

Datasheet: MCA2389A647T

Description:	RAT ANTI MOUSE Ly-6C:Alexa Fluor® 647
Specificity:	Ly-6C
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	ER-MP20
Isotype:	IgG2a
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	Mouse						
Product Form	Purified IgG conjugated to Alexa Fluor® 647 - liquid						
Max Ex/Em	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>Alexa Fluor®647</td> <td>650</td> <td>665</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	Alexa Fluor®647	650	665
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
Alexa Fluor®647	650	665					
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant						
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	Balb/c macrophage precursor cell hybrids.						
External Database Links	<p>UniProt: P09568 Related reagents</p> <p>Entrez Gene:</p>						

Synonyms	Ly6c
-----------------	------

Fusion Partners	Spleen cells from immunised rats were fused with cells of the Y3-Ag1.2.3 myeloma cell line.
------------------------	---

Specificity	<p>Rat anti Mouse Ly-6C antibody, clone ER-MP20 recognizes murine Ly-6C, a ~14 kDa differentiation antigen, expressed on macrophage/dendritic cell precursors in mid-stage development (late CFU-M, monoblasts and immature monocytes), granulocytes, and on a wide range of endothelial cells and subpopulations of B- and T-lymphocytes.</p> <p>Rat anti Mouse Ly-6C antibody, clone ER-MP20 is able to distinguish multiple mouse blood monocyte subsets: immature Ly-6C^{hi} monocytes are recruited to acute peripheral inflammation and develop into Ly-6C⁺ exudate macrophages, whereas more mature Ly-6C^{-lo} monocytes are precursors for tissue macrophages and dendritic cells in steady state.</p> <p>Rat anti Mouse Ly-6C, clone ER-MP20 can be used in conjunction with clone ER-MP12 in two colour flow cytometric analysis, to identify different stages of myeloid progenitor cells in mouse bone marrow (Leenen et al. 1990).</p>
--------------------	--

Flow Cytometry	<p>Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.</p> <p>The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR (BUF041A/B).</p>
-----------------------	--

References	<ol style="list-style-type: none">1. Zhang, Y. & Bliska, J.B. (2010) YopJ-promoted cytotoxicity and systemic colonization are associated with high levels of murine interleukin-18, gamma interferon, and neutrophils in a live vaccine model of <i>Yersinia pseudotuberculosis</i> infection. Infect Immun 78: 2329-41.2. Leenen, P.J. et al. (1990) Murine macrophage precursor characterization. II. Monoclonal antibodies against macrophage precursor antigens. Eur J Immunol. 20 (1): 27-34.3. de Bruijn, M.F. et al. (1998) Bone marrow cellular composition in <i>Listeria monocytogenes</i> infected mice detected using ER-MP12 and ER-MP20 antibodies: a flow cytometric alternative to differential counting. J Immunol Methods. 217 (1-2): 27-39.4. Schatteman, G.C. et al. (2010) Lin⁻ Cells Mediate Tissue Repair by Regulating MCP-1/CCL-2. Am J Pathol. 177: 2002-10.5. Baumeister, T. et al. (2003) Interleukin-3Ralpha⁺ myeloid dendritic cells and mast cells develop simultaneously from different bone marrow precursors in cultures with interleukin-3. J Invest Dermatol. 121: 280-8.6. Devey, L. et al. (2009) Tissue-resident macrophages protect the liver from ischemia reperfusion injury via a heme oxygenase-1-dependent mechanism. Mol Ther. 17: 65-72.7. Nikolic, T. et al. (2003) Developmental stages of myeloid dendritic cells in mouse bone marrow. Int Immunol. 15: 515-24.8. Wynn, A.A. et al. (2001) Role of granulocyte/macrophage colony-stimulating factor in zymocel-induced hepatic granuloma formation. Am J Pathol. 158: 131-45.9. Lesokhin, A.M. et al. (2012) Monocytic CCR2⁺ Myeloid-Derived Suppressor Cells Promote Immune Escape by Limiting Activated CD8 T-cell Infiltration into the Tumor Microenvironment. Cancer Res. 72: 876-86.10. Chan, J. et al. (1998) Macrophage lineage cells in inflammation: characterization by colony-stimulating factor-1 (CSF-1) receptor (c-Fms), ER-MP58, and ER-MP20 (Ly-6C) expression. Blood. 92: 1423-31.11. van Rijt, L.S. et al. (2002) Allergen-induced accumulation of airway dendritic cells is supported by an increase in CD31(hi)Ly-6C(neg) bone marrow precursors in a mouse model of asthma.
-------------------	--

[Blood. 100: 3663-71.](#)

12. Arnardottir, H.H. *et al.* (2012) Dietary Fish Oil Decreases the Proportion of Classical Monocytes in Blood in Healthy Mice but Increases Their Proportion upon Induction of Inflammation. [J Nutr. 142: 803-8.](#)
13. Henkel, G. *et al.* (1999) Commitment to the monocytic lineage occurs in the absence of the transcription factor PU.1. [Blood. 93:2849-58.](#)
14. Bossaller, L. *et al.* (2013) Overexpression of membrane-bound fas ligand (CD95L) exacerbates autoimmune disease and renal pathology in pristane-induced lupus. [J Immunol. 191: 2104-14.](#)
15. Garcia, J.A. *et al.* (2013) Regulation of adaptive immunity by the fractalkine receptor during autoimmune inflammation. [J Immunol. 191: 1063-72.](#)
16. Stijlemans, B. *et al.* (2015) Murine Liver Myeloid Cell Isolation Protocol . Bio-protocol 5(10): e1471. [Bio-protocol 5\(10\): e1471](#)
17. Laoui, D. *et al.* (2014) Purification of Tumor-Associated Macrophages (TAM) and Tumor-Associated Dendritic Cells (TADC). [Bio-protocol 4\(22\): e1294.](#)
18. Morganti, J.M. *et al.* (2016) Age exacerbates the CCR2/5-mediated neuroinflammatory response to traumatic brain injury. [J Neuroinflammation. 13 \(1\): 80.](#)
19. Mooney, J.E. *et al.* (2010) Cellular plasticity of inflammatory myeloid cells in the peritoneal foreign body response. [Am J Pathol. 176 \(1\): 369-80.](#)
20. Iwasaki, Y. *et al.* (2011) *In situ* proliferation and differentiation of macrophages in dental pulp. [Cell Tissue Res. 346 \(1\): 99-109.](#)
21. Movahedi, K. *et al.* (2012) Nanobody-based targeting of the macrophage mannose receptor for effective in vivo imaging of tumor-associated macrophages. [Cancer Res. 72 \(16\): 4165-77.](#)
22. Ribechini, E. *et al.* (2009) Gr-1 antibody induces STAT signaling, macrophage marker expression and abrogation of myeloid-derived suppressor cell activity in BM cells. [Eur J Immunol. 39 \(12\): 3538-51.](#)
23. Bossaller, L. *et al.* (2016) TLR9 Deficiency Leads to Accelerated Renal Disease and Myeloid Lineage Abnormalities in Pristane-Induced Murine Lupus. [J Immunol. Jun 27. pii: 1501943. \[Epub ahead of print\]](#)
24. Barnes, M.A. *et al.* (2015) Macrophage migration inhibitory factor is required for recruitment of scar-associated macrophages during liver fibrosis. [J Leukoc Biol. 97 \(1\): 161-9.](#)
25. Ohnishi, K. *et al.* (2012) Immunohistochemical detection of possible cellular origin of hepatic histiocytic sarcoma in mice. [J Clin Exp Hematop. 52 \(3\): 171-7.](#)
26. Van den Bossche, J. *et al.* (2012) Claudin-1, claudin-2 and claudin-11 genes differentially associate with distinct types of anti-inflammatory macrophages *in vitro* and with parasite- and tumour-elicited macrophages *in vivo*. [Scand J Immunol. 75 \(6\): 588-98.](#)
27. Houthuys, E. *et al.* (2010) A method for the isolation and purification of mouse peripheral blood monocytes. [J Immunol Methods. 359 \(1-2\): 1-10.](#)
28. Greifernberg, V. *et al.* (2009) Myeloid-derived suppressor cell activation by combined LPS and IFN-gamma treatment impairs DC development. [Eur J Immunol. 39 \(10\): 2865-76.](#)
29. Cardona, S.M. *et al.* (2015) Disruption of Fractalkine Signaling Leads to Microglial Activation and Neuronal Damage in the Diabetic Retina. [ASN Neuro. 7 \(5\): pii: 1759091415608204.](#)
30. Waddell, A. *et al.* (2011) Colonic eosinophilic inflammation in experimental colitis is mediated by Ly6C(high) CCR2(+) inflammatory monocyte/macrophage-derived CCL11. [J Immunol. 186 \(10\): 5993-6003.](#)
31. Robbie, S.J. *et al.* (2016) Enhanced Ccl2-Ccr2 signaling drives more severe choroidal neovascularization with aging. [Neurobiol Aging. 40: 110-9.](#)
32. Cao, Y. *et al.* (2016) IL-1 β differently stimulates proliferation and multinucleation of distinct mouse bone marrow osteoclast precursor subsets. [J Leukoc Biol. 100 \(3\): 513-23.](#)
33. Cao, Y. *et al.* (2017) TNF- α has both stimulatory and inhibitory effects on mouse monocyte-derived osteoclastogenesis. [J Cell Physiol. May 20. \[Epub ahead of print\]](#)
34. Khedoe, P.P.S.J. *et al.* (2017) Acute and chronic effects of treatment with mesenchymal stromal cells on LPS-induced pulmonary inflammation, emphysema and atherosclerosis development. [PLoS One. 12 \(9\): e0183741.](#)

Storage	<p>Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. 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.</p>
Shelf Life	18 months from date of despatch.
Acknowledgements	<p>This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com</p>
Health And Safety Information	<p>Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf</p>
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA1212A647\)](#)

Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

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
----------------------------------	---	------------------	---	---------------	---

'M300537:170105'

Printed on 01 Aug 2018