

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

Catalog# / Size	108401 / 50 µg 108402 / 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.
Concentration	0.5 mg/ml
Storage & Handling	The Ly-6G/Ly-6C antibody solution should be stored undiluted between 2°C and 8°C.
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 . For flow cytometric staining, the suggested use of this reagent is ≤0.06 µg per million 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. Ritchie N, Ijaz U, and Evans T. 2017. *BMC Genomics.* 10.1186/s12864-017-4215-3. [PubMed](#)
2. Hawila E, *et al.* 2017. *Cell Rep.* 10.1016/j.celrep.2017.10.104. [PubMed](#)
3. Bachran C, *et al.* 2017. *Sci Rep.* 10.1038/s41598-017-17948-0. [PubMed](#)
4. Shevchenko MA, *et al.* 2018. *J Immunol Res.* 8:53. [PubMed](#)
5. Godoy-Calderón MJ, *et al.* 2018. *Oncotarget.* 8:11370. [PubMed](#)
6. Winter C, *et al.* 2018. *Cell Metab.* 28:175. [PubMed](#)
7. Chen X *et al.* 2017. *Cell stem cell.* 21(6):747-760. [PubMed](#)
8. Ronkina N, *et al.* 2019. *J Immunol.* 203:2291. [PubMed](#)
9. McCormick B, *et al.* 2019. *J Immunol.* 203:1579. [PubMed](#)
10. Sparber F *et al.* 2019. *British journal of pharmacology.* 176(11):1728-1744. [PubMed](#)
11. Dave K *et al.* 2017. *eLife.* 6 pii: e23382. [PubMed](#)
12. He X, *et al.* 2017. *Cancer Biol Ther.* 0.815277778. [PubMed](#)
13. Telford W, *et al.* 2017. *Cytometry A.* 91:314. [PubMed](#)
14. Rios-Doria J, *et al.* 2017. *Cancer Res.* 77:2686. [PubMed](#)
15. Periasamy S, *et al.* 2017. *Nat Commun.* 8:15564. [PubMed](#)
16. Akiel M, *et al.* 2017. *Cancer Res.* 77:4014. [PubMed](#)
17. Parigi SM, *et al.* 2018. *Sci Rep.* 0.440277778. [PubMed](#)
18. Cao Q, *et al.* 2018. *Am J Physiol Renal Physiol.* 314:F561. [PubMed](#)
19. Wicki S, *et al.* 2018. *Int J Mol Sci.* 1.266666667. [PubMed](#)
20. Pushalkar S, *et al.* 2018. *Cancer Discov.* 0.613194444. [PubMed](#)
21. Diao J, *et al.* 2018. *J Immunol.* 201:1306. [PubMed](#)
22. Zhao L, *et al.* 2018. *Nat Med.* 24:1536. [PubMed](#)
23. Ford J, *et al.* 2019. *Front Immunol.* 2.502083333. [PubMed](#)
24. Chen S, *et al.* 2018. *Immunohorizons.* 0.345138889. [PubMed](#)
25. Hwang BJ, *et al.* 2019. *Oncogene.* 38:7491. [PubMed](#)
26. Nederhoff MGJ, *et al.* 2019. *Auton Neurosci.* 221:102580. [PubMed](#)
27. Wolf Y, *et al.* 2017. *J Exp Med.* 214:905. [PubMed](#)
28. Lee YJ, *et al.* 2018. *Front Microbiol.* 9:83. [PubMed](#)
29. Zhang J, *et al.* 2019. *Onco Targets Ther.* 12:4985. [PubMed](#)
30. Shao Y, *et al.* 2017. *Onco Targets Ther.* 10:2675. [PubMed](#)
31. Wang W, *et al.* 2018. *Cancer Cell.* 34:757. [PubMed](#)
32. Yang SH, *et al.* 2017. *Front Immunol.* 8:1192. [PubMed](#)
33. Tsubaki T, *et al.* 2018. *Oncotarget.* 9:11209. [PubMed](#)
34. Umemoto T, *et al.* 2017. *EMBO J.* 36:2390. [PubMed](#)
35. Gautam J, *et al.* 2020. *J Neuroinflammation.* 17:103. [PubMed](#)
36. Mainini F, *et al.* 2018. *Nucleic Acid Ther.* 28:225. [PubMed](#)
37. Khan KA, *et al.* 2020. *NPJ Breast Cancer.* 6:29. [PubMed](#)
38. Hameed AM, *et al.* 2020. *Sci Rep.* 5.229166667. [PubMed](#)
39. Satoh-Takayama N, *et al.* 2020. *Immunity.* 52(4):635-649. [PubMed](#)
40. Arnold IC, *et al.* 2018. *J Exp Med.* 215:2055. [PubMed](#)
41. Matsuno Y, *et al.* 2007. *Am J Respir Crit Care Med.* 176:1015. [PubMed](#)
42. Arnold S, *et al.* 2008. *Exp Biol Med.* 233:860. [PubMed](#)
43. Piao Y, *et al.* 2012. *Neuro Oncology.* 14:1379. [PubMed](#)
44. Mori H, *et al.* 2015. *Toxicol Pathol.* 43: 883-889. [PubMed](#)
45. Alrefai H, *et al.* 2016. *Nat Commun.* 7:11724. [PubMed](#)
46. Artz A, Butz S, Vestweber D 2016. *Am J Physiol Renal Physiol.* 311: F176 - F181. [PubMed](#)
47. Weidner H, *et al.* 2020. *JCI Insight.* 5:00. [PubMed](#)
48. Zou C, *et al.* 2020. *Cell Rep.* 33:108447. [PubMed](#)
49. Bernal S, *et al.* 2020. *British Journal of Pharmacology.* 178(3):564-581. [PubMed](#)
50. Wang SS, *et al.* 2021. *Cell Chemical Biology.* 28(5):699-710.e5. [PubMed](#)

RRID AB_313366 (BioLegend Cat. No. 108401)
 AB_313367 (BioLegend Cat. No. 108402)

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, et al. 1993. <i>J. Immunol.</i> 151:2399. 2. Jutila MA, et al. 1988. <i>Eur. J. Immunol.</i> 18:1819. 3. Goni O, et al. 2002. <i>Int. Immunol.</i> 14:1125.
Gene ID	17067 546644

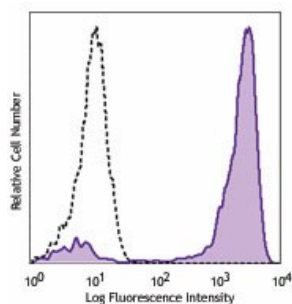
Related Protocols

[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 cells were stained with purified Ly-6G/Ly-6C (clone RB6-8C5) (filled histogram) or rat IgG2b, κ isotype control (open histogram), followed by anti-rat IgG FITC. Data shown was gated on myeloid cell population.

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