

Datasheet: MCA756A647T

Description:	MOUSE ANTI HUMAN CD64:Alexa Fluor® 647
Specificity:	CD64
Other names:	FcRI
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	10.1
Isotype:	IgG1
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	■			Neat - 1/10

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		
Species Cross Reactivity	Reacts with: Baboon, Cynomolgus monkey, Rhesus Monkey N.B. Antibody reactivity and working conditions may vary between species.		
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 from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative Stabilisers	0.09% Sodium Azide		
	1% Bovine Serum Albumin		
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml		
Immunogen	Human monocytes.		

**External Database
Links**

UniProt:

[P12314](#) [Related reagents](#)

Entrez Gene:

[2209](#) FCGR1A [Related reagents](#)

Synonyms

FCG1, FCGR1, IGFR1

Fusion Partners

Spleen cells from immunised BALB/c mice were fused with cells of the mouse SP2/0-Ag14 myeloma cell line.

Specificity

Mouse anti Human CD64 antibody, clone 10.1 recognizes the human CD64 cell surface antigen, a ~75 kDa glycoprotein expressed by monocytes. The antigen acts as a high affinity receptor for human IgG, and is also known as FcRI.

Mouse anti Human CD64 antibody, clone 10.1 blocks binding of immunoglobulin to FcRI.

Flow Cytometry

Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.

References

1. Dougherty, G.J. *et al.* (1987) The human mononuclear phagocyte high-affinity Fc receptor, FcRI, defined by a monoclonal antibody, 10.1. [Eur J Immunol. 17 \(10\): 1453-9.](#)
2. Beekman, J.M. *et al.* (2004) Direct interaction between FcγRI (CD64) and periplakin controls receptor endocytosis and ligand binding capacity. [Proc Natl Acad Sci U S A. 101: 10392-7.](#)
3. Tanaka, M. *et al.* (2009) Activation of Fc gamma RI on monocytes triggers differentiation into immature dendritic cells that induce autoreactive T cell responses. [J Immunol. 183: 2349-55.](#)
4. Fet, N.G. *et al.* (2012) Reduction of activated macrophages after ischaemia-reperfusion injury diminishes oxidative stress and ameliorates renal damage. [Nephrol Dial Transplant. 27 \(8\): 3149-55.](#)
5. Wagner, C. *et al.* (2008) T lymphocytes in acute bacterial infection: increased prevalence of CD11b(+) cells in the peripheral blood and recruitment to the infected site. [Immunology. 125: 503-9.](#)
6. Eisenhardt, S.U. *et al.* (2009) Dissociation of pentameric to monomeric C-reactive protein on activated platelets localizes inflammation to atherosclerotic plaques. [Circ Res. 105: 128-37.](#)
7. Fadlon, E. *et al.* (1998) Blood polymorphonuclear leukocytes from the majority of sickle cell patients in the crisis phase of the disease show enhanced adhesion to vascular endothelium and increased expression of CD64. [Blood. 91: 266-74.](#)
8. Scheinecker, C. *et al.* (1998) Initiation of the autologous mixed lymphocyte reaction requires the expression of costimulatory molecules B7-1 and B7-2 on human peripheral blood dendritic cells. [J Immunol. 161: 3966-73.](#)
9. Navarro-López, F. *et al.* (2003) Late T-lymphocyte and monocyte activation in coronary restenosis. Evidence for a persistent inflammatory/immune mechanism? [Rev Esp Cardiol. 56: 465-72.](#)
10. Liu M *et al.* (2011) Vitellogenin mediates phagocytosis through interaction with FcγR. [Mol Immunol. 49 \(1-2\): 211-8.](#)
11. Kapelski S *et al.* (2014) Assessment of the neutrophilic antibody-dependent respiratory burst (ADRB) response to *Plasmodium falciparum*. [J Leukoc Biol. 96 \(6\): 1131-42.](#)
12. Loi, A.L.T. *et al.* (2017) Proteomic profiling of peripheral blood neutrophils identifies two inflammatory phenotypes in stable COPD patients. [Respir Res. 18 \(1\): 100.](#)
13. Hristodorov, D. *et al.* (2016) Fully human MAP-fusion protein selectively targets and eliminates proliferating CD64(+) M1 macrophages. [Immunol Cell Biol. 94 \(5\): 470-8.](#)

Further Reading

1. Yoshino, N. *et al.* (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of Cynomolgus monkeys (*Macaca fascicularis*) by using anti-human

cross-reactive antibodies. [Exp Anim. 49 \(2\): 97-110.](#)

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. This product is photosensitive and should be protected from light.

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.

Acknowledgements

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Health And Safety Information

Material Safety Datasheet documentation #10041 available at:
10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA928A647\)](#)

Recommended Useful Reagents

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

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

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