

APC anti-human CD64 Antibody

Catalog# / Size	305013 / 25 tests 305014 / 100 tests
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 and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
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 5 μl per million cells in 100 μl staining volume or 5 μl per 100 μl of whole blood.
Excitation Laser	Red Laser (633 nm)
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"> 1. McMichael A, <i>et al.</i> Eds. 1987. Leucocyte Typing III. Oxford University Press. New York. 2. Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. p. 874. 3. Kishimoto T, <i>et al.</i> Eds. 1997. Leucocyte Typing VI. Garland Publishing Inc. London. 4. Holl V, <i>et al.</i> 2004. <i>J. Immunol.</i> 173:6274. 5. Hober D, <i>et al.</i> 2002. <i>J. Gen. Virol.</i> 83:2169. 6. Cho HJ, <i>et al.</i> 2007. <i>Physiol Genomics</i> 149:60. 7. van Tits L, <i>et al.</i> 2005. <i>Arterioscler Thromb Vasc Biol.</i> 25:717. PubMed 8. Bruhns P, <i>et al.</i> 2008. <i>Blood</i> 113:3716. PubMed 9. Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC)
(PubMed link indicates BioLegend citation)	

10. Carter DL, *et al.* 1999. *Cytometry* 37:41. (FC)
11. Dougherty GJ, *et al.* 1987. *Eur. J. Immunol.* 17:1453.
12. Blom AB, *et al.* 2003. *Arthritis Rheum.* 48(4):1002-14. (IHC)

Product Citations

1. Shapiro H, *et al.* 2013. *J Clin Endocrinol Metab.* 98:1173. [PubMed](#)
2. Pecht T, *et al.* 2016. *PLoS One.* 11: 0159350. [PubMed](#)
3. Hultmark S, *et al.* 2020. *Haematologica.* . [PubMed](#)
4. Hintz HM, *et al.* 2021. *Cancer Immunol Res.* 9:1270. [PubMed](#)
5. Bourdely P, *et al.* 2020. *Immunity.* 53(2):335-352. [PubMed](#)
6. Wißfeld J, *et al.* 2021. *Glia.* 69:1393. [PubMed](#)
7. Wegner J, *et al.* 2021. *Sci Rep.* 11:14983. [PubMed](#)
8. Hoepel W, *et al.* 2021. *Sci Transl Med.* 13: . [PubMed](#)
9. Carestia A, *et al.* 2019. *Cell Rep.* 28:896. [PubMed](#)
10. Wagner K, *et al.* 2014. *Proc Natl Acad Sci U S A.* 111:16820. [PubMed](#)
11. Mathewson ND, *et al.* 2021. *Cell.* 184(5):1281-1298.e26. [PubMed](#)
12. Medeiros-Furquim T, *et al.* 2022. *Front Immunol.* 13:678817. [PubMed](#)

RRID

AB_1595539 (BioLegend Cat. No. 305013)
 AB_1595428 (BioLegend Cat. No. 305014)

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	<ol style="list-style-type: none"> 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

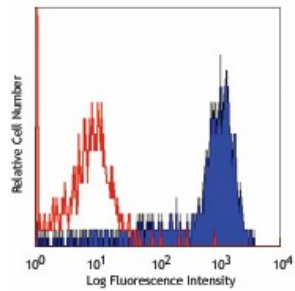
[Cell Surface Flow Cytometry Staining Protocol](#)

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
stained with 10.1 APC



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