

Datasheet: MCA2387AMO

Description:	RAT ANTI MOUSE Gr-1:Amethyst Orange
Specificity:	Gr-1
Other names:	Ly-6G
Format:	Amethyst Orange
Product Type:	Monoclonal Antibody
Clone:	RB6-8C5
Isotype:	IgG2b
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	▪			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 Amethyst Orange - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Amethyst Orange	405	540

Preparation

Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide (NaN₃)
1% Bovine Serum Albumin

Approx. Protein Concentrations

IgG concentration 0.1 mg/ml

Immunogen Normal murine bone marrow cells.

External Database

Links

UniProt:

[P35461](#) [Related reagents](#)

Entrez Gene:

[546644](#) Ly6g [Related reagents](#)

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 *a/j* 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.](#)
27. Idowu, T.O. *et al.* (2020) Identification of specific Tie2 cleavage sites and therapeutic modulation in experimental sepsis. [Elife. 9: e59520.](#)

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 12 months from date of despatch

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 Useful Reagents

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

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

North & South Tel: +1 800 265 7376

America 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

'M374369:201030'

Printed on 04 Jan 2021

© 2021 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)