

Alexa Fluor[®] 647 anti-human CD11c Antibody

Catalog# / Size	301619 / 25 tests 301622 / 100 µg 301620 / 100 tests
Clone	3.9
Regulatory Status	RUO
Workshop	III NL707
Other Names	Integrin αX subunit, CR4, p150, ITGAX
Isotype	Mouse IgG1, κ
Description	CD11c is a 145-150 kD type I transmembrane glycoprotein also known as integrin αX and CR4. CD11c non-covalently associates with integrin β2 (CD18) and is expressed on monocytes/macrophages, dendritic cells, granulocytes, NK cells, and subsets of T and B cells. CD11c has been reported to play a role in adhesion and CTL killing through its interactions with fibrinogen, CD54, and iC3b.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	African Green, Baboon, Chimpanzee, Squirrel Monkey
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	test sizes: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA). µg size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor [®] 647 under optimal conditions.
Concentration	test sizes: lot-specific; µg size: 0.5 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 test sizes , the suggested use of this reagent for immunofluorescent staining is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. For µg size , the suggested use of this reagent for immunofluorescent staining is ≤2 µg per 10 ⁶ cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * Alexa Fluor [®] 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm. Alexa Fluor [®] and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Red Laser (633 nm)
Application Notes	Clone 3.9 preferentially binds the activated form of CD11c, is specific for the I domain of CD11c, and is able to partially block the binding of CD11c and ICAM-4. 3.9 binding is divalent cation dependent ¹² . While analyzing blood, it is best to use heparin as the anti-coagulant and not EDTA. Since the ability of clone 3.9 to bind to its target is divalent cation dependent, the usage of EDTA as an anti-coagulant may be detrimental to staining due to its chelating properties. Additional reported applications (for the relevant formats) include: immunohistochemical staining of

acetone-fixed frozen tissue sections⁴, and functional assays^{5,6}. The LEAF™ purified antibody (Endotoxin <0.1 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. No. 301616). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 301632) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/μg).

Application References

(PubMed link indicates BioLegend citation)

1. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
2. Knapp W, *et al.* 1989. Leucocyte Typing IV Oxford University Press. New York.
3. McMichael A, *et al.* Eds. 1987. Leucocyte Typing III Oxford University Press. New York.
4. Vainer B, *et al.* 2000. *Am. J. Surg. Pathol.* 24:1115. (IHC)
5. Ottonello L, *et al.* 1999. *Blood* 93:3505.
6. Metelitsa LS, *et al.* 2002. *Blood* 99:4166.
7. Sadhu C, *et al.* 2007. *J. Leukoc. Biol.* doi:10.1189/jlb.1106680. [PubMed](#)
8. Ihanus E, *et al.* 2007. *Blood* 109:802-810.
9. Gurer C, *et al.* 2008. *Blood* 112:1231. [PubMed](#)
10. Asai A, *et al.* 2009. *J. Lipid Res.* 50:95. [PubMed](#)
11. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
12. Sadhu C, *et al.* 2008. *J. Immunoass. Immunochem.* 29:42. (FC)

Product Citations

1. Murakami T, *et al.* 2018. *Nat Commun.* 9:2436. [PubMed](#)
2. Sándor N, *et al.* 2013. *Immunobiology.* 218:652. [PubMed](#)
3. Bristol JA, *et al.* 2022. *PLoS Pathog.* 18:e1010453. [PubMed](#)
4. Paulson K, *et al.* 2010. *Circ Res.* 106:383. [PubMed](#)
5. Sprockholt J, *et al.* 2017. *PLoS One.* 10.1371/journal.pone.0185580. [PubMed](#)
6. Mysore V, *et al.* 2021. *Med (N Y).* 2:1050. [PubMed](#)

RRID

AB_439792 (BioLegend Cat. No. 301619)
AB_1088990 (BioLegend Cat. No. 301622)
AB_439793 (BioLegend Cat. No. 301620)

Antigen Details

Structure	Integrin, type I transmembrane glycoprotein, associates with integrin β ₂ (CD18), 145-150 kD
Distribution	Myeloid, dendritic cells, NK cells, B cells and T cell subsets
Function	Adhesion, CTL killing
Ligand/Receptor	CD54, fibrinogen, iC3b, ICAM-1, ICAM-4
Cell Type	B cells, Dendritic cells, Neutrophils, 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	<ol style="list-style-type: none">1. Petty H. 1996. <i>Immunol. Today</i> 17:209.2. Springer T. 1994. <i>Cell</i> 76:301.3. Ihanus E, <i>et al.</i> 2007. <i>Blood</i> 109:802-810.
Gene ID	3687

Related Protocols

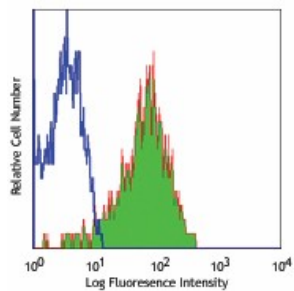
[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

FITC anti-human CD11c, PE anti-human CD11c, Purified anti-human CD11c, PE/Cyanine7 anti-human CD11c, PE/Cyanine5 anti-human CD11c, Biotin anti-human CD11c, APC anti-human CD11c, Alexa Fluor® 488 anti-human CD11c, Alexa Fluor® 647 anti-human CD11c, Pacific Blue™ anti-human CD11c, PerCP/Cyanine5.5 anti-human CD11c, Brilliant Violet 421™ anti-human CD11c, Brilliant Violet 711™ anti-human CD11c, Ultra-LEAF™ Purified anti-human CD11c, Brilliant Violet 510™ anti-human CD11c, Brilliant Violet 605™ anti-human CD11c, Brilliant Violet 650™ anti-human CD11c, Purified anti-human CD11c (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD11c, Brilliant Violet 785™ anti-human CD11c, Alexa Fluor® 700 anti-human CD11c, APC/Fire™ 750 anti-human CD11c, Spark Red™ 718 anti-human CD11c

Product Data

Human peripheral blood monocytes
stained with 3.9 Alexa Fluor® 647



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