

## Brilliant Violet 421™ anti-human CD1c Antibody

<b>Catalog# / Size</b>	331525 / 25 tests 331526 / 100 tests
<b>Clone</b>	L161
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	V T-CD01.18
<b>Other Names</b>	R7, M241, BDCA-1
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	CD1c, also known as R7 or M241, is a 43 kD member of the five CD1 antigens (CD1a-e) in humans. The CD1 molecules are type I glycoprotein with structural similarities to MHC class I and are non-covalently associated with $\beta_2$ -microglobulin, belonging to the Ig superfamily. CD1c is expressed on cortical thymocytes, Langerhans cells, dendritic cells, and a subset of B cells. It has been reported that CD1c is also expressed on mature T cells in a tightly regulated manner. CD1c is involved in antigen-presentation of glycolipids. It may also act in T cells as an immune regulatory molecule.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	African Green, Baboon, Cynomolgus, Rhesus
<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 <math>\mu</math>l per million cells in 100 <math>\mu</math>l staining volume or 5 <math>\mu</math>l per 100 <math>\mu</math>l 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>	Additional reported applications (for the relevant formats) include: immunohistochemical staining on frozen tissue <sup>4,5</sup> , formalin-fixed paraffin-embedded immunohistochemical staining <sup>6</sup> , and spatial biology (IBEX) <sup>7,8</sup> .

## Application References

(PubMed link indicates BioLegend citation)

1. del C Salamone M, *et al.* 2001. *J Leukoc Biol.* 70:567.
2. de Fraissinette A, *et al.* 1988. *Exp Hematol.* 16:764.
3. Li D, *et al.* 2012. *J Exp Med.* 209:109. [PubMed](#)
4. Xu C, *et al.* 2010. *Am J Hematol.* 85:539 (IHC-F)
5. Gerlini G, *et al.* 2001. *J Invest Dermatol.* 117:576 (IHC-F)
6. Poposki J, *et al.* 2016. *Clin Exp Allergy* 45:384 (IHC-P) [PubMed](#)
7. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
8. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

## Product Citations

1. Cignarella F *et al.* 2018. *Cell metabolism.* 27(6):1222-1235. [PubMed](#)
2. Montes de Oca M, *et al.* 2016. *Cell Rep.* 17:399-412. [PubMed](#)
3. Esaulova E, *et al.* 2020. *Cell Host Microbe.* 29(2):165-178.e8. [PubMed](#)
4. Obradovic A, *et al.* 2021. *Cell.* 184(11):2988-3005.e16. [PubMed](#)
5. McCracken M, *et al.* 2017. *PLoS Pathog.* 10.1371/journal.ppat.1006487. [PubMed](#)
6. Mulder K, *et al.* 2021. *Immunity.* 54(8):1883-1900.e5. [PubMed](#)
7. Sharma A, *et al.* 2020. *Cell.* 183(2):377-394.e21. [PubMed](#)
8. Lim CX, *et al.* 2020. *Cell Rep.* 3793:30. [PubMed](#)
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12. Ohmatsu H, *et al.* 2017. *Oncoimmunology.* 6:e1181237. [PubMed](#)
13. Wimmers F, *et al.* 2021. *Cell.* 184:3915. [PubMed](#)
14. Domanska D, *et al.* 2022. *J Exp Med.* 219:. [PubMed](#)
15. Abd Hamid M *et al.* 2019. *Cancer Immunol Res.* 7(8):1293-1306. [PubMed](#)
16. Dutertre CA, *et al.* 2020. *Immunity.* 51(3):573-589.e8.. [PubMed](#)

## RRID

AB\_10933249 (BioLegend Cat. No. 331525)  
AB\_10962909 (BioLegend Cat. No. 331526)

## Antigen Details

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<b>Structure</b>	43 kD, Ig superfamily, MHC I-like molecule, associates with $\beta$ 2-microglobulin
<b>Distribution</b>	B cell subset, cortical thymocytes, dendritic cells, and Langerhans cells
<b>Function</b>	Presents lipid antigen to CD1c-restricted T cells
<b>Ligand/Receptor</b>	CD1c-restricted TCR
<b>Cell Type</b>	B cells, Dendritic cells, Langerhans cells, Thymocytes
<b>Biology Area</b>	Immunology
<b>Molecular Family</b>	CD Molecules
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Fainboim LM and del C. Salamone. 2002. <i>J. Biol. Reg. Homeos. Ag.</i> 16:125.</li><li>2. M. del Salamone C, <i>et al.</i> 2001. <i>J. Leukocyte Biol.</i> 70:567.</li><li>3. Zola H, <i>et al.</i> Eds. 2007. <i>Leukocyte and Stromal Cell Molecules: The CD Markers.</i> P42.</li></ol>
<b>Gene ID</b>	<a href="#">911</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

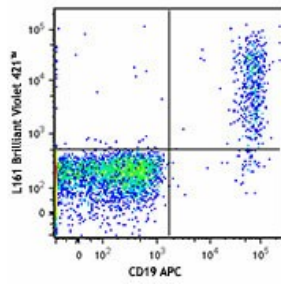
## Other Formats

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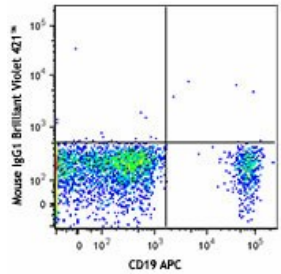
PerCP anti-human CD1c, Purified anti-human CD1c, Biotin anti-human CD1c, PE anti-human CD1c, Pacific Blue™ anti-human CD1c, Alexa Fluor® 647 anti-human CD1c, PerCP/Cyanine5.5 anti-human CD1c, Brilliant Violet 421™ anti-human CD1c, PE/Cyanine7 anti-human CD1c, FITC anti-human CD1c, APC/Cyanine7 anti-human CD1c, APC anti-human CD1c, Alexa Fluor® 488 anti-human CD1c, Alexa Fluor® 700 anti-human CD1c, PE/Dazzle™ 594 anti-human CD1c, Brilliant Violet 510™ anti-human CD1c, Brilliant Violet 605™ anti-human CD1c, Brilliant Violet 711™ anti-human CD1c, TotalSeq™-A0160 anti-human CD1c, Brilliant Violet 650™ anti-human CD1c, Brilliant Violet 785™ anti-human CD1c, APC/Fire™ 750 anti-human CD1c, TotalSeq™-C0160 anti-human CD1c, TotalSeq™-B0160 anti-human CD1c, TotalSeq™-D0160 anti-human CD1c, PE/Cyanine5 anti-human CD1c

## Product Data

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Human peripheral blood lymphocytes were stained with CD19 APC and CD1c (clone L161) Brilliant Violet 421™ (top) or mouse IgG1 Brilliant Violet 421™ isotype control (bottom).



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