such as smooth muscle contraction, histamine release from mast cells, and enhanced vascular permeability. In addition, C3a induces respiratory burst in neutrophils and has chemotactic properties for eosinophils and mast cells. Moreover, C3a causes release of key cytokines from multiple cell types, including IL-1β, TNF-α, IL-6 and IL-8. A role for C3aR has been implicated in several murine disease models. It was shown that C3aR inhibition reduces neurodegeneration in experimental lupus, whereas in a murine model of allergic airway disease, deletion of the C3a receptor protects against the changes in lung physiology seen after allergen challenge. Finally, it was shown that deletion of C3aR is protective in myelin oligodendrocyte glycoprotein-induced experimental autoimmune encephalomyelitis.
<b>Immunogen</b>	RBL-2H3 transfectants expressing mouse C3aR
<b>References</b>	1. Kiafard Z, et al; Use of monoclonal antibodies to assess expression of anaphylatoxin receptors in tubular epithelial cells of human, murine and rat kidneys. Immunobiology 2007, 212: 129.
<b>Storage&amp;stability</b>	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  
13/07/2021

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