

PE anti-human CD1c Antibody

Catalog# / Size	331505 / 25 tests 331506 / 100 tests
Clone	L161
Regulatory Status	RUO
Workshop	V T-CD01.18
Other Names	R7, M241, BDCA-1
Isotype	Mouse IgG1, κ
Description	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 β 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

Verified Reactivity	Human, African Green, Baboon, Cynomolgus, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
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 PE 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 SB - Reported in the literature, not verified in house
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 μ l per million cells in 100 μ l staining volume or 5 μ l per 100 μ l of whole blood.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunohistochemical staining on frozen tissue ^{4,5} , formalin-fixed paraffin-embedded immunohistochemical staining ⁶ , and spatial biology (IBEX) ^{7,8} .
Additional Product Notes	Iterative Bleaching Extended multi-pleXity (IBEX) is a fluorescent imaging technique capable of highly-multiplexed spatial analysis. The method relies on cyclical bleaching of panels of fluorescent antibodies in order to image and analyze many markers over multiple cycles of staining, imaging, and, bleaching. It is a community-developed open-access method developed by the Center for Advanced Tissue Imaging (CAT-I) in the National Institute of Allergy and Infectious Diseases (NIAID, NIH).
Application References	1. del C Salamone M, <i>et al.</i> 2001. <i>J Leukoc Biol.</i> 70:567. 2. de Fraissinette A, <i>et al.</i> 1988. <i>Exp Hematol.</i> 16:764. 3. Li D, <i>et al.</i> 2012. <i>J Exp Med.</i> 209:109. PubMed 4. Xu C, <i>et al.</i> 2010. <i>Am J Hematol.</i> 85:539 (IHC-F)
(PubMed link indicates BioLegend citation)	

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. Lin JR *et al.* 2018. *eLife.* 7 pii: e31657. [PubMed](#)
2. Costa A *et al.* 2018. *Cancer cell.* 33(3):463-479 . [PubMed](#)
3. Magri G *et al.* 2017. *Immunity.* 47(1):118-134 . [PubMed](#)
4. Rusconi M, *et al.* 2017. *Sci Rep.* 5.745138889. [PubMed](#)
5. Hartman AL, *et al.* 2020. *PLoS Pathog.* 16:e1008903. [PubMed](#)
6. Schröder M, *et al.* 2016. *PLoS One.* 11: 0157387. [PubMed](#)
7. Barman S, *et al.* 2016. *Int Immunol.* 28: 533 - 545. [PubMed](#)

RRID

AB_1089000 (BioLegend Cat. No. 331505)
 AB_1088999 (BioLegend Cat. No. 331506)

Antigen Details

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

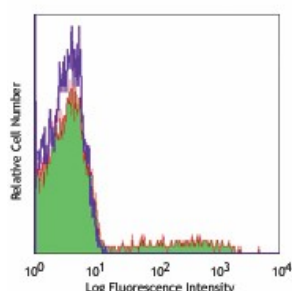
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

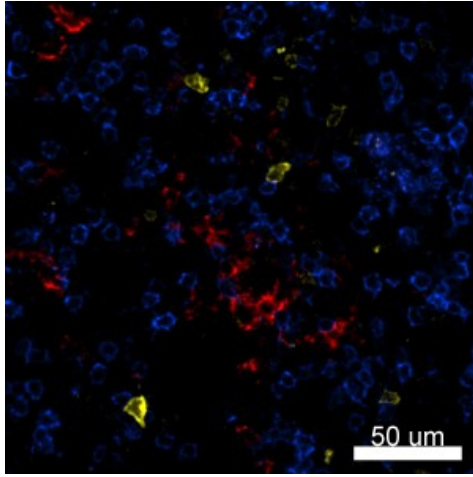
Other Formats

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, Purified anti-human CD1c, Biotin anti-human CD1c, PE anti-human CD1c, Pacific Blue™ anti-human CD1c, Alexa Fluor® 647 anti-human CD1c, PerCP anti-human CD1c, PerCP/Cyanine5.5 anti-human CD1c, PE/Cyanine7 anti-human CD1c, FITC anti-human CD1c, APC/Cyanine7 anti-human CD1c, Alexa Fluor® 488 anti-human CD1c, APC anti-human CD1c, Brilliant Violet 421™ anti-human CD1c, Alexa Fluor® 700 anti-human CD1c

Product Data



Human peripheral blood lymphocytes
 stained with L161 PE



Confocal image of human lymph node sample acquired using the IBEX method of highly multiplexed antibody-based imaging: CD1c (red) in Cycle 3, CD8 (blue) in Cycle 4, and CD25 (yellow) in Cycle 4. Tissues were prepared using ~1% (vol/vol) formaldehyde and a detergent. Following fixation, samples are immersed in 30% (wt/vol) sucrose for cryoprotection. Images are courtesy of Drs. Andrea J. Radtke and Ronald N. Germain of the Center for Advanced Tissue Imaging (CAT-I) in the National Institute of Allergy and Infectious Diseases (NIAID, NIH).

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