

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	CD59a, Mouse, clone 7A6	<b>Expiry date</b>	-
<b>Catalog number</b>	HM1116-20UG		
<b>Lot number</b>	-	<b>Amount</b>	20 µg
<b>Volume</b>	200 µl	<b>Concentration</b>	100 µg/ml
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA	<b>Conjugate</b>	None
<b>Host Species</b>	Mouse IgG1	<b>Purification</b>	Protein G
<b>Endotoxin</b>	<24 EU/mg		
<b>Storage</b>	4°C		

**Application notes**

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	2		2,3,4	1	1	1		1,4
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: HM1116 can be used as a detection antibody.
- IF: Six-micrometer cryosections were fixed with cold acetone for 5 minutes, rehydrated with PBS, and blocked with 5% normal goat serum in 1% BSA/PBS for 30 minutes at RT (Ref.4).
- W: Samples were run in nonreducing sample buffer, and membranes were incubated overnight at 4°C (Ref.4). The expected band size is ~18 kDa.

**General Information**

**Description** The monoclonal antibody 7A6 (previously known as mCD59.3) recognizes mouse CD59a, a potent inhibitor of the complement membrane attack complex (MAC) action. CD59 regulates the formation and function of the lytic C5b-9 complex by binding C8 and preventing the unfolding and membrane insertion of C9 and by binding C9 and restricting its polymerization. CD59 is a small (18 - 25 kDa) molecule, linked to the cell membrane through a glycosyl phosphatidylinositol (GPI) anchor and comprising 77 amino acids with a single N-linked carbohydrate group at Asn-18. Analogues of CD59 can be found in all species with similar structures and sizes. In contrast to all other species, mice have two genes encoding a CD59a and a CD59b protein. These two molecules are 63% identical at the amino acid level and share all major structural features. CD59a is broadly distributed on endothelia, erythrocytes, platelets and on numerous other cell types in organs, a distribution pattern resembling that of CD59 in other species. Expression of CD59b is restricted to germ cell elements in the testis and mature spermatozoa. Both CD59a and CD59b inhibit human and rodent complement with similar efficiency. CD59 may be involved in rheumatoid arthritis, motor nerve injury in the Guillain-Barré syndrome and in other diseases where defective inhibition of complement activation on self tissue is involved. Furthermore, CD59 may play an important part in abrogating the effects of complement attack in renal disease. Its presence and protective effect have already been demonstrated on human renal cells.

**Immunogen** mCD59a-Fc

**Aliases** Membrane attack complex inhibition factor, MACIF, MAC-inhibitory protein, Protectin, CD59

**Gene** Gene name: CD59A

- References**
1. Harris, C et al; Characterization of the mouse analogues of CD59 using novel monoclonal antibodies: tissue distribution and functional comparison. *Immunology* 2003, *109*: 117
  2. Williams, A et al; Deletion of the gene encoding CD59a in mice increases disease severity in a murine model of rheumatoid arthritis. *Arthritis Rheum* 2004, *50*: 3035
  3. Willison, H et al; The role of complement and complement regulators in mediating motor nerve terminal injury in murine models of Guillain-Barré syndrome, *J Neuroimmunol* 2008, *201-202*: 172
  4. Yang, P et al; Expression and Modulation of RPE Cell Membrane Complement Regulatory Proteins. *Invest Ophthalmol Vis Sci* 2009, *50*: 3473

**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  
11/11/2020

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