

## Datasheet: MCA1054PE

Description:	MOUSE ANTI HUMAN CD59:RPE		
Specificity:	CD59		
Other names:	HRF, PROTECTIN		
Format:	RPE		
Product Type:	Monoclonal Antibody		
Clone:	MEM-43		
Isotype:	IgG2a		
Quantity:	100 TESTS		

## **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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	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 as 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 conjuga	ated to R. Phycoerythrin	(RPE) - lyophilized
Reconstitution	Reconstitute with 1.	0 ml distilled water	
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
Preparation	Purified IgG prepare supernatant	ed by affinity chromatog	raphy on Protein A from tissue o
Buffer Solution	Phosphate buffered	saline	
Preservative	0.09% sodium azide	e (NaN <sub>3</sub> )	
Stabilisers	1% bovine serum al	bumin	
	5% sucrose		

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Thymocytes and T lymphocytes.

# External Database

Links

**UniProt:** 

P13987 Related reagents

**Entrez Gene:** 

966 CD59 Related reagents

**Synonyms** 

MIC11, MIN1, MIN2, MIN3, MSK21

**RRID** 

AB 321512

### **Specificity**

Mouse anti Human CD59 antibody, clone MEM-43 recognizes CD59, a glycosylphosphatidylinositol (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 10µl of the suggested working dilution to label 10<sup>6</sup> cells in 100µl

#### References

- 1. Horejsí, V. *et al.* (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). Folia Biol (Praha). 34 (1): 23-34.
- 2. Stefanová, I. *et al.* (1989) Characterization of a broadly expressed human leucocyte surface antigen MEM-43 anchored in membrane through phosphatidylinositol. <u>Mol Immunol.</u> 26 (2): 153-61.
- 3. Stefanová, I. *et al.* (1989) in Leucocyte Typing IV: White cell differentiation antigens. Ed. Knapp, W. *et al.* Oxford University Press pp 678-97.
- 4. Stefanová, I. & Horejsí, V. (1991) Association of the CD59 and CD55 cell surface glycoproteins with other membrane molecules. <u>J Immunol. 147 (5): 1587-92.</u>
- 5. Tandon, N. *et al.* (1994) Expression and function of multiple regulators of complement activation in autoimmune thyroid disease. Immunology. 81 (4): 643-7.
- 6. Vanderplasschen, A. *et al.* (1997) Extracellular enveloped vaccinia virus is resistant to complement because of incorporation of host complement control proteins into its envelope. Proc Natl Acad Sci U S A. 95: 7544-9.
- 7. Cowan, P.J. *et al.* (1998) High-level endothelial expression of human CD59 prolongs heart function in an *ex vivo* model of xenograft rejection. <u>Transplantation</u>. 65: 826-31.
- 8. 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:</u> 51-60.
- 9. Shamri, R. *et al.* (2002) 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. <u>J Biol Chem. 277: 40027-35.</u>
- 10. Zhang, J. et al. (2002) Early complement activation and decreased levels of

- glycosylphosphatidylinositol-anchored complement inhibitors in human and experimental diabetic retinopathy. Diabetes. 51: 3499-504.
- 11. Donin, N. *et al.* (2003) Complement resistance of human carcinoma cells depends on membrane regulatory proteins, protein kinases and sialic acid. <u>Clin Exp Immunol. 131:</u> 254-63.
- 12. Gendek-Kubiak, H. and Gendek, E.G. (2004) Immunolocalization of protectin (CD59) and macrophages in polymyositis and dermatomyositis. <u>J Neuroimmunol</u>. 149: 187-94.
- 13. 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>
- 14. Ohyama, M. *et al.* (2006) Characterization and isolation of stem cell-enriched human hair follicle bulge cells. J Clin Invest. 116: 249-60.
- 15. Ellison, B.S. *et al.* (2007) Complement susceptibility in glutamine deprived breast cancer cells. Cell Div. 2007 2: 20.
- 16. Takemoto, M. *et al.* (2007) Human herpesvirus 7 infection increases the expression levels of CD46 and CD59 in target cells. <u>J Gen Virol. 88: 1415-22.</u>
- 17. Shaw, M.L. *et al.* (2008) Cellular proteins in influenza virus particles. <u>PLoS Pathog. 4:</u> e1000085.
- 18. Bonnon, C. *et al.* (2010) Selective export of human GPI-anchored proteins from the endoplasmic reticulum. <u>J Cell Sci. 123: 1705-15.</u>
- 19. Sadallah, S. *et al.* (2011) Microparticles (ectosomes) shed by stored human platelets downregulate macrophages and modify the development of dendritic cells. <u>J Immunol.</u> 186: 6543-52.
- 20. Rondelli, T. *et al.* (2013) The frequency of granulocytes with spontaneous somatic mutations: a wide distribution in a normal human population. PLoS One. 8 (1): e54046.
- 21. Abe, Y. *et al.* (2017) Glycan region of GPI anchored-protein is required for cytocidal oligomerization of an anticancer parasporin-2, Cry46Aa1 protein, from *Bacillus thuringiensis* strain A1547. J Invertebr Pathol. 142: 71-81.
- 22. Sica, M. *et al.* (2017) Eculizumab treatment: stochastic occurrence of C3 binding to individual PNH erythrocytes. <u>J Hematol Oncol. 10 (1): 126.</u>
- 23. Gullipalli, D. *et al.* (2018) Antibody Inhibition of Properdin Prevents Complement-Mediated Intravascular and Extravascular Hemolysis. <u>J Immunol. 201 (3): 1021-1029.</u>
  24. Ueda, M. *et al.* (2019) Endovascular trophoblast expresses CD59 to evade
- complement-dependent cytotoxicity. Mol Cell Endocrinol. 490: 57-67.

### Storage

Prior to reconstitution store at +4°C. Following reconstitution store at +4°C. DO NOT FREEZE.

This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #20487 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1054PE">https://www.bio-rad-antibodies.com/SDS/MCA1054PE</a> 20487
Regulatory	For research purposes only

## **Related Products**

## **Recommended Negative Controls**

MOUSE IgG2a NEGATIVE CONTROL:RPE (MCA929PE)

### **Recommended Useful 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

 $\textbf{Email: antibody\_sales\_us@bio-rad.com} \\ \textbf{Email: antibody\_sales\_uk@bio-rad.com} \\ \textbf{Email: antibody\_sales\_uk@b$ 

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M419649:230616'

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