Brilliant Violet 421™ anti-human CD11c Antibody

Catalog# / Size	301627 / 25 tests 301628 / 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 α_X 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, African Green, Baboon, Chimpanzee, Cynomolgus, Rhesus, Squirrel Monkey
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 Brilliant Violet 421™ 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
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 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. 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. Learn more about Brilliant Violet™. 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.
Excitation Laser	Violet Laser (405 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 sections[4], 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. Immunoch.* 29:42. (FC)

Product Citations

1. Arce Vargas F *et al.* 2018. Cancer cell. 33(4):649-663 . PubMed
2. Snell LM, *et al.* 2018. Immunity. 49:678. PubMed
3. Jin Y *et al.* 2019. Nature communications. 10(1):391 . PubMed
4. Webb K *et al.* 2018. Frontiers in immunology. 2.574305556 . PubMed
5. Freeman A, *et al.* 2014. PLoS One. 9:110928. PubMed
6. Dudley D, *et al.* 2016. Nat Commun. 7:12204. PubMed
7. Aliota M, *et al.* 2016. PLoS Negl Trop Dis. 10:e0005168. PubMed

RRID

AB_10898313 (BioLegend Cat. No. 301627)
AB_11203895 (BioLegend Cat. No. 301628)

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 Dendritic cells, NK cells, B cells, T cells, Neutrophils, Tregs

Biology Area Cell Adhesion, Cell Biology, Immunology, Innate Immunity, Neuroscience, Neuroscience Cell Markers, Costimulatory Molecules

Molecular Family Adhesion Molecules, CD Molecules

Antigen References

1. Petty H. 1996. *Immunol. Today* 17:209.
2. Springer T. 1994. *Cell* 76:301.
3. Ihanus E, *et al.* 2007. *Blood* 109:802-810.

Gene ID 3687

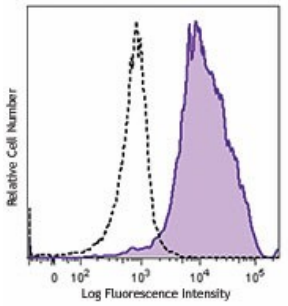
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

PE/Dazzle™ 594 anti-human CD11c, Brilliant Violet 785™ anti-human CD11c, Alexa Fluor® 700 anti-human CD11c, APC/Fire™ 750 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, FITC anti-human CD11c, PE anti-human CD11c, Purified anti-human CD11c, PerCP/Cyanine5.5 anti-human CD11c, Pacific Blue™ 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)

Product Data



Human peripheral blood granulocytes were stained with CD11c (clone 3.9) Brilliant Violet 421™ (filled histogram) or mouse IgG1, κ Brilliant Violet 421™ isotype control (open histogram).

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