# Datasheet: MCA914

## BATCH NUMBER 163102

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| **Description:** | MOUSE ANTI HUMAN CD55 |
| **Specificity:** | CD55 |
| **Other names:** | DAF |
| **Format:** | Purified |
| **Product Type:** | Monoclonal Antibody |
| **Clone:** | BRIC216 |
| **Isotype:** | IgG1 |
| **Quantity:** | 0.2 mg |

## 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.

| | Yes | No | Not Determined | Suggested Dilution |
|---|---|---|---|---|
| Flow Cytometry | ▪ | | | |
| Immunohistology - Frozen | | | ▪ | |
| Immunohistology - Paraffin | | | ▪ | |
| ELISA | | | ▪ | |
| Immunoprecipitation | ▪ | | | |
| Western Blotting (1) | ▪ | | | |
| Functional Assays (2) | ▪ | | | |

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 guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1)**Non-reducing conditions required.**

(2) **This product contains sodium azide, removal by dialysis is recommended prior to use in functional assays.**

**Target Species**

Human

**Product Form**

Purified IgG - liquid

**Preparation**

Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

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| **Buffer Solution** | TRIS buffered saline. |
| **Preservative Stabilisers** | <0.1% Sodium Azide ($NaN_3$)<br>≤100mM Glycine |
| **Approx. Protein Concentrations** | IgG concentration 1.0 mg/ml |
| **Immunogen** | Human fibroblast cell line. |
| **External Database Links** | **UniProt:**<br>P08174 Related reagents<br>**Entrez Gene:**<br>1604 CD55 Related reagents |
| **Synonyms** | CR, DAF |
| **RRID** | AB_321792 |
| **Specificity** | **Mouse anti Human CD55 antibody, clone BRIC216** recognizes the CD55 antigen, a ~70 kDa glycoprotein also known as Decay Accelerating Factor (DAF). CD55 is distributed on erythrocytes and other circulating blood cells and also on cells in non-haemopoietic tissue particularly epithelium and endothelium. CD55 is also expressed at the foetal-maternal interfaces in placenta.CD55 has reduced expression on individuals with paroxysmal nocturnal haemoglobinuria. Mouse anti Human CD55 antibody, clone BRIC216 has a functional binding affinity to erythrocytes of $8.7 \times 10^7$ $M^{-1}$. The antigen is pronase and trypsin resistant and chymotrypsin sensitive. Mouse anti Human CD55 antibody, clone BRIC216 recognizes the consensus region 3 of the DAF molecule, which contains the functional site, and the antibody blocks the function of DAF. |
| **Flow Cytometry** | Use 10ul of the suggested working dilution to label $10^6$ cells in 100ul |
| **References** | 1. Fodor, W.L. *et al.* (1995) A novel bifunctional chimeric complement inhibitor that regulates C3 convertase and formation of the membrane attack complex. J Immunol. 155 (9): 4135-8.<br>2. Wiesner, J. *et al.* (1997) Host cell factor CD59 restricts complement lysis of Plasmodium falciparum-infected erythrocytes. Eur J Immunol. 27 (10): 2708-13.<br>3. Triantafilou, M. *et al.* (2000) A 70 kDa MHC class I associated protein (MAP-70) identified as a receptor molecule for Coxsackievirus A9 cell attachment. Hum Immunol. 61 (9): 867-78.<br>4. Tieng, V. *et al.* (2002) Binding of Escherichia coli adhesin AfaE to CD55 triggers cell-surface expression of the MHC class I-related molecule MICA. Proc Natl Acad Sci U S A. 99: 2977-82.<br>5. Loberg, R.D. *et al.* (2006) Inhibition of decay-accelerating factor (CD55) attenuates prostate cancer growth and survival *in vivo.* Neoplasia. 8: 69-78.<br>6. Wu, G. *et al.* (2007) Coagulation cascade activation triggers early failure of pig hearts |

expressing human complement regulatory genes. Xenotransplantation. 14 (1): 34-47.
7. Kim, M.S. & Racaniello, V.R. (2007) Enterovirus 70 receptor utilization is controlled by capsid residues that also regulate host range and cytopathogenicity. J Virol. 81 (16): 8648-55.
8. Ellison, B.S. *et al.* (2007) Complement susceptibility in glutamine deprived breast cancer cells. Cell Div. 2: 20.
9. Liszewski, M.K. *et al.* (2007) Modeling how CD46 deficiency predisposes to atypical hemolytic uremic syndrome. Mol Immunol. 44: 1559-68.
10. Koch, N. *et al.* (2009) IL-10 protects monocytes and macrophages from complement-mediated lysis. J Leukoc Biol. 86 (1): 155-66.
11. Tu, C.F. *et al.* (2010) The *in vitro* protection of human decay accelerating factor and hDAF/heme oxygenase-1 transgenes in porcine aortic endothelial cells against sera of Formosan macaques. Transplant Proc. 42 (6): 2138-41.
12. Pahwa, R. *et al.* (2016) Modulation of PBMC-decay accelerating factor (PBMC-DAF) and cytokines in rheumatoid arthritis. Mol Cell Biochem. 414 (1-2): 85-94.
13. Gullipalli, D. *et al.* (2018) Antibody Inhibition of Properdin Prevents Complement-Mediated Intravascular and Extravascular Hemolysis. J Immunol. 201 (3): 1021-9.
14. Noda, G.S. *et al*. (2020) Specificities and isotypes of erythrocytes autoantibodies in patients with warm autoimmune hemolytic anemia Rev Cubana Hematol Inmunol Hemoter 36(4): e1283

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| **Storage** | This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.<br><br>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. |
| **Guarantee** | 12 months from date of despatch |
| **Health And Safety Information** | Material Safety Datasheet documentation #10511 available at: https://www.bio-rad-antibodies.com/SDS/MCA914<br>10511 |
| **Regulatory** | For research purposes only |

## Related Products

### Recommended Secondary Antibodies

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| Goat Anti Mouse IgG (STAR77...) | HRP |
| Rabbit Anti Mouse IgG (STAR12...) | RPE |
| Goat Anti Mouse IgG (STAR70...) | FITC |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | Alk. Phos., HRP |
| Goat Anti Mouse IgG (STAR76...) | RPE |
| Goat Anti Mouse IgG (Fc) (STAR120...) | FITC, HRP |
| Rabbit Anti Mouse IgG (STAR13...) | HRP |
| Rabbit Anti Mouse IgG (STAR9...) | FITC |

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| Goat Anti Mouse IgG (H/L) (STAR117...) | Alk. Phos., DyLight®488, DyLight®550, DyLight®650, DyLight®680, DyLight®800, FITC, HRP |

## Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)


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

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