

Purified anti-human CD64 Antibody

Catalog# / Size	305002 / 100 µg
Clone	10.1
Regulatory Status	RUO
Workshop	VI MA36
Other Names	FcγRI, FcR I
Isotype	Mouse IgG1, κ
Description	CD64 is a 72 kD single chain type I glycoprotein also known as FcγRI and FcR I. CD64 is a member of the immunoglobulin superfamily and is expressed on monocytes/macrophages, dendritic cells, and activated granulocytes. The expression can be upregulated by IFN-γ stimulation. CD64 binds IgG immune complex. It plays a role in antigen capture, phagocytosis of IgG/antigen complexes, and antibody-dependent cellular cytotoxicity (ADCC).

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	Baboon, Capuchin Monkey, Chimpanzee, Squirrel Monkey
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Human rheumatoid synovial fluid cells and fibronectin-purified monocytes.
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 antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested IHC-F, Block - 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 ≤ 1.0 µg per 10 ⁶ cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Clone 10.1 recognizes the EC3 epitope of CD64. While both contain the EC3 domain, in-house testing suggests that clone 10.1 preferentially binds to CD64A (FcγRIA), but not CD64B (FcγRIB). Additional reported applications (for the relevant formats) include: blocking of human IgG3 and murine IgG2a binding to FcγRI ^{2,5,6,11} and immunohistochemical staining of acetone-fixed frozen tissue sections ¹² .
Application References	<ol style="list-style-type: none"> McMichael A, <i>et al.</i> Eds. 1987. Leucocyte Typing III. Oxford University Press. New York. Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. p. 874. Kishimoto T, <i>et al.</i> Eds. 1997. Leucocyte Typing VI. Garland Publishing Inc. London. Holl V, <i>et al.</i> 2004. <i>J. Immunol.</i> 173:6274. Hober D, <i>et al.</i> 2002. <i>J. Gen. Virol.</i> 83:2169. Cho HJ, <i>et al.</i> 2007. <i>Physiol Genomics</i> 149:60. van Tits L, <i>et al.</i> 2005. <i>Arterioscler Thromb Vasc Biol.</i> 25:717. PubMed Bruhns P, <i>et al.</i> 2008. <i>Blood</i> 113:3716. PubMed Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC) Carter DL, <i>et al.</i> 1999. <i>Cytometry</i> 37:41. (FC) Dougherty GJ, <i>et al.</i> 1987. <i>Eur. J. Immunol.</i> 17:1453. Blom AB, <i>et al.</i> 2003. <i>Arthritis Rheum.</i> 48(4):1002-14. (IHC)

Product Citations

1. Weinhage T, *et al.* 2020. *J Immunol.* 205:56. [PubMed](#)
2. Wagner J *et al.* 2019. *Cell.* 177(5):1330-1345 . [PubMed](#)
3. Rodriguez L, *et al.* 2020. *Cell Reports Medicine.* 1(5):100078. [PubMed](#)
4. Mann ER, *et al.* 2020. *Sci Immunol.* :5. [PubMed](#)
5. Vivanco Gonzalez N, *et al.* 2022. *STAR Protoc.* 3:101280. [PubMed](#)
6. van Tits L, *et al.* 2005. *Arterioscler Thromb Vasc Biol.* 25:717. [PubMed](#)
7. Chudnovskiy A *et al.* 2016. *Cell.* 167(2):444-456 . [PubMed](#)
8. Jog NR, *et al.* 2018. *Front Immunol.* 9:2198. [PubMed](#)
9. Olin A, *et al.* 2018. *Cell.* 174:1277. [PubMed](#)
10. Vermi W, *et al.* 2018. *Cancer Res.* 78:3544. [PubMed](#)
11. Prodjinotho UF, *et al.* 2017. *PLoS Negl Trop Dis.* 11:e0005777. [PubMed](#)
12. González LA, *et al.* 2021. *Front Immunol.* 12:638917. [PubMed](#)
13. Combes AJ, *et al.* 2021. *Nature.* 591:124. [PubMed](#)
14. Henrick BM, *et al.* 2021. *Cell.* . [PubMed](#)
15. Cho H, *et al.* 2007. *Physiol Genomics.* 29:149. [PubMed](#)
16. Evrard M *et al.* 2018. *Immunity.* 48(2):364-379 . [PubMed](#)
17. Steffen U, *et al.* 2020. *Nat Commun.* 0.541666667. [PubMed](#)
18. Chevrier S, *et al.* 2021. *Cell Reports Medicine.* 2(1):100166. [PubMed](#)
19. Keskin DB, *et al.* 2019. *Nature.* 565:234. [PubMed](#)
20. Keck S, *et al.* 2021. *Cellular and Molecular Gastroenterology and Hepatology.* 12(2):507-545. [PubMed](#)
21. Chen W, Pilling D, and Gomer R 2017. *BMC Immunol.* . 10.1186/s12865-017-0230-z [PubMed](#)
22. Chevrier S, *et al.* 2018. *Cell Syst.* 0.675. [PubMed](#)
23. Zhong Q, *et al.* 2018. *J Immunol.* 200:3913. [PubMed](#)
24. Bruhns P, *et al.* 2008. *Blood.* 101182. [PubMed](#)
25. Elias S, *et al.* 2018. *Oncoimmunology.* 9:416. [PubMed](#)

RRID

AB_314486 (BioLegend Cat. No. 305002)

Antigen Details

Structure	Ig superfamily, type I glycoprotein, 72 kD
Distribution	Monocytes, macrophages, dendritic cells, activated granulocytes
Function	Phagocytosis, ADCC
Ligand/Receptor	IgG receptor
Cell Type	Dendritic cells, Granulocytes, Macrophages, Monocytes
Biology Area	Immunology, Innate Immunity
Molecular Family	CD Molecules, Fc Receptors
Antigen References	1. Hulett M, <i>et al.</i> 1994. <i>Adv. Immunol.</i> 57:1. 2. van de Winkel J, <i>et al.</i> 1993. <i>Immunol. Today</i> 14:215.
Gene ID	2209

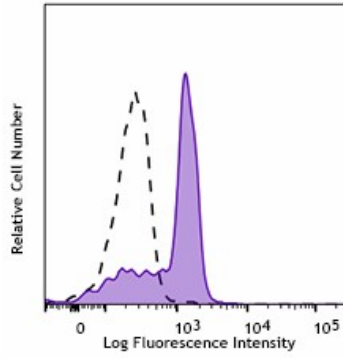
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Biotin anti-human CD64, FITC anti-human CD64, PE anti-human CD64, Purified anti-human CD64, Alexa Fluor® 488 anti-human CD64, Alexa Fluor® 647 anti-human CD64, APC anti-human CD64, Pacific Blue™ anti-human CD64, Brilliant Violet 421™ anti-human CD64, PE/Cyanine7 anti-human CD64, PerCP/Cyanine5.5 anti-human CD64, APC/Cyanine7 anti-human CD64, Brilliant Violet 510™ anti-human CD64, Purified anti-human CD64 (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD64, Brilliant Violet 605™ anti-human CD64, APC/Fire™ 750 anti-human CD64, TotalSeq™-A0162 anti-human CD64, Brilliant Violet 711™ anti-human CD64, Alexa Fluor® 700 anti-human CD64, Brilliant Violet 785™ anti-human CD64, TotalSeq™-C0162 anti-human CD64, Ultra-LEAF™ Purified anti-human CD64, TotalSeq™-B0162 anti-human CD64, TotalSeq™-D0162 anti-human CD64, GMP PE anti-human CD64, GMP FITC anti-human CD64

Product Data



Human peripheral blood monocytes were stained with CD64 (clone 10.1) Purified (filled histogram) or Purified Mouse IgG1, κ isotype control (open histogram) followed by anti-mouse IgG FITC

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587