

## Datasheet: MCA1054A488 BATCH NUMBER 156641

Description:	MOUSE ANTI HUMAN CD59:Alexa Fluor® 488
Specificity:	CD59
Other names:	HRF, PROTECTIN
Format:	ALEXA FLUOR® 488
Product Type:	Monoclonal Antibody
Clone:	MEM-43
Isotype:	lgG2a
Quantity:	100 TESTS/1ml

## **Product Details**

Applications	This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit <u>www.bio-rad-antibodies.com/protocols</u> .				
		Yes No	Not Determined	Suggested Dilution	
	Flow Cytometry			Neat	
	Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.				
Target Species	Human				
Product Form	Purified IgG conjugated to Alexa Fluor® 488 - liquid				
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)		
	Alexa Fluor®488	495	519		
Preparation	Purified IgG prepared by affinity chromatography on Protein A				
Buffer Solution	Phosphate buffered saline				
Preservative Stabilisers	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin				
Approx. Protein Concentrations	IgG concentration 0.05	mg/ml			

Immunogen	Thymocytes and T lymphocytes.
External Database Links	UniProt: <u>P13987</u> <u>Related reagents</u> Entrez Gene: <u>966</u> CD59 <u>Related reagents</u>
Synonyms	MIC11, MIN1, MIN2, MIN3, MSK21
RRID	AB_2076229
Specificity	<b>Mouse anti Human CD59 antibody, clone MEM-43</b> recognizes CD59, a glycosyl- phosphatidylinositol (GPI) anchored membrane protein also known as membrane attack complex inhibition factor. CD59 blocks the formation of the complement membrane attack complex (MAC) by binding of C8a and C9. CD59 is found on all types of leucocytes including platelets and is also expressed on many non-haematopoietic cells. The epitope recognized by Mouse anti Human CD59 antibody, clone MEM-43 is lost after reduction therefore, non-reducing conditions are required for western blotting techniques.
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells or 100ul whole blood.
References	<ol> <li>Stefanova, I. <i>et al.</i> (1989) in Leucocyte Typing IV: White cell differentiation antigens. Ed. Knapp, W. <i>et al.</i> Oxford University Press pp 678-97.</li> <li>Stefanová, I. <i>et al.</i> (1989) Characterization of a broadly expressed human leucocyte surface antigen MEM-43 anchored in membrane through phosphatidylinositol. <u>Mol Immunol. 26 (2): 153-61.</u></li> <li>Tandon, N. <i>et al.</i> (1994) Expression and function of multiple regulators of complement activation in autoimmune thyroid disease. <u>Immunology. 81 (4): 643-7.</u></li> <li>Horejsí, V. <i>et al.</i> (1988) Monoclonal antibodies against human leucocyte antigens. II. Antibodies against CD45 (T200), CD3 (T3), CD43, CD10 (CALLA), transferrin receptor (T9), a novel broadly expressed 18-kDa antigen (MEM-43) and a novel antigen of restricted expression (MEM-74). <u>Folia Biol (Praha). 34 (1): 23-34.</u></li> <li>Stefanová, I. &amp; Horejsí, V. (1991) Association of the CD59 and CD55 cell surface glycoproteins with other membrane molecules. <u>J Immunol. 147 (5): 1587-92.</u></li> <li>Shaw, M.L. <i>et al.</i> (2011) Microparticles (ectosomes) shed by stored human platelets downregulate macrophages and modify the development of dendritic cells. <u>J Immunol. 186: 6543-52.</u></li> <li>Jolly, C, and Sattentau. Q.J. (2005) Human Immunodeficiency Virus Type 1 Virological Synapse Formation in T Cells Requires Lipid Raft Integrity <u>J Virol. 79: 12088-94.</u></li> <li>Shamri, R. <i>et al.</i> (2010) Chemokine stimulation of lymphocyte alpha 4 integrin avidity but not of leukocyte function-associated antigen-1 avidity to endothelial ligands under shear flow requires cholesterol membrane rafts. J Biol Chem. 277: 40027-35.</li> <li>Bonnon, C. <i>et al.</i> (2010) Selective export of human GPI-anchored proteins from the endoplasmic reticulum. <u>J Cell Sci. 123: 1705-15.</u></li> </ol>

	<ol> <li>Zhang, J. <i>et al.</i> (2002) Early complement activation and decreased levels of glycosylphosphatidylinositol-anchored complement inhibitors in human and experimental diabetic retinopathy. <u>Diabetes. 51: 3499-504.</u></li> <li>Ellison, B.S. <i>et al.</i> (2007) Complement susceptibility in glutamine deprived breast cancer cells. <u>Cell Div. 2007 2: 20.</u></li> <li>Cowan, P.J. <i>et al.</i> (1998) High-level endothelial expression of human CD59 prolongs heart function in an <i>ex vivo</i> model of xenograft rejection. <u>Transplantation. 65: 826-31.</u></li> <li>Vanderplasschen, A. <i>et al.</i> (1997) Extracellular enveloped vaccinia virus is resistant to complement because of incorporation of host complement control proteins into its envelope. <u>Proc Natl Acad Sci U S A. 95: 7544-9.</u></li> <li>Takemoto, M. <i>et al.</i> (2007) Human herpesvirus 7 infection increases the expression levels of CD46 and CD59 in target cells. <u>J Gen Virol. 88: 1415-22.</u></li> <li>Chong, Y.H. and Lee, M.J. (2000) Expression of complement inhibitor protein CD59 in human neuronal and glial cell lines treated with HIV-1 gp41 peptides. <u>J Neurovirol. 6: 51-60.</u></li> <li>Gendek-Kubiak, H. and Gendek, E.G. (2004) Immunolocalization of protectin (CD59) and macrophages in polymyositis and dermatomyositis. <u>J Neuroimmunol. 149: 187-94.</u></li> <li>Abe, Y. <i>et al.</i> (2017) Glycan region of GPI anchored-protein is required for cytocidal oligomerization of an anticancer parasporin-2, Cry46Aa1 protein, from <i>Bacillus thuringiensis</i> strain A1547. <u>J Invertebr Pathol. 142: 71-81.</u></li> <li>Sica, M. <i>et al.</i> (2017) Eculizumab treatment: stochastic occurrence of C3 binding to individual PNH erythrocytes. <u>J Hematol Oncol. 10 (1): 126.</u></li> <li>Ueda, M. <i>et al.</i> (2013) The frequency of granulocytes with spontaneous somatic mutations: a wide distribution in a normal human population. PLoS One. 8 (1): e54046.</li> </ol>
Storage	Store at +4°C or at -20°C if preferred.
	This product should be stored undiluted.
	Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.
	Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch
Acknowledgements	This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad

Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA1054A488 10041	
Regulatory	For research purposes only	
Related Produc	cts	
Recommended N	egative Controls	
MOUSE IgG2a NEGAT	TVE CONTROL:Alexa Fluor® 488 (MCA929A488)	
Recommended U	seful Reagents	
HUMAN SEROBLOCK	(BUF070A)	

HUMAN SEROBLOCK (BUF070B)

North & South	Tel: +1 800 265 7376	Worldwide	Tel: +44 (0)1865 852 700	Europe	Tel: +49 (0) 89 8090 95 21
America	Fax: +1 919 878 3751		Fax: +44 (0)1865 852 739		Fax: +49 (0) 89 8090 95 50
	Email: antibody_sales_us@bio-rad.com		Email: antibody_sales_uk@bio-rad.com		Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M364721:200529'

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