

Datasheet: MCA2387A647T

Description:	RAT ANTI MOUSE Gr-1:Alexa Fluor® 647
Specificity:	Gr-1
Other names:	Ly-6G
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	RB6-8C5
Isotype:	IgG2b
Quantity:	25 TESTS/0.25ml

Product Details

RRID AB_2115660

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	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 Normal murine bone marrow cells.

External Database Links **UniProt:**

Entrez Gene:

Specificity

Rat anti Mouse Gr-1 antibody, clone RB6-8C5 recognizes the mouse Gr-1 antigen, a ~21–25 kDa GPI anchored cell surface protein bearing a single uPAR/Ly6 domain that belongs to the Ly-6 family of proteins ([Lee et al. 2013](#)). Rat anti Mouse Gr-1 antibody, clone RB6-8C5 reacts predominantly with the Ly-6G protein but weaker reactivity with the Ly-6C protein has been reported ([Fleming et al. 1993](#)). However, other observations dispute the cross-reactivity of clone RB6-8C5 with the Ly-6C protein with the alternative explanation that certain sub-populations of bone marrow cells simultaneously express both Ly-6C and Ly-6G ([Nagendra et al. 2007](#))

The Gr-1 antigen is primarily a marker of myeloid differentiation. In the bone marrow the level of Gr-1 expression is low on immature myeloblasts and increases as the myeloid cells mature to granulocytes. Gr-1 is also expressed on macrophages and transiently on differentiating monocytes.

Rat anti Mouse Gr-1 antibody, clone RB6-8C5 has been used successfully for the depletion of mature neutrophils *in vivo* ([Czuprynski et al 1994](#), [Daley et al. 2008](#)).

Flow Cytometry

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

References

1. Fleming, T.J. *et al.* (1993) Selective expression of Ly-6G on myeloid lineage cells in mouse bone marrow. RB6-8C5 mAb to granulocyte-differentiation antigen (Gr-1) detects members of the Ly-6 family. [J Immunol. 151 \(5\): 2399-408.](#)
2. Hestdal, K. *et al.* (1991) Characterization and regulation of RB6-8C5 antigen expression on murine bone marrow cells. [J Immunol. 147 \(1\): 22-8.](#)
3. Czuprynski, C.J. *et al.* (1994) Administration of anti-granulocyte mAb RB6-8C5 impairs the resistance of mice to *Listeria monocytogenes* infection. [J Immunol. 152 \(4\): 1836-46.](#)
4. Sumagin R *et al.* (2010) LFA-1 and Mac-1 define characteristically different intraluminal crawling and emigration patterns for monocytes and neutrophils *in situ*. [J Immunol. 185 \(11\): 7057-66.](#)
5. Takano, K. *et al.* (2011) Successful treatment of acute lung injury with pitavastatin in septic mice: potential role of glucocorticoid receptor expression in alveolar macrophages. [J Pharmacol Exp Ther. 336: 381-90.](#)
6. Giroux, M. *et al.* (2011) SMAD3 prevents graft-versus-host disease by restraining Th1 differentiation and granulocyte-mediated tissue damage. [Blood. 117: 1734-44.](#)
7. Suttman, H. *et al.* (2006) Neutrophil granulocytes are required for effective Bacillus Calmette-Guérin immunotherapy of bladder cancer and orchestrate local immune responses. [Cancer Res. 66: 8250-7.](#)
8. Nix, R.N. *et al.* (2007) Hemophagocytic macrophages harbor *Salmonella enterica* during persistent infection. [PLoS Pathog. 3: e193.](#)
9. Kanda, N. *et al.* (2011) Visfatin Enhances CXCL8, CXCL10, and CCL20 Production in Human Keratinocytes. [Endocrinology. 152: 3155-64.](#)
10. Conlan, J. and North, R. (1994) Neutrophils are essential for early anti-*Listeria* defense in the liver, but not in the spleen or peritoneal cavity, as revealed by a granulocyte-depleting monoclonal antibody. [J Exp Med. 179:259-68.](#)
11. Takebe, M. *et al.* (2014) Inhibition of histone deacetylases protects septic mice from lung and splenic apoptosis. [J Surg Res. 187 \(2\): 559-70.](#)
12. Francke, A. *et al.* (2011) Generation of mature murine monocytes from heterogeneous bone marrow and description of their properties. [J Histochem Cytochem. 59: 813-25.](#)
13. Sharp, P.E. *et al.* (2013) FcγRIIb on myeloid cells and intrinsic renal cells rather than B cells protects from nephrotoxic nephritis. [J Immunol. 190: 340-8.](#)

14. Hamers, A.A. *et al.* (2014) Limited role of nuclear receptor Nur77 in *Escherichia coli*-induced peritonitis. [Infect Immun. 82 \(1\): 253-64.](#)
15. Roche, J.A. *et al.* (2015) Myofiber damage precedes macrophage infiltration after *in vivo* injury in dysferlin-deficient *afj* mouse skeletal muscle. [Am J Pathol. 185 \(6\): 1686-98.](#)
16. Lee, Y.S. *et al.* (2015) Interleukin-1 (IL-1) signaling in intestinal stromal cells controls KC/CXCL1 secretion, which correlates with recruitment of IL-22- secreting neutrophils at early stages of *Citrobacter rodentium* infection. [Infect Immun. 83 \(8\): 3257-67.](#)
17. Heckelsmiller, K. *et al.* (2002) Combined dendritic cell- and CpG oligonucleotide-based immune therapy cures large murine tumors that resist chemotherapy. [Eur J Immunol. 32 \(11\): 3235-45.](#)
18. Zhang, M.Z. *et al.* (2015) Inhibition of cyclooxygenase-2 in hematopoietic cells results in salt-sensitive hypertension. [J Clin Invest. 125 \(11\): 4281-94.](#)
19. Leblond, A.L. *et al.* (2015) Systemic and Cardiac Depletion of M2 Macrophage through CSF-1R Signaling Inhibition Alters Cardiac Function Post Myocardial Infarction. [PLoS One. 10 \(9\): e0137515.](#)
20. Kojo, K. *et al.* (2016) BLT1 signalling protects the liver against acetaminophen hepatotoxicity by preventing excessive accumulation of hepatic neutrophils. [Sci Rep. 6: 29650.](#)
21. Otsuru, S. *et al.* (2017) Hematopoietic derived cells do not contribute to osteogenesis as osteoblasts. [Bone. 94: 1-9.](#)
22. Wang, Y. *et al.* (2015) Proximal tubule-derived colony stimulating factor-1 mediates polarization of renal macrophages and dendritic cells, and recovery in acute kidney injury. [Kidney Int. 88 \(6\): 1274-1282.](#)
23. Cousins, F.L. *et al.* (2016) Evidence for a dynamic role for mononuclear phagocytes during endometrial repair and remodelling. [Sci Rep. 6: 36748.](#)
24. Cotrina ML *et al.* (2017) Direct comparison of microglial dynamics and inflammatory profile in photothrombotic and arterial occlusion evoked stroke. [Neuroscience. 343: 483-94.](#)
25. Kamata, M. *et al.* (2019) Role of the high-affinity leukotriene B₄ receptor signaling in fibrosis after unilateral ureteral obstruction in mice. [PLoS One. 14 \(2\): e0202842.](#)
26. Natanov, R. *et al.* (2018) Blood cytokine expression correlates with early multi-organ damage in a mouse model of moderate hypothermia with circulatory arrest using cardiopulmonary bypass. [PLoS One. 13 \(10\): e0205437.](#)

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.

Guarantee

18 months from date of despatch.

Acknowledgements

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Health And Safety

Material Safety Datasheet documentation #10041 available at:

Information 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory For research purposes only

Related Products

Recommended Useful Reagents

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

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

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