

APC/Cyanine7 anti-mouse Ly-6G/Ly-6C (Gr-1) Antibody

Catalog# / Size	108423 / 25 µg 108424 / 100 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 APC/Cyanine7 under optimal conditions.
Concentration	0.2 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, 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.
Excitation Laser	Red Laser (633 nm)
Application Notes	<p>Clone RB6-8C5 binds with high affinity to mouse Ly-6G molecules and to a lower extent to Ly-6C¹⁹. Clone RB6-8C5 impairs the binding of anti-mouse Ly-6G clone 1A8¹⁹. However, clone RB6-8C5 is able to stain in the presence of anti-mouse Ly-6C clone HK1.4²⁰.</p> <p>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 cytotoxicity², <i>in vivo</i> depletion^{3-5,9}, immunoprecipitation¹, immunohistochemical staining⁶ (including paraffin-embedded sections^{9,16,33-35}, acetone-fixed frozen sections¹¹ and zinc-fixed sections¹⁵), and Western blotting⁷. RB6-8C5 is not suitable for depletion of hepatic myeloid derived suppressor cells (MDSCs)²⁰.</p> <p>Special Note: For <i>in vivo</i> studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 108436).</p>
Additional Product Notes	BioLegend is in the process of converting the name APC/Cy7 to APC/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our APC/Cyanine7 products. Please contact Technical Service if you have any questions.
Application References	1. Fleming TJ, <i>et al.</i> 1993. <i>J. Immunol.</i> 151:2399. (IP)

**(PubMed link indicates
BioLegend citation)**

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. Chung Y, *et al.* 2014. *J Vis Exp.* 89: 51660. [PubMed](#)
2. Hatzi K, *et al.* 2019. *Nat Immunol.* 20:86. [PubMed](#)
3. Jaitin DA, *et al.* 2020. *Cell.* 178(3):686-698.e14. [PubMed](#)
4. Viny AD, *et al.* 2019. *Cell Stem Cell.* 25:682. [PubMed](#)
5. Coleby R, *et al.* 2021. *Clin Exp Rheumatol.* :39. [PubMed](#)
6. Gu H, *et al.* 2021. *Immun Inflamm Dis.* 9:1686. [PubMed](#)
7. Leimkühler NB, *et al.* 2020. *Cell Stem Cell.* 28:637. [PubMed](#)
8. Liu J, *et al.* 2012. *PLoS One.* 7:e44044. [PubMed](#)
9. Bhattacharjee A, *et al.* 2019. *Commun Biol.* 2:450. [PubMed](#)
10. Pan W *et al.* 2017. *Immunity.* 47(2):284-297. [PubMed](#)
11. Mayers S, *et al.* 2019. *BMC Biotechnol.* 19:21. [PubMed](#)
12. Qiu F, *et al.* 2022. *J Cancer.* 13:2893. [PubMed](#)
13. Gabbita S, *et al.* 2015. *PLoS One.* 10: e0137305. [PubMed](#)
14. Kunimoto H, *et al.* 2018. *Cancer Cell.* 33:44. [PubMed](#)
15. Chen X *et al.* 2017. *Cell stem cell.* 21(6):747-760. [PubMed](#)
16. Kleppe M *et al.* 2018. *Cancer cell.* 33(1):29-43. [PubMed](#)
17. Lehmann M, *et al.* 2016. *J Leukoc Biol.* 99: 1057 - 1064. [PubMed](#)
18. Zhang C, *et al.* 2020. *Cell Rep.* 32:108206. [PubMed](#)
19. Vettorazzi S, *et al.* 2015. *Nat Commun.* 6: 7796. [PubMed](#)
20. Panea C, *et al.* 2021. *Commun Biol.* 4:913. [PubMed](#)
21. Liu Z, *et al.* 2021. *Immunity.* 54(2):247-258.e7. [PubMed](#)
22. Xiang W, *et al.* 2018. *Nat Commun.* 9:2574. [PubMed](#)
23. Firas J, *et al.* 2014. *Differentiation.* 87:193. [PubMed](#)
24. Jamali A, *et al.* 2020. *Cell Reports.* 32(9):108099. [PubMed](#)
25. Lin W, *et al.* 2019. *EBioMedicine.* 49:133. [PubMed](#)
26. Yahagi A, *et al.* 2019. *RMD Open.* 5:e000853. [PubMed](#)
27. Gagnon JD, *et al.* 2019. *Cell Rep.* 28:2169. [PubMed](#)
28. Tomay F, *et al.* 2019. *J Transl Med.* 17:237. [PubMed](#)
29. Chen Z, *et al.* 2019. *J Exp Med.* 216:152. [PubMed](#)
30. Yang S, *et al.* 2022. *J Exp Med.* 219:. [PubMed](#)
31. Huang J, *et al.* 2014. *J Immunol.* 192:1972. [PubMed](#)
32. Matthew B Buechler *et al.* 2019. *Immunity.* 51(1):119-130. [PubMed](#)
33. Zhang CR, *et al.* 2022. *Blood Cancer Discov.* 3:220. [PubMed](#)
34. Xu G, *et al.* 2022. *Front Pharmacol.* 13:896601. [PubMed](#)
35. Celik H, *et al.* 2018. *Cancer Cell.* 34:741. [PubMed](#)
36. Gerdes P, *et al.* 2022. *Nat Commun.* 13:7470. [PubMed](#)
37. van den Berk P, *et al.* 2020. *Cell Rep.* 33:108533. [PubMed](#)
38. Yoshida H, *et al.* 2019. *Cell.* 176:897. [PubMed](#)
39. Chao JL, *et al.* 2021. *Cell Rep Med.* 2:100399. [PubMed](#)
40. Jee JJ, *et al.* 2022. *Nat Commun.* 13:18. [PubMed](#)
41. Aryal B, *et al.* 2016. *Nat Commun.* 7:12313. [PubMed](#)
42. Chen S, *et al.* 2015. *Cancer Res.* 7: 519-531. [PubMed](#)
43. Kong IY, *et al.* 2020. *Cell Rep.* 33:108290. [PubMed](#)

44. Young K, *et al.* 2021. Cell Stem Cell. . [PubMed](#)
 45. Xiang W, *et al.* 2020. Signal Transduct Target Ther. 0.374305556. [PubMed](#)
 46. Ershaid N, *et al.* 2019. Nat Commun. 10:4375. [PubMed](#)
 47. Deets KA, *et al.* 2021. Elife. 10:. [PubMed](#)
 48. Liu Y, *et al.* 2021. Nat Commun. 12:6831. [PubMed](#)

RRID AB_2137486 (BioLegend Cat. No. 108423)
 AB_2137485 (BioLegend Cat. No. 108424)

Antigen Details

Structure	21-25 kD
Distribution	Granulocytes, monocytes
Cell Type	Granulocytes, Monocytes, Neutrophils
Biology Area	Immunology, Innate Immunity
Antigen References	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

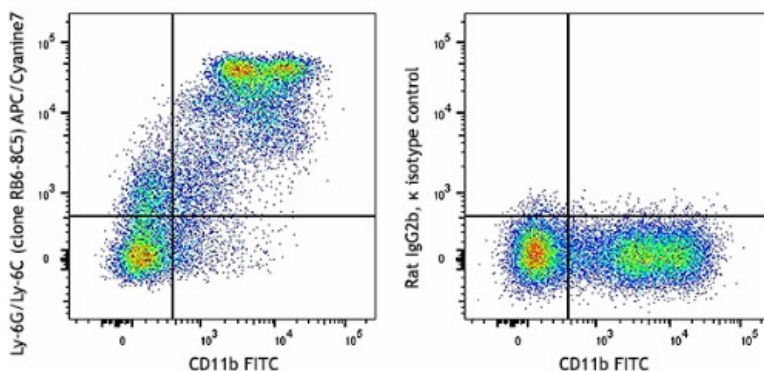
Related Protocols

[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 CD11b FITC and Ly-6G/Ly-6C (Gr-1) (clone RB6-8C5) APC/Cyanine7 (left) or Rat IgG2b, κ isotype control (right). Dot plots are gated on myeloid cell population.

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