

## Brilliant Violet 421™ anti-human CD163 Antibody

<b>Catalog# / Size</b>	333611 / 25 tests 333612 / 100 tests
<b>Clone</b>	GHI/61
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	VI M38
<b>Other Names</b>	GHI/61, M130, RM3/1, p155, Hemoglobin/Haptoglobin Complex Receptor, macrophage-associated antigen, ED2(rat)
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	CD163 is a member of the group B scavenger receptor cysteine-rich superfamily, also known as GHI/61, M130, RM3/1, p155, hemoglobin-haptoglobin complex receptor, or macrophage-associated antigen. It is a 134 kD (non-reduced)/155 kD (reduced) glycoprotein primarily expressed on macrophages, Kupffer cells, monocytes, a subset of dendritic cells, and a subset of hematopoietic stem/progenitor cells. CD163 binds to haptoglobin-hemoglobin complex and TWEAK, and plays a role in clearing hemoglobin and regulating cytokine production by macrophages. Membrane CD163 can be cleaved by metalloproteinases (MMP), resulting in a soluble form. Elevated serum level of sCD163 has been implicated in many kinds of inflammatory diseases.

### Product Details

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<b>Verified Reactivity</b>	Human, Cynomolgus, Rhesus
<b>Reported Reactivity</b>	African Green
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<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 GHI/61 binds to domain 7 of CD163. Additional reported applications (for the relevant

formats) include: immunocytochemical staining, immunoprecipitation, western blot<sup>1</sup>, and spatial biology (IBEX)<sup>6,7</sup>.

## Application References

(PubMed link indicates BioLegend citation)

1. Pulford K, *et al.* 1992. *Immunology* 75:588. (ICC, IP, WB)
2. Law SK, *et al.* 1993. *Eur. J. Immunol.* 23:2320.
3. Madsen M, *et al.* 2004. *J. Biol. Chem.* 279:51561.
4. Kim WK, *et al.* 2006. *Am. J. Pathol.* 168:822. (FC)
5. Buttari B, *et al.* 2011. *Atherosclerosis.* 215:316. [PubMed](#)
6. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
7. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

## Product Citations

1. Oostindie SC, *et al.* 2022. *Nat Biotechnol.* .: [PubMed](#)
2. Vitallé J, *et al.* 2017. *Front Immunol.* 8:836. [PubMed](#)
3. Nyazika TK, *et al.* 2022. *Front Immunol.* 13:992659. [PubMed](#)
4. Eriksson E, *et al.* 2016. *Gene Ther.* 10.1038/gt.2016.80. [PubMed](#)
5. Eriksson E, *et al.* 2019. *J Immunol.* 202:787. [PubMed](#)
6. Hofbauer D, *et al.* 2021. *Immunity.* 54(8):1772-1787.e9. [PubMed](#)
7. Rodríguez E, *et al.* 2022. *Commun Biol.* 5:41. [PubMed](#)
8. Liakopoulos V, *et al.* 2018. *Sci Rep.* 8:13964. [PubMed](#)
9. Wang X, *et al.* 2022. *Cancer Gene Ther.* Online ahead of print. [PubMed](#)
10. Rizzo MD, *et al.* 2018. *AIDS.* 32:419. [PubMed](#)
11. Xiao R, *et al.* 2022. *Nat Commun.* 13:4661. [PubMed](#)
12. Xu D, *et al.* 2021. *Front Oncol.* 11:738607. [PubMed](#)
13. Deniset JF *et al.* 2019. *Immunity.* 51(1):131-140. [PubMed](#)

## RRID

AB\_2562462 (BioLegend Cat. No. 333611)  
AB\_2562463 (BioLegend Cat. No. 333612)

## Antigen Details

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<b>Structure</b>	134 kD (non-reduced)/155 kD (reduced) glycoprotein, scavenger receptor superfamily
<b>Distribution</b>	Monocytes, macrophages, Kuffer cells, subset of dendritic cells, subset of hematopoietic stem/progenitor cells
<b>Function</b>	Clearance of haptoglobin-hemoglobin complex, regulation of cytokine production by macrophages
<b>Ligand/Receptor</b>	Haptoglobin-hemoglobin complex, TWEAK
<b>Cell Type</b>	Dendritic cells, Hematopoietic stem and progenitors, Macrophages, Monocytes
<b>Biology Area</b>	Cell Biology, Immunology, Innate Immunity, Neuroscience, Neuroscience Cell Markers
<b>Molecular Family</b>	CD Molecules
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Roth J, <i>et al.</i> 1994 <i>Transplantation.</i> 57:127</li><li>2. Van den Heuvel MM, <i>et al.</i> 1999 <i>J. Leukoc. Biol.</i> 66:858</li><li>3. Sulahian TH, <i>et al.</i> 2000 <i>Cytokines</i> 12:1312</li><li>4. Fabrick BO, <i>et al.</i> 2007 <i>J. Neuroimmunol.</i> 187:179</li></ol>
<b>Gene ID</b>	<a href="#">9332</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

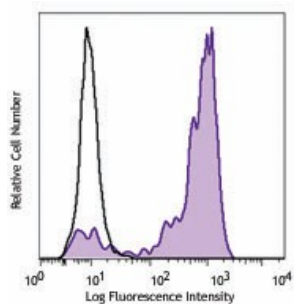
## Other Formats

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PerCP anti-human CD163, Purified anti-human CD163, Biotin anti-human CD163, PE anti-human CD163, PerCP/Cyanine5.5 anti-human CD163, APC anti-human CD163, Brilliant Violet 421™ anti-human CD163, PE/Cyanine7 anti-human CD163, Brilliant Violet 605™ anti-human CD163, FITC anti-human CD163, Alexa Fluor® 647 anti-human CD163, APC/Cyanine7 anti-human CD163, PE/Dazzle™ 594 anti-human CD163, Brilliant Violet 510™ anti-human CD163, Brilliant Violet 711™ anti-human CD163, Brilliant Violet 785™ anti-human CD163, APC/Fire™ 750 anti-human CD163, TotalSeq™-A0358 anti-human CD163, TotalSeq™-C0358 anti-human CD163, TotalSeq™-B0358 anti-human CD163, PE/Cyanine5 anti-human CD163, TotalSeq™-D0358 anti-human CD163

## Product Data

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Human peripheral blood monocytes were stained with CD163 (clone GHI/63) Brilliant Violet 421™ (filled histogram) or mouse IgG1, κ Brilliant Violet 421™ isotype control (open histogram).

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Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587