

## Datasheet: MCA1054A647T

|                      |                                        |
|----------------------|----------------------------------------|
| <b>Description:</b>  | MOUSE ANTI HUMAN CD59:Alexa Fluor® 647 |
| <b>Specificity:</b>  | CD59                                   |
| <b>Other names:</b>  | HRF, PROTECTIN                         |
| <b>Format:</b>       | ALEXA FLUOR® 647                       |
| <b>Product Type:</b> | Monoclonal Antibody                    |
| <b>Clone:</b>        | MEM-43                                 |
| <b>Isotype:</b>      | IgG2a                                  |
| <b>Quantity:</b>     | 25 TESTS/0.25ml                        |

## 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 [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

|                | 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 conjugated to Alexa Fluor® 647 - liquid                |                     |                   |
| Max Ex/Em                      | Fluorophore                                                         | Excitation Max (nm) | Emission Max (nm) |
|                                | Alexa Fluor®647                                                     | 650                 | 665               |
| Preparation                    | Purified IgG prepared by affinity chromatography on Protein A       |                     |                   |
| Buffer Solution                | Phosphate buffered saline                                           |                     |                   |
| Preservative                   | 0.09% Sodium Azide                                                  |                     |                   |
| Stabilisers                    | 1% Bovine Serum Albumin                                             |                     |                   |
| Approx. Protein Concentrations | IgG concentration 0.05 mg/ml                                        |                     |                   |
| Immunogen                      | Thymocytes and T lymphocytes.                                       |                     |                   |
| External Database Links        | UniProt:<br><a href="#">P13987</a> <a href="#">Related reagents</a> |                     |                   |

**Entrez Gene:**[966](#) CD59 [Related reagents](#)

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| <b>Synonyms</b>       | MIC11, MIN1, MIN2, MIN3, MSK21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Specificity</b>    | <p><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.</p> <p>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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Flow Cytometry</b> | Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells or 100ul whole blood.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>References</b>     | <ol style="list-style-type: none"><li>1. 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>2. Stefanová, I. <i>et al.</i> (1989) Characterization of a broadly expressed human leucocyte surface antigen MEM-43 anchored in membrane through phosphatidylinositol. <a href="#">Mol Immunol. 26 (2): 153-61.</a></li><li>3. Tandon, N. <i>et al.</i> (1994) Expression and function of multiple regulators of complement activation in autoimmune thyroid disease. <a href="#">Immunology. 81 (4): 643-7.</a></li><li>4. 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). <a href="#">Folia Biol (Praha). 34 (1): 23-34.</a></li><li>5. Stefanová, I. &amp; Horejsí, V. (1991) Association of the CD59 and CD55 cell surface glycoproteins with other membrane molecules. <a href="#">J Immunol. 147 (5): 1587-92.</a></li><li>6. Shaw, M.L. <i>et al.</i> (2008) Cellular proteins in influenza virus particles. <a href="#">PLoS Pathog. 4: e1000085.</a></li><li>7. Sadallah, S. <i>et al.</i> (2011) Microparticles (ectosomes) shed by stored human platelets downregulate macrophages and modify the development of dendritic cells. <a href="#">J Immunol. 186: 6543-52.</a></li><li>8. Jolly, C, and Sattentau. Q.J. (2005) Human Immunodeficiency Virus Type 1 Virological Synapse Formation in T Cells Requires Lipid Raft Integrity <a href="#">J Virol. 79: 12088-94.</a></li><li>9. Shamri, R. <i>et al.</i> (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. <a href="#">J Biol Chem. 277: 40027-35.</a></li><li>10. Bonnon, C. <i>et al.</i> (2010) Selective export of human GPI-anchored proteins from the endoplasmic reticulum. <a href="#">J Cell Sci. 123: 1705-15.</a></li><li>11. Zhang, J. <i>et al.</i> (2002) Early complement activation and decreased levels of glycosylphosphatidylinositol-anchored complement inhibitors in human and experimental diabetic retinopathy. <a href="#">Diabetes. 51: 3499-504.</a></li><li>12. Ellison, B.S. <i>et al.</i> (2007) Complement susceptibility in glutamine deprived breast cancer cells. <a href="#">Cell Div. 2007 2: 20.</a></li><li>13. Cowan, P.J. <i>et al.</i> (1998) High-level endothelial expression of human CD59 prolongs heart function in an ex vivo model of xenograft rejection. <a href="#">Transplantation. 65: 826-31.</a></li><li>14. 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. <a href="#">Proc Natl Acad Sci U S A. 95: 7544-9.</a></li><li>15. Takemoto, M. <i>et al.</i> (2007) Human herpesvirus 7 infection increases the expression levels of CD46 and CD59 in target cells. <a href="#">J Gen Virol. 88: 1415-22.</a></li><li>16. 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. <a href="#">J Neurovirol. 6: 51-60.</a></li></ol> |

17. Gendek-Kubiak, H. and Gendek, E.G. (2004) Immunolocalization of protectin (CD59) and macrophages in polymyositis and dermatomyositis. [J Neuroimmunol. 149: 187-94.](#)
18. Abe, Y. *et al.* (2017) Glycan region of GPI anchored-protein is required for cytotoxic oligomerization of an anticancer parasporin-2, Cry46Aa1 protein, from *Bacillus thuringiensis* strain A1547. [J Invertebr Pathol. 142: 71-81.](#)
19. Sica, M. *et al.* (2017) Eculizumab treatment: stochastic occurrence of C3 binding to individual PNH erythrocytes. [J Hematol Oncol. 10 \(1\): 126.](#)

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| <b>Storage</b> | <p>Store at +4°C or at -20°C if preferred.</p> <p>This product should be stored undiluted.</p> <p>Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.</p> |
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| <b>Shelf Life</b> | 18 months from date of despatch. |
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| <b>Health And Safety Information</b> | <p>Material Safety Datasheet documentation #10041 available at:<br/>10041: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf</a></p> |
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|                   |                            |
|-------------------|----------------------------|
| <b>Regulatory</b> | For research purposes only |
|-------------------|----------------------------|

## Related Products

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA929A647\)](#)

### Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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| <b>North &amp; South America</b> | <p>Tel: +1 800 265 7376</p> <p>Fax: +1 919 878 3751</p> <p>Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a></p> | <b>Worldwide</b> | <p>Tel: +44 (0)1865 852 700</p> <p>Fax: +44 (0)1865 852 739</p> <p>Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a></p> | <b>Europe</b> | <p>Tel: +49 (0) 89 8090 95 21</p> <p>Fax: +49 (0) 89 8090 95 50</p> <p>Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a></p> |
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