

## Brilliant Violet 421™ anti-human CD64 Antibody

<b>Catalog# / Size</b>	305019 / 25 tests 305020 / 100 tests
<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>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions.
<b>Concentration</b>	Lot-specific (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, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	<p>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 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.</p> <p>Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.</p> <p><a href="#">Learn more about Brilliant Violet™.</a></p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
<b>Excitation Laser</b>	Violet Laser (405 nm)
<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>.

## Application References

(PubMed link indicates BioLegend citation)

1. McMichael A, *et al.* Eds. 1987. Leucocyte Typing III. Oxford University Press. New York.
2. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. p. 874.
3. Kishimoto T, *et al.* Eds. 1997. Leucocyte Typing VI. Garland Publishing Inc. London.
4. Höll V, *et al.* 2004. *J. Immunol.* 173:6274.
5. Hober D, *et al.* 2002. *J. Gen. Virol.* 83:2169.
6. Cho HJ, *et al.* 2007. *Physiol Genomics* 149:60.
7. van Tits L, *et al.* 2005. *Arterioscler Thromb Vasc Biol.* 25:717. [PubMed](#)
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. Zhu B, *et al.* 2021. *Immunity.* 54(6):1200-1218.e9. [PubMed](#)
2. Abdul-Jawad S, *et al.* 2021. *Cancer Cell.* 39(2):257-275.e6. [PubMed](#)
3. Laing AG, *et al.* 2020. *Nat Med.* 26:1623. [PubMed](#)
4. Huynh L, *et al.* 2016. *Sci Rep.* 6:31959. [PubMed](#)

## RRID

AB\_2561538 (BioLegend Cat. No. 305019)  
AB\_2561828 (BioLegend Cat. No. 305020)

## 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>	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.
<b>Gene ID</b>	<a href="#">2209</a>

## Related Protocols

---

[Cell Surface Flow Cytometry Staining Protocol](#)

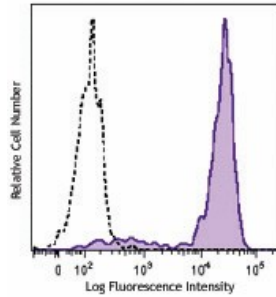
## Other Formats

---

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) Brilliant Violet 421™ (filled histogram) or mouse IgG1 Brilliant Violet 421™ isotype control (open histogram).

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](http://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](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587