

Datasheet: MCA1614GA

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| Description: | MOUSE ANTI HUMAN CD55 |
| Specificity: | CD55 |
| Other names: | DAF |
| Format: | Purified |
| Product Type: | Monoclonal Antibody |
| Clone: | 67 |
| Isotype: | IgG1 |
| Quantity: | 0.1 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 | ▪ | | | 1/10 - 1/25 |
| Immunohistology - Frozen | ▪ | | | 1/100 - 1/1000 |
| Immunohistology - Paraffin | | | ▪ | |
| ELISA | | | ▪ | |
| Immunoprecipitation | | | ▪ | |
| Western Blotting | ▪ | | | |

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.

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| Target Species | Human |
| Product Form | Purified IgG - liquid |
| Preparation | Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant |
| Buffer Solution | Phosphate buffered saline |
| Preservative Stabilisers | 0.09% Sodium Azide |
| Carrier Free | Yes |
| Approx. Protein Concentrations | IgG concentration 1.0 mg/ml |
| Immunogen | K562 cells |

**External Database
Links**

UniProt:

[P08174](#) [Related reagents](#)

Entrez Gene:

[1604](#) CD55 [Related reagents](#)

Synonyms

CR, DAF

Specificity

Mouse anti Human CD55 antibody, clone 67 recognizes the human CD55 cell surface antigen, a GPI linked molecule also known as decay accelerating factor (DAF). CD55 is expressed by a wide range of cell types.

CD55 is the complement regulatory protein, decay accelerating factor (DAF) ([Lublin and Atkinson 1989](#)). Human CD55 is a ~70 kDa glycoprotein (in erythrocytes) anchored in the membrane by glycosylphosphatidylinositol tail. In other cells the apparent molecular weight is somewhat larger. It has a substantial content of O-glycans, and also on N-glycan. DAF binds to activated C4b or C3b complement fragments on the cell surface, preventing the assembly and accelerating the decay of both classical and alternative pathways. DAF carries the [Cromer related blood group antigens](#).

DAF has a wide distribution on cells in non-hemopoietic tissues, particularly epithelium and is specifically found at the fetal-maternal interface in placenta ([Holmes *et al.* 1990](#) and [Yang *et al.* 2009](#)). Soluble forms of DAF are found, for example, in plasma, saliva and urine ([Medof *et al.* 1987](#)). The antigen on erythrocytes is pronase and chymotrypsin sensitive, but resistant to trypsin.

Flow Cytometry

Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul. Please note: Bio-Rad do not recommend the use of this reagent to stain erythrocytes

**Histology Positive
Control Tissue**

Human Tonsil

References

1. Lublin, D.M. & Atkinson, J.P. (1989) Decay-accelerating factor: biochemistry, molecular biology, and function. [Annu Rev Immunol. 7: 35-58.](#)
2. Daniels, G. (1989) Cromer-related antigens--blood group determinants on decay-accelerating factor. [Vox Sang. 56 \(4\): 205-11.](#)
3. Holmes, C.H. *et al.* (1990) Preferential expression of the complement regulatory protein decay accelerating factor at the fetomaternal interface during human pregnancy. [J Immunol. 144 \(8\): 3099-105.](#)
4. Yang, P. *et al.* (2009) Expression and modulation of RPE cell membrane complement regulatory proteins. [Invest Ophthalmol Vis Sci. 50: 3473-81.](#)
5. van de Sande, M.G. *et al.* (2011) Different stages of rheumatoid arthritis: features of the synovium in the preclinical phase. [Ann Rheum Dis. 70: 772-7.](#)
6. Mo, B. *et al.* (2006) ECC-1 cells: a well-differentiated steroid-responsive endometrial cell line with characteristics of luminal epithelium. [Biol Reprod. 75: 387-94.](#)
7. Araten, D.J. *et al.* (2005) A quantitative measurement of the human somatic mutation rate. [Cancer Res. 65: 8111-7.](#)
8. de Launay, D. *et al.* (2010) Silencing the expression of Ras family GTPase homologues decreases inflammation and joint destruction in experimental arthritis. [Am J Pathol. 177: 3010-24.](#)
9. Gheorghe, K.R. *et al.* (2011) Prostaglandin E2 synthesizing enzymes in rheumatoid arthritis B cells and the effects of B cell depleting therapy on enzyme expression. [PLoS One. ;6: e16378.](#)
10. Kraan, M.C. *et al.* (2004) T cells, fibroblast-like synoviocytes, and granzyme B+ cytotoxic cells are associated with joint damage in patients with recent onset rheumatoid arthritis. [Ann Rheum Dis. 63: 483-8.](#)

11. van Holten, J. *et al.* (2005) A multicentre, randomised, double blind, placebo controlled phase II study of subcutaneous interferon beta-1a in the treatment of patients with active rheumatoid arthritis. [Ann Rheum Dis. 64 \(1\): 64-9.](#)
12. Abreu, J.R. *et al.* (2009) The Ras guanine nucleotide exchange factor RasGRF1 promotes matrix metalloproteinase-3 production in rheumatoid arthritis synovial tissue. [Arthritis Res Ther.11\(4\):R121.](#)
13. Thurlings, R.M. *et al.* (2008) Synovial tissue response to rituximab: mechanism of action and identification of biomarkers of response. [Ann Rheum Dis. 67 \(7\): 917-25.](#)
14. Vos, K. *et al.* (2007) Early effects of rituximab on the synovial cell infiltrate in patients with rheumatoid arthritis. [Arthritis Rheum. 56 \(3\): 772-8.](#)
15. Edginton S *et al.* (2016) Effects of Rituximab and Infliximab Treatment on Carboxypeptidase B and Its Substrates in RA Synovium. [J Rheumatol. 43 \(5\): 846-54.](#)

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| 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. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use. |
| Shelf Life | 18 months from date of despatch. |
| Health And Safety Information | Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf |
| Regulatory | For research purposes only |

Related Products

Recommended Secondary Antibodies

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| Goat Anti Mouse IgG (STAR76...) | RPE |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | Alk. Phos. , HRP |
| Rabbit Anti Mouse IgG (STAR9...) | FITC |
| Goat Anti Mouse IgG (STAR77...) | HRP |
| Rabbit Anti Mouse IgG (STAR12...) | RPE |
| Goat Anti Mouse IgG (Fc) (STAR120...) | FITC , HRP |
| Rabbit Anti Mouse IgG (STAR8...) | DyLight@800 |
| Goat Anti Mouse IgG (STAR70...) | FITC |
| Rabbit Anti Mouse IgG (STAR13...) | HRP |
| Human Anti Mouse IgG1 (HCA036...) | HRP |
| Goat Anti Mouse IgG (H/L) (STAR117...) | Alk. Phos. , DyLight@488 , DyLight@549 , DyLight@649 , 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 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com | Worldwide | Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com | Europe | Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com |
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'M319048:180719'

