

## Datasheet: MCA1614F

<b>Description:</b>	MOUSE ANTI HUMAN CD55:FITC
<b>Specificity:</b>	CD55
<b>Other names:</b>	DAF
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	67
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	■			Neat

Where this product 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 product for use in their own system using appropriate negative/positive controls.

<b>Target Species</b>	Human		
<b>Product Form</b>	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	FITC	490	525
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative</b>	0.09% Sodium Azide (NaN <sub>3</sub> )		
<b>Stabilisers</b>	1% Bovine Serum Albumin		
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1 mg/ml		
<b>Immunogen</b>	K562 cells		
<b>External Database Links</b>	<b>UniProt:</b>		
	<a href="#">P08174</a>	<a href="#">Related reagents</a>	

**Entrez Gene:**[1604](#) CD55 [Related reagents](#)

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**Synonyms**

CR, DAF

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**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-haematopoietic tissues, particularly epithelium and is 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.

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**Flow Cytometry**

Use 10ul of the suggested working dilution to label 10<sup>6</sup> cells in 100ul. Please note: Bio-Rad do not recommend the use of this reagent to stain erythrocytes

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**References**

1. Hadam, M.R. (1989) In Leucocyte Typing IV: White Cell Differentiation Antigens. Edited by Knapp, W. *et al.* Oxford University Press pp 694-697.
2. 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.](#)
3. O'Brien, D.P. *et al.* (2009) Regulation of the Helicobacter pylori cellular receptor decay-accelerating factor. [J Biol Chem. 283: 23922-30.](#)
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.](#)
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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.](#)
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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.](#)

<b>Further Reading</b>	<ol style="list-style-type: none"> <li>1. Lublin, D.M. &amp; Atkinson, J.P. (1989) Decay-accelerating factor: biochemistry, molecular biology, and function. <a href="#">Annu Rev Immunol. 7: 35-58.</a></li> <li>2. Daniels, G. (1989) Cromer-related antigens--blood group determinants on decay-accelerating factor. <a href="#">Vox Sang. 56 (4): 205-11.</a></li> </ol>
<b>Storage</b>	<p>Store at +4°C or at -20°C if preferred.</p> <p>Storage in frost-free freezers is not recommended.</p> <p>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.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: 10041: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf</a>
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

### Recommended Useful Reagents

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

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

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