

PE/Cyanine7 anti-mouse CD11c Antibody

Catalog# / Size	117317 / 25 µg 117318 / 100 µg
Clone	N418
Regulatory Status	RUO
Other Names	αX integrin, integrin αX chain, CR4, p150, ITGAX
Isotype	Armenian Hamster IgG
Description	CD11c is a 150 kD glycoprotein also known as αX integrin, CR4, and p150. CD11c forms a αXβ2 heterodimer with β2 integrin (CD18). It is primarily expressed on dendritic cells, NK cells, a subset of intestinal intraepithelial lymphocytes (IEL), and some activated T cells. The αXβ2 integrin plays an important role in cell-cell contact by binding its ligands: iC3b, fibrinogen, and CD54.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Armenian Hamster
Immunogen	Mouse spleen dendritic cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with PE/Cyanine7 under optimal conditions.
Concentration	0.2 mg/ml
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
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 = 0.25 µg per 10 ⁶ cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for other applications.
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: immunoprecipitation ³ , immunohistochemical staining of acetone-fixed frozen sections ³ , immunofluorescence microscopy ^{5,9} (Alexa Fluor® 488 conjugated N418 was used for IHC in frozen sections ¹⁰), and spatial biology (IBEX) ^{22,23} .
Additional Product Notes	View more applications data for this product in our Scientific Poster Library .
	BioLegend is in the process of converting the name PE/Cy7 to PE/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine7 products. Please contact Technical Service if you have any questions.

Application References

(PubMed link indicates BioLegend citation)

1. Granucci F, *et al.* 1997. *J. Immunol.* 159:1794.
2. Stokes RW, *et al.* 1998. *J. Immunol.* 160:5514.
3. Metlay JP, *et al.* 1990. *J. Exp. Med.* 171:1753. (IHC, IP)
4. Ma XT, *et al.* 2006. *Cancer Research* 66:1169.
5. Chin RK, *et al.* 2006. *J. Immunol.* 177:290. (IF)

6. Cervantes-Barragan L, et al. 2007. *Blood* 109:1131. (FC) [PubMed](#)
7. Turnquist HR, et al. 2007. *J. Immunol.* 178:7018. (FC) [PubMed](#)
8. Benson MJ, et al. 2007. *J. Exp. Med.* doi:10.1084/jem.20070719. (FC) [PubMed](#)
9. You Y, et al. 2009. *J. Immunol.* 182:7343. (IF) [PubMed](#)
10. Roland CL, et al. 2009. *Mol. Cancer Res.* 8:1761. (IHC, FC) [PubMed](#)
11. Wikstrom M, et al. 2006. *J. Immunol.* 177:913. [PubMed](#)
12. Pericolini E, et al. 2008. *J. Leukocyte Biol.* 83:1286. [PubMed](#)
13. Randall LM, et al. 2008. *Infect. Immun.* 76:3312. [PubMed](#)
14. Fahlen-Yrild L, et al. 2009. *J. Immunol.* 183:5032. [PubMed](#)
15. Osterholzer JJ, et al. 2009. *J. Immunol.* 183:8044. [PubMed](#)
16. Bankoti J, et al. 2010. *Toxicol. Sci.* 115:422. (FC) [PubMed](#)
17. Eisenach PA, et al. 2010. *J Cell Sci.* 123:4182. [PubMed](#)
18. Leppin K, et al. 2014. *Invest. Ophthalmol. Vis. Sci.* 55:3603. [PubMed](#)
19. Sakai F, et al. 2014. *PLoS One.* 9:105370. [PubMed](#)
20. Gibbins JD, et al. 2014. *Blood.* 124:2953. [PubMed](#)
21. White CE, et al. 2015. *J Immunol.* 194:697. [PubMed](#)
22. Lu X, et al. 2015. *J Immunol.* 194:2011. [PubMed](#)
23. Radtke AJ, et al. 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) [PubMed](#)
24. Radtke AJ, et al. 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

Product Citations

1. An J, et al. 2017. *Sci Rep.* 10.1038/s41598-017-13629-0. [PubMed](#)
2. Clarke F, et al. 2017. *PLoS One.* 10.1371/journal.pone.0186625. [PubMed](#)
3. Wunderlich CM, et al. 2018. *Nat Commun.* 9:1646. [PubMed](#)
4. Porrello A, et al. 2018. *Nat Commun.* 9:1988. [PubMed](#)
5. Tippimanchai DD, et al. 2018. *Oncoimmunology.* 7:e1438105. [PubMed](#)
6. Lyons J, et al. 2018. *PLoS Biol.* 16:e2002417. [PubMed](#)
7. Enggård J, et al. 2018. *Immunity.* 143:419. [PubMed](#)
8. Habib S, et al. 2018. *Infect Immun.* 86:e00019. [PubMed](#)
9. Fatkhullina AR et al. 2018. *Immunity.* 49(5):943-957. [PubMed](#)
10. Moon HG et al. 2018. *Immunity.* 49(2):275-287. [PubMed](#)
11. Yuzhu Hou et al. 2018. *Immunity.* 49(3):490-503. [PubMed](#)
12. Hiebert P et al. 2018. *Developmental cell.* 46(2):145-161. [PubMed](#)
13. Chan WY, et al. 2019. *Infect Immun.* 87:.. [PubMed](#)
14. Calcinotto A, et al. 2018. *Nat Commun.* 9:4832. [PubMed](#)
15. Chen S, et al. 2018. *Nat Commun.* 9:5298. [PubMed](#)
16. Thwe PM et al. 2017. *Cell metabolism.* 26(3):558-567. [PubMed](#)
17. Ding L et al. 2018. *Cell reports.* 25(11):2972-2980. [PubMed](#)
18. Koliaraki V et al. 2019. *Cell reports.* 26(3):536-545. [PubMed](#)
19. Zwick M, et al. 2019. *Front Immunol.* 10:222. [PubMed](#)
20. Kurelac I, et al. 2019. *Nat Commun.* 10:903. [PubMed](#)
21. Andersen TK, et al. 2019. *NPJ Vaccines.* 4:9. [PubMed](#)
22. Perry JSA, et al. 2018. *Immunity.* 48:923. [PubMed](#)
23. Hastings AK, et al. 2019. *iScience.* 13:339. [PubMed](#)
24. Zeng J, et al. 2019. *Cell Rep.* 27:549. [PubMed](#)
25. Fachi JL et al. 2019. *Cell reports.* 27(3):750-761. [PubMed](#)
26. Albaghdadi AJH, et al. 2019. *Sci Rep.* 9:6528. [PubMed](#)
27. Nagatake T, et al. 2018. *J Allergy Clin Immunol.* 142:470. [PubMed](#)
28. Lyons J, et al. 2018. *Sci Signal.* 11. [PubMed](#)
29. Christ A, et al. 2018. *Cell.* 172:162. [PubMed](#)
30. Kelsey E Sivick et al. 2018. *Cell reports.* 25(11):3074-3085. [PubMed](#)
31. Lai SM et al. 2018. *Cell reports.* 25(11):3099-3109. [PubMed](#)
32. Britton GJ et al. 2019. *Immunity.* 50(1):212-224. [PubMed](#)
33. Clemente-Casares X, et al. 2017. *Immunity.* 47:974. [PubMed](#)
34. Niven J, et al. 2019. *Cell Rep.* 28:21. [PubMed](#)
35. Xueyang Yu et al. 2017. *Immunity.* 47(5):903-912. [PubMed](#)
36. Janela B, et al. 2019. *Immunity.* 50:1069. [PubMed](#)
37. Komuczki J, et al. 2019. *Immunity.* 50:1289. [PubMed](#)
38. Dahlgren MW et al. 2019. *Immunity.* 50(3):707-722. [PubMed](#)
39. Dave K et al. 2017. *eLife.* 6 pii: e23382. [PubMed](#)
40. Meng Michelle Xu et al. 2017. *Immunity.* 47(2):363-373. [PubMed](#)
41. Ioanna E Galani et al. 2017. *Immunity.* 46(5):875-890. [PubMed](#)
42. Schuh E, et al. 2017. *J Immunol.* 198:3081. [PubMed](#)
43. Urata S, et al. 2018. *PLoS Pathog.* 14:e1007172. [PubMed](#)
44. Nguyen CM, et al. 2019. *Diabetes.* 68:1499. [PubMed](#)
45. Wang X, et al. 2019. *Cell Res.* 29:787. [PubMed](#)
46. Zhao Y, et al. 2020. *Immunity.* 51(6):1059-1073.e9. [PubMed](#)
47. Wong E, et al. 2019. *Cell Rep.* 29:3047. [PubMed](#)
48. Kimura S, et al. 2020. *Nat Commun.* 0.620833333. [PubMed](#)
49. Yoshida H, et al. 2019. *Cell.* 176:897. [PubMed](#)
50. Davidson S, et al. 2020. *Cell Reports.* 31(7):107628. [PubMed](#)
51. Yang C, et al. 2019. *Nanomedicine (Lond).* 14:2423. [PubMed](#)
52. Crowe J, et al. 2020. *PLoS Pathog.* 16:e1008391. [PubMed](#)
53. Deng M, et al. 2020. *Nat Commun.* 11:2193. [PubMed](#)
54. Lu Y, et al. 2020. *Immunity.* 52:782. [PubMed](#)
55. Thomson CA, et al. 2018. *J Immunol.* 201:215. [PubMed](#)
56. Fu R, et al. 2020. *Sci Rep.* 10:1455. [PubMed](#)
57. Quatrini L, et al. 2018. *Nat Immunol.* 19:954. [PubMed](#)
58. Saleh R, et al. 2018. *J Immunol.* 201:2042. [PubMed](#)

59. Kim M, *et al.* 2018. *Immunity*. 49:151. [PubMed](#)
60. Choi EW, *et al.* 2020. *Sci Rep*. 10:12001. [PubMed](#)
61. Tran NT, *et al.* 2020. *STAR Protocols*. 1(1):100028. [PubMed](#)
62. Si Y, *et al.* 2018. *J Control Release*. 282:120. [PubMed](#)
63. Baudoux T, *et al.* 2018. *Sci Rep*. 4:0375. [PubMed](#)
64. Jin J, *et al.* 2020. *Cell Reports*. 30(12):4124-4136. [PubMed](#)
65. van Dierendonck XAMH, *et al.* 2020. *Cell Reports*. 30(6):1811-1822. [PubMed](#)
66. Liu S, *et al.* 2020. *Cell Host & Microbe*. 26(6):779-794.e8. [PubMed](#)
67. Doo DW, *et al.* 2020. *Ther Adv Med Oncol*. 12:1758835920913798. [PubMed](#)
68. Liang J, *et al.* 2020. *Sci Adv*. 6:eabc3646. [PubMed](#)
69. Al-Rashed F, *et al.* 2020. *Sci Rep*. 10:16802. [PubMed](#)
70. Hennion-Tscheltzoff O, *et al.* 2013. *Blood*. 121:4684. [PubMed](#)
71. Škrnjug I, *et al.* 2014. *PLoS One*. 9:95728. [PubMed](#)
72. Suzuki T, *et al.* 2014. *J Dermatol Sci*. 74:116. [PubMed](#)
73. Morgado P, *et al.* 2014. *Infect Immun*. 82:4047. [PubMed](#)
74. Škrnjug I, *et al.* 2014. *PLoS One*. 9:110150. [PubMed](#)
75. Gibbins J, *et al.* 2014. *Blood*. 124:2953. [PubMed](#)
76. Lee M, *et al.* 2014. *PLoS One*. 9:112666. [PubMed](#)
77. Schaefer K, *et al.* 2014. *PLoS One*. 9:114824. [PubMed](#)
78. Stack G, *et al.* 2015. *PLoS Pathog*. 11:1004641. [PubMed](#)
79. Ermert D, *et al.* 2016. *PLoS Pathog*. 11: 1005043. [PubMed](#)
80. Vettorazzi S, *et al.* 2015. *Nat Commun*. 6: 7796. [PubMed](#)
81. Clark K, *et al.* 2015. *J Autoimmun*. Available online 21 August 2015. [PubMed](#)
82. Syed A, *et al.* 2015. *Infect Immun*. 83: 3428-3437. [PubMed](#)
83. Hayashi K, *et al.* 2015. *Int Immunol*. 27: 435-445. [PubMed](#)
84. Colliou N, *et al.* 2015. *Toxins*. 7: 3805 - 3817. [PubMed](#)
85. Zhang Y, *et al.* 2015. *PLoS Pathog*. 11: e1005167. [PubMed](#)
86. Yu H, *et al.* 2015. *PLoS One*. 10: 0143001. [PubMed](#)
87. Uematsu T, *et al.* 2015. *Sci Rep*. 5: 17577. [PubMed](#)
88. Ohtsuki T, *et al.* 2016. *J Virol*. 90: 300 - 307. [PubMed](#)
89. Bazett M, Haston M 2016. *Sci Rep*. 6:19189. [PubMed](#)
90. Cuenca M, *et al.* 2016. *J Immunol*. 196: 726 - 737. [PubMed](#)
91. Velázquez F, *et al.* 2016. *J Immunol*. 196: 1305 - 1316. [PubMed](#)
92. Rosen D, *et al.* 2016. *J Infect Dis*. 213: 649 - 658. [PubMed](#)
93. Shin J, *et al.* 2016. *Sci Rep*. 6:23426. [PubMed](#)
94. Fontana C, *et al.* 2016. *J Biol Chem*. 291: 7727-7741. [PubMed](#)
95. Kawano H, *et al.* 2016. *Int Immunol*. 28: 489 - 501. [PubMed](#)
96. Wan X, Thomas J, Unanue E 2016. *J Exp Med*. 213: 967 - 978. [PubMed](#)
97. Sellau J, *et al.* 2016. *Sci Rep*. 6:28058. [PubMed](#)
98. Ben-Shaan T, *et al.* 2016. *Nat Med*. 10.1038/nm.4133. [PubMed](#)
99. Novkovic M, *et al.* 2016. *PLoS Biol*. 14: 1002515. [PubMed](#)
100. Ku M, *et al.* 2016. *Mol Cancer Ther*. 15: 1975 - 1987. [PubMed](#)
101. Ghosh D, *et al.* 2016. *J Immunol*. 197: 1788 - 1800. [PubMed](#)
102. Shepardson K, *et al.* 2016. *MBio*. 7: e00506-16. [PubMed](#)
103. Rosnagl S, *et al.* 2016. *PLoS Biol*. 14: 1002562. [PubMed](#)
104. Morikawa M, *et al.* 2016. *PLoS One*. 11:e0163607. [PubMed](#)
105. Kolawole A, *et al.* 2015. *J Virol*. 90: 1499-1506. [PubMed](#)
106. Yasuda T, *et al.* 2016. *PLoS One*. 11:e0167952. [PubMed](#)
107. Rao S, *et al.* 2017. *Cell*. 168(3):503-516.e12. [PubMed](#)
108. Furuta Y, *et al.* 2017. *PLoS One*. 12(2):e0172509. [PubMed](#)
109. Hayashi K, *et al.* 2020. *Nat Commun*. 4.832638889. [PubMed](#)
110. Hildreth AD, *et al.* 2020. *STAR Protoc*. 1:100113. [PubMed](#)
111. Trivedi S, *et al.* 2020. *Elife*. 9:00. [PubMed](#)
112. Crosse EI, *et al.* 2020. *Cell Stem Cell*. 27:822. [PubMed](#)
113. Moreau GB, *et al.* 2020. *Am J Trop Med Hyg*. 103:1215. [PubMed](#)
114. Si Y, *et al.* 2020. *Sci Adv*. 6:eaba0995. [PubMed](#)
115. Dieterich LC, *et al.* 2020. *Angiogenesis*. 1.24375. [PubMed](#)
116. Hirata SI, *et al.* 2020. *Allergy*. 75:1939. [PubMed](#)
117. Reimer E, *et al.* 2020. *J Cell Sci*. 134:00:00. [PubMed](#)
118. Wei Z, *et al.* 2021. *Nat Commun*. 0.805555556. [PubMed](#)
119. Tran S, *et al.* 2020. *Immunity*. 53(3):627-640.e5. [PubMed](#)
120. Ndoja A, *et al.* 2020. *Cell*. 182(5):1156-1169.e12. [PubMed](#)
121. Engler AE, *et al.* 2020. *Cell Reports*. 33(13):108553. [PubMed](#)
122. Yousif AS, *et al.* 2020. *Immunity*. 54(2):235-246.e5. [PubMed](#)
123. Evren E, *et al.* 2020. *Immunity*. 54(2):259-275.e7. [PubMed](#)
124. Koren N, *et al.* 2021. *Cell Host Microbe*. 29(2):197-209.e5. [PubMed](#)
125. Xu W, *et al.* 2021. *Immunity*. 54(3):526-541.e7. [PubMed](#)
126. He Y, *et al.* 2021. *Cell Metabolism*. 33(5):988-1000.e7. [PubMed](#)
127. Liu Y, *et al.* 2021. *Cell Metabolism*. 33(6):1221-1233.e11. [PubMed](#)
128. Tacconi C, *et al.* 2021. *Cell Reports*. 35(2):108993. [PubMed](#)
129. Kim SH, *et al.* 2021. *Cell Reports*. 35(2):108995. [PubMed](#)
130. Kumari P, *et al.* 2021. *Cell Reports*. 35(3):109012. [PubMed](#)
131. Schiller M, *et al.* 2021. *Immunity*. 54(5):1022-1036.e8. [PubMed](#)
132. Harb H, *et al.* 2021. *Immunity*. 54(6):1186-1199.e7. [PubMed](#)
133. Dong L, *et al.* 2021. *Cancer Cell*. [PubMed](#)
134. Hearnden R, *et al.* 2021. *STAR Protocols*. 2(2):100422. [PubMed](#)
135. Souza COS, *et al.* 2021. *iScience*. 24(6):102548. [PubMed](#)
136. Xu C, *et al.* 2021. *Cell Reports*. 35(11):109235. [PubMed](#)
137. Yu K, *et al.* 2021. *Cell Reports*. 35(12):109273. [PubMed](#)

RRID

AB_493569 (BioLegend Cat. No. 117317)
AB_493568 (BioLegend Cat. No. 117318)

Antigen Details

Structure	Integrin α -chain, associates with integrin β_2 (CD18), 150 kD
Distribution	Dendritic cells, NK cells, intestinal intraepithelial lymphocytes (IEL), some activated T cells
Function	Cellular adhesion
Ligand/Receptor	iC3b, fibrinogen
Cell Type	Dendritic cells, Epithelial cells, NK cells, T cells, Tregs
Biology Area	Cell Adhesion, Cell Biology, Costimulatory Molecules, Immunology, Innate Immunity, Neuroscience, Neuroscience Cell Markers
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	1. Barclay A, <i>et al.</i> 1997. The Leukocyte Antigen Facts Book Academic Press. 2. Springer TA. 1994. <i>Cell</i> 76:301. 3. Lopez-Rodriguez C, <i>et al.</i> 1996. <i>J. Immunol.</i> 156:3780.
Gene ID	16411

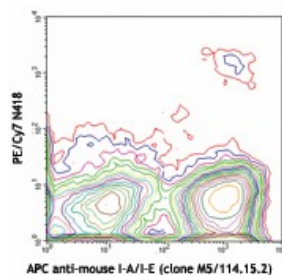
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

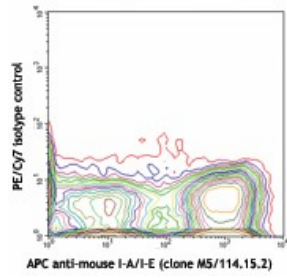
Other Formats

APC anti-mouse CD11c, Biotin anti-mouse CD11c, FITC anti-mouse CD11c, PE anti-mouse CD11c, Purified anti-mouse CD11c, Alexa Fluor® 488 anti-mouse CD11c, Alexa Fluor® 647 anti-mouse CD11c, PE/Cyanine5 anti-mouse CD11c, PE/Cyanine7 anti-mouse CD11c, Brilliant Violet 605™ anti-mouse CD11c, Alexa Fluor® 700 anti-mouse CD11c, Pacific Blue™ anti-mouse CD11c, APC/Cyanine7 anti-mouse CD11c, PerCP/Cyanine5.5 anti-mouse CD11c, PerCP anti-mouse CD11c, Brilliant Violet 421™ anti-mouse CD11c, Brilliant Violet 570™ anti-mouse CD11c, Brilliant Violet 785™ anti-mouse CD11c, Brilliant Violet 510™ anti-mouse CD11c, Brilliant Violet 650™ anti-mouse CD11c, Purified anti-mouse CD11c (Maxpar® Ready), Alexa Fluor® 594 anti-mouse CD11c, PE/Dazzle™ 594 anti-mouse CD11c, Brilliant Violet 711™ anti-mouse CD11c, APC/Fire™ 750 anti-mouse CD11c, TotalSeq™-A0106 anti-mouse CD11c, Brilliant Violet 750™ anti-mouse CD11c, TotalSeq™-B0106 anti-mouse CD11c, TotalSeq™-C0106 anti-mouse CD11c, KIRAVIA Blue 520™ anti-mouse CD11c, Spark Blue™ 550 anti-mouse CD11c, Spark NIR™ 685 anti-mouse CD11c, Spark UV™ 387 anti-mouse CD11c, Spark Red™ 718 anti-mouse CD11c

Product Data



C57BL/6 mouse splenocytes stained with APC anti-mouse I-A/I-E (clone M5/114.15.2) and PE/Cyanine7 N418 (top) or PE/Cyanine7 Armenian hamster IgG isotype control (bottom)



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