

Biotin anti-mouse Ly-6G/Ly-6C (Gr-1) Antibody

Catalog# / Size	108403 / 50 µg 108404 / 500 µg
Clone	RB6-8C5
Regulatory Status	RUO
Other Names	Gr-1
Isotype	Rat IgG2b, κ
Description	Gr-1 is a 21-25 kD protein also known as Ly-6G/Ly-6C. This myeloid differentiation antigen is a glycosylphosphatidylinositol (GPI)-linked protein expressed on granulocytes and macrophages. In bone marrow, the expression levels of Gr-1 directly correlate with granulocyte differentiation and maturation; Gr-1 is also transiently expressed on bone marrow cells in the monocyte lineage. Immature Myeloid Gr-1+ cells play a role in the development of antitumor immunity.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Raised against granulocytes of mouse origin
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	FC - Quality tested IP, IHC, WB - Reported in the literature, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . The suggested use of this reagent is ≤ 0.25 µg per 10 ⁶ cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Clone RB6-8C5 binds with high affinity to mouse Ly-6G molecules and to a lower extent to Ly-6C ¹⁹ . Clone RB6-8C5 impairs the binding of anti-mouse Ly-6G clone 1A8 ¹⁹ . However, clone RB6-8C5 is able to stain in the presence of anti-mouse Ly-6C clone HK1.4 ²⁰ . The RB6-8C5 antibody has been used to identify peripheral blood neutrophils and deplete granulocytes <i>in vivo</i> . Additional reported applications (for relevant formats of this clone) include: <i>in vitro</i> complement-mediated cytotoxicity ² , <i>in vivo</i> depletion ^{3-5,9} , immunoprecipitation ¹ , immunohistochemical staining ⁶ (including paraffin-embedded sections ^{9,16,33-35} , acetone-fixed frozen sections ¹¹ and zinc-fixed sections ¹⁵), and Western blotting ⁷ . RB6-8C5 is not suitable for depletion of hepatic myeloid derived suppressor cells (MDSCs) ²⁰ . Special Note: For <i>in vivo</i> studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 108436).

Application References

(PubMed link indicates BioLegend citation)

1. Fleming TJ, *et al.* 1993. *J. Immunol.* 151:2399. (IP)
2. Brummer E, *et al.* 1984. *J. Leukocyte Biol.* 36:505. (CMCD)
3. Stoppacciaro A, *et al.* 1993. *J. Exp. Med.* 178:151. (Deplete)
4. Tumpey TM, *et al.* 1996. *J. Virol.* 70:898. (Deplete)
5. Czuprynski CJ, *et al.* 1994. *J. Immunol.* 152:1836. (Deplete)
6. Nitta H, *et al.* 1997. *Cell Vision* 4:73. (IHC)
7. Jutila MA, *et al.* 1988. *Eur. J. Immunol.* 18:1819. (WB)
8. Engwerda CR, *et al.* 2004. *Am. J. Pathol.* 165:2123.

9. Brown CR, *et al.* 2004. *Infect. Immun.* 72:4956. (Deplete, IHC)
10. Andoniou CE, *et al.* 2005. *Nature Immunology* 6:1011. (FC) [PubMed](#)
11. Li M, *et al.* 2006. *P. Natl. Acad. Sci USA* 103:11736. (IHC)
12. Dzhagalov I, *et al.* 2007. *Blood* 109:1620. (FC) [PubMed](#)
13. Fazilleau N, *et al.* 2007. *Nature Immunol.* 8:753. (FC) [PubMed](#)
14. Heuser M, *et al.* 2007. *Blood* 110:1639. (FC) [PubMed](#)
15. Wang T, *et al.* 2007. *Infect. Immun.* 75:1144. (IHC)
16. Bosio CM, *et al.* 2007. *J. Immunol.* 178:4538. (IHC)
17. Boehme SA, *et al.* 2009. *Int. Immunol.* 21:81. (IHC)
18. Piao Y, *et al.* 2012. *Neuro Oncol.* 14:1379. [PubMed](#)
19. Ribechini E, *et al.* 2009. *Eur. J. Immunol.* 39:3538.
20. Ma C, *et al.* 2012. *J. Leukoc. Biol.* 92:1199.
21. Li J, *et al.* 2012. *Arthritis Rheum.* 64:1098. [PubMed](#)
22. Fan Q, *et al.* 2014. *Cancer Res.* 74:471. [PubMed](#)
23. Korrer MJ, *et al.* 2014. *PLoS One.* 9:91370. [PubMed](#)
24. Morshed M, *et al.* 2014. *J Immunol.* 192:5314. [PubMed](#)
25. Collins C, *et al.* 2014. *PNAS.* 111:9899. [PubMed](#)
26. Madireddi S, *et al.* 2014. *J Exp Med.* 211:1433. [PubMed](#)
27. Bianchi G, *et al.* 2014. *Cell Death Dis.* 5:1135. [PubMed](#)
28. Guo H, *et al.* 2014. *J Leukoc Biol.* 96:419. [PubMed](#)
29. Roderick JE, *et al.* 2014. *PNAS.* 111:14436. [PubMed](#)
30. Distel E, *et al.* 2014. *Circ Res.* 115:759. [PubMed](#)
31. Iwai H, *et al.* 2015. *Tuberculosis.* 95:246. [PubMed](#)
32. Charmsaz S, *et al.* 2015. *PLoS One.* 10:130692. [PubMed](#)
33. Whiteland J, *et al.* 1994 *J Histochem Cytochem* 43:3 (IHC-P)
34. Brown C, *et al.* 2003 *J Immunology* 171:2 (IHC-P)
35. Obregon-Henao A, *et al.* PLoS One 8:11 (IHC-P)

Product Citations

1. Ishidome T *et al.* 2017. *EBioMedicine.* 22:89-99 . [PubMed](#)
2. Sevin M, *et al.* 2018. *Nat Commun.* 9:1431. [PubMed](#)
3. Bowers E, *et al.* 2018. *Nat Med.* 24:95. [PubMed](#)
4. Johnson JL *et al.* 2018. *Immunity.* 48(2):243-257 . [PubMed](#)
5. Tanimura N *et al.* 2018. *Developmental cell.* 46(5):581-594 . [PubMed](#)
6. Giambra V *et al.* 2018. *Cell stem cell.* 23(5):714-726 . [PubMed](#)
7. Li Q *et al.* 2018. *Immunity.* 48(2):258-270 . [PubMed](#)
8. Vasamsetti SB, *et al.* 2018. *Immunity.* 49:93. [PubMed](#)
9. Dietmar Herndler-Brandstetter *et al.* 2018. *Immunity.* 48(4):716-729 . [PubMed](#)
10. Luo W *et al.* 2018. *Immunity.* 48(2):313-326 . [PubMed](#)
11. Chen X *et al.* 2017. *Cell stem cell.* 21(6):747-760 . [PubMed](#)
12. Luo H, *et al.* 2019. *Cell Rep.* 26:945. [PubMed](#)
13. Parada-Kusz M, *et al.* 2018. *Dis Model Mech.* 11:. [PubMed](#)
14. Galle-Treger L, *et al.* 2019. *Nat Commun.* 10:713. [PubMed](#)
15. Chen Z, *et al.* 2019. *J Exp Med.* 216:152. [PubMed](#)
16. Moon H *et al.* 2017. *Cell stem cell.* 21(5):665-678 . [PubMed](#)
17. Patel MM, *et al.* 2018. *J Am Heart Assoc.* 7:e010690. [PubMed](#)
18. Mann M, *et al.* 2018. *Cell Rep.* 25:2992. [PubMed](#)
19. Dey A *et al.* 2019. *The EMBO journal.* 38(7) pii: e100293. [PubMed](#)
20. Kubota S, *et al.* 2019. *Nat Commun.* 10:1653. [PubMed](#)
21. Goldstein JM *et al.* 2019. *Cell reports.* 27(4):1254-1264 . [PubMed](#)
22. Ahmed AU, *et al.* 2017. *J Immunol.* 199(6):2128. [PubMed](#)
23. Ito K *et al.* 2019. *Cell Rep.* 28(10):2480-2490 . [PubMed](#)
24. Nagashima H *et al.* 2019. *Immunity.* 51(4):682-695 . [PubMed](#)
25. Säwen P *et al.* 2018. *eLife.* 7 pii: e41258. [PubMed](#)
26. Yu VWC, *et al.* 2017. *Cell.* 168:944. [PubMed](#)
27. Yu VWC *et al.* 2016. *Cell.* 167(5):1310-1322 . [PubMed](#)
28. Zhang C, *et al.* 2018. *Cell Res.* 28:323. [PubMed](#)
29. Zhu C, *et al.* 2018. *Sci Rep.* 5.113194444. [PubMed](#)
30. Davis FM, *et al.* 2019. *Arterioscler Thromb Vasc Biol.* 39:2353. [PubMed](#)
31. Hurrell BP, *et al.* 2019. *Cell Rep.* 29:4509. [PubMed](#)
32. Domingues AF, *et al.* 2020. *Elife.* 9:e51754. [PubMed](#)
33. Mikami H, *et al.* 2020. *Nat Commun.* 11:1162. [PubMed](#)
34. Frodermann V, *et al.* 2019. *Nat Med.* 25:1761. [PubMed](#)
35. Shin JW, *et al.* 2020. *Cell Death Dis.* 0.667361111. [PubMed](#)
36. He M, *et al.* 2020. *Cell Metabolism.* 31(3):580-591. [PubMed](#)
37. Fukushima T, *et al.* 2019. *Cell Rep.* 29:4144. [PubMed](#)
38. Frohner IE, *et al.* 2020. *Cell Rep.* 30:3171. [PubMed](#)
39. Andersen L, *et al.* 2020. *Cell Reports.* 29(13):4447-4459.e6.. [PubMed](#)
40. Akk A, *et al.* 2019. *Mol Immunol.* 114:629. [PubMed](#)
41. Getts D, *et al.* 2008. *J Exp Med.* 205:2319. [PubMed](#)
42. Michel A, *et al.* 2013. *J Immunol.* 90:5534. [PubMed](#)
43. Roderick J, *et al.* 2014. *Proc Natl Acad Sci U S A.* 111:14436. [PubMed](#)
44. Matsuzaki Y, *et al.* 2015. *Biomed Rep.* 1: 91 - 97. [PubMed](#)
45. Lutz J, *et al.* 2015. *Nat Commun.* 6: 8575. [PubMed](#)
46. Kitano M, *et al.* 2016. *Proc Natl Acad Sci U S A.* 113: 1044 - 1049. [PubMed](#)
47. Dubeykovskaya Z, *et al.* 2016. *Nat Commun.* 7:10517. [PubMed](#)
48. Olsson A, *et al.* 2016. *Nature.* 10.1038/nature19348. [PubMed](#)
49. Sochalska M, *et al.* 2016. *Oncogene.* 10.1038/onc.2016.362. [PubMed](#)
50. Zysset D, *et al.* 2016. *Nat Commun.* 7:13151. [PubMed](#)

51. Carr M, *et al.* 2016. Proc Natl Acad Sci U S A. 113(52):15024-15029. [PubMed](#)
52. Köchl R, *et al.* 2020. Elife. 9:00. [PubMed](#)
53. Khiew SH, *et al.* 2020. J Clin Invest. 130:3453. [PubMed](#)
54. Preglej T, *et al.* 2020. JCI Insight. 5(4):. [PubMed](#)
55. Milner JJ, *et al.* 2020. Immunity. 52(5):808-824.e7. [PubMed](#)
56. Gao Y, *et al.* 2020. Immunity. 52(6):1007-1021.e8. [PubMed](#)
57. Lefkopoulos S, *et al.* 2020. Immunity. 53(5):934-951.e9. [PubMed](#)
58. Olariu V, *et al.* 2021. Cell Reports. 34(2):108622. [PubMed](#)
59. Riether C, *et al.* 2021. Cell Reports. 34(4):108663. [PubMed](#)
60. Heyde A, *et al.* 2021. Cell. 184(5):1348-1361.e22. [PubMed](#)
61. Jassinskaja M, *et al.* 2021. Cell Reports. 34(12):108894. [PubMed](#)
62. Yi W, *et al.* 2021. Cell Reports. 34(13):108922. [PubMed](#)
63. Paiva RA, *et al.* 2021. Cell Reports. 35(2):108967. [PubMed](#)
64. Riedel SS, *et al.* 2021. Molecular Cell. 81(11):2332-2348.e9. [PubMed](#)

RRID AB_313368 (BioLegend Cat. No. 108403)
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Antigen Details

Structure	21-25 kD
Distribution	Granulocytes, monocytes
Cell Type	Granulocytes, Monocytes, Neutrophils
Biology Area	Immunology, Innate Immunity
Antigen References	<ol style="list-style-type: none"> 1. Fleming TJ, <i>et al.</i> 1993. <i>J. Immunol.</i> 151:2399. 2. Jutila MA, <i>et al.</i> 1988. <i>Eur. J. Immunol.</i> 18:1819. 3. Goni O, <i>et al.</i> 2002. <i>Int. Immunol.</i> 14:1125.
Gene ID	17067 546644

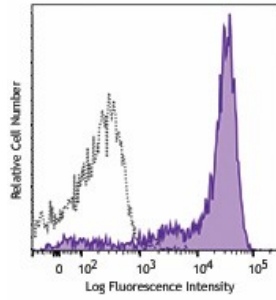
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-mouse Ly-6G/Ly-6C (Gr-1), Biotin anti-mouse Ly-6G/Ly-6C (Gr-1), FITC anti-mouse Ly-6G/Ly-6C (Gr-1), PE anti-mouse Ly-6G/Ly-6C (Gr-1), PE/Cyanine5 anti-mouse Ly-6G/Ly-6C (Gr-1), Purified anti-mouse Ly-6G/Ly-6C (Gr-1), PE/Cyanine7 anti-mouse Ly-6G/Ly-6C (Gr-1), Alexa Fluor® 488 anti-mouse Ly-6G/Ly-6C (Gr-1), Alexa Fluor® 647 anti-mouse Ly-6G/Ly-6C (Gr-1), Alexa Fluor® 700 anti-mouse Ly-6G/Ly-6C (Gr-1), Brilliant Violet 711™ anti-mouse Ly-6G/Ly-6C (Gr-1), APC/Cyanine7 anti-mouse Ly-6G/Ly-6C (Gr-1), Pacific Blue™ anti-mouse Ly-6G/Ly-6C (Gr-1), PerCP/Cyanine5.5 anti-mouse Ly-6G/Ly-6C (Gr-1), PerCP anti-mouse Ly-6G/Ly-6C (Gr-1), Brilliant Violet 421™ anti-mouse Ly-6G/Ly-6C (Gr-1), Brilliant Violet 570™ anti-mouse Ly-6G/Ly-6C (Gr-1), Ultra-LEAF™ Purified anti-mouse Ly-6G/Ly-6C (Gr-1), Brilliant Violet 510™ anti-mouse Ly-6G/Ly-6C (Gr-1), Brilliant Violet 605™ anti-mouse Ly-6G/Ly-6C (Gr-1), Brilliant Violet 650™ anti-mouse Ly-6G/Ly-6C (Gr-1), Alexa Fluor® 594 anti-mouse Ly-6G/Ly-6C (Gr-1), Purified anti-mouse Ly-6G/Ly-6C (Gr-1) (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse Ly-6G/Ly-6C (Gr-1), APC/Fire™ 750 anti-mouse Ly-6G/Ly-6C (Gr-1), TotalSeq™-A0116 anti-mouse Ly-6G/Ly-6C (Gr-1), TotalSeq™-C0116 anti-mouse Ly-6G/Ly-6C (Gr-1), TotalSeq™-B0116 anti-mouse Ly-6G/Ly-6C (Gr-1), Spark Blue™ 550 anti-mouse Ly-6G/Ly-6C (Gr-1), APC/Fire™ 810 anti-mouse Ly-6G/Ly-6C (Gr-1), Spark Violet™ 423 anti-mouse Ly-6G/Ly-6C (GR-1) Antibody, Spark UV™ 387 anti-mouse Ly-6G/Ly-6C (GR-1)

Product Data



C57BL/6 mouse bone marrow stained with biotinylated Ly-6G/Ly-6C (clone RB6-8C5, filled histogram) or biotinylated Rat IgG2b, κ isotype control (open histogram), followed by streptavidin PE.

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