

## Ultra-LEAF™ Purified anti-human CD64 Antibody

<b>Catalog# / Size</b>	305047 / 100 µg 305048 / 1 mg
<b>Clone</b>	10.1
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	VI MA36
<b>Other Names</b>	FcγRI, FcR I
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	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

<b>Verified Reactivity</b>	Human, Cynomolgus, Rhesus
<b>Reported Reactivity</b>	Baboon, Capuchin Monkey, Chimpanzee, Squirrel Monkey
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Human rheumatoid synovial fluid cells and fibronectin-purified monocytes.
<b>Formulation</b>	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is <0.01 EU/µg of the protein (<0.001 ng/µg of the protein) as determined by the LAL test.
<b>Preparation</b>	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.
<b>Concentration</b>	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL. Older lots may have also been bottled at 1 mg/mL. To obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
<b>Application</b>	<a href="#">FC - Quality tested</a> <a href="#">IHC-F, Block - Reported in the literature, not verified in house</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is ≤ 0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	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 <sup>2,5,6,11</sup> and immunohistochemical staining of acetone-fixed frozen tissue sections <sup>12</sup> .
<b>Application References</b>	<ol style="list-style-type: none"> <li>McMichael A, <i>et al.</i> Eds. 1987. Leucocyte Typing III. Oxford University Press. New York.</li> <li>Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. p. 874.</li> <li>Kishimoto T, <i>et al.</i> Eds. 1997. Leucocyte Typing VI. Garland Publishing Inc. London.</li> <li>Holl V, <i>et al.</i> 2004. <i>J. Immunol.</i> 173:6274.</li> <li>Hober D, <i>et al.</i> 2002. <i>J. Gen. Virol.</i> 83:2169.</li> <li>Cho HJ, <i>et al.</i> 2007. <i>Physiol Genomics</i> 149:60.</li> <li>van Tits L, <i>et al.</i> 2005. <i>Arterioscler Thromb Vasc Biol.</i> 25:717. <a href="#">PubMed</a></li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

8. Bruhns P, *et al.* 2008. *Blood* 113:3716. [PubMed](#)
9. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
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. Yamin R, *et al.* 2021. *Nature.* 599:465. [PubMed](#)
2. Caielli S, *et al.* 2021. *Cell.* 184(17):4464-4479.e19. [PubMed](#)
3. Gruber CN, *et al.* 2020. *Cell.* 183:982. [PubMed](#)
4. Gimpel AK, *et al.* 2022. *Front Immunol.* 12:761816. [PubMed](#)

#### RRID

AB\_2810455 (BioLegend Cat. No. 305047)  
 AB\_2810456 (BioLegend Cat. No. 305048)

## Antigen Details

<b>Structure</b>	Ig superfamily, type I glycoprotein, 72 kD
<b>Distribution</b>	Monocytes, macrophages, dendritic cells, activated granulocytes
<b>Function</b>	Phagocytosis, ADCC
<b>Ligand/Receptor</b>	IgG receptor
<b>Cell Type</b>	Dendritic cells, Granulocytes, Macrophages, Monocytes
<b>Biology Area</b>	Immunology, Innate Immunity
<b>Molecular Family</b>	CD Molecules, Fc Receptors
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Hulett M, <i>et al.</i> 1994. <i>Adv. Immunol.</i> 57:1.</li> <li>2. van de Winkel J, <i>et al.</i> 1993. <i>Immunol. Today</i> 14:215.</li> </ol>
<b>Gene ID</b>	<a href="#">2209</a>

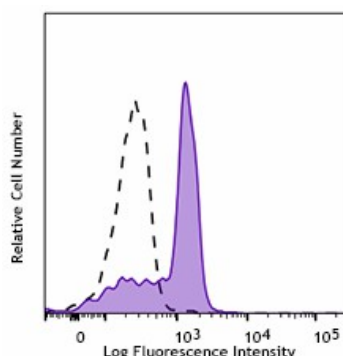
## Related Protocols

[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

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