

Brilliant Violet 510™ anti-human CD11c

Catalog # / Size: 2108165 / 25 tests
2108170 / 100 tests

Clone: 3.9

Isotype: Mouse IgG1, κ

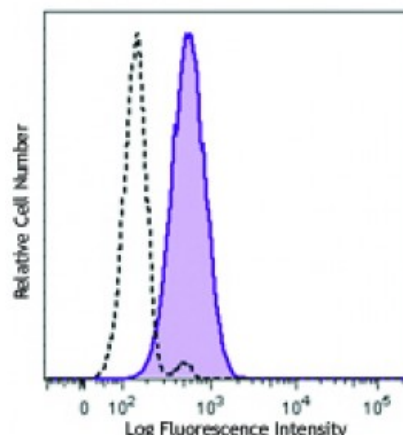
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 510™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 510™ and unconjugated antibody.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

Workshop Number: III NL707

Concentration: Lot-specific



Human peripheral blood granulocytes were stained with CD11c (clone 3.9) Brilliant Violet 510™ (filled histogram) or mouse IgG1, κ Brilliant Violet 510™ isotype control (open histogram).

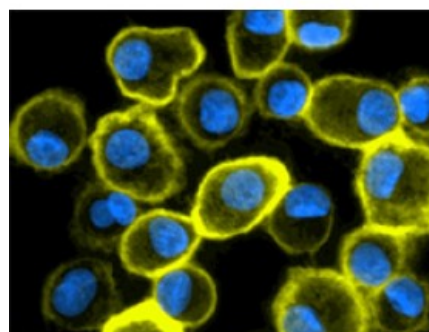
Applications:

Applications: Flow Cytometry

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 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 510™ excites at 405 nm and emits at 510 nm. The bandpass filter 510/50 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. **Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.** Refer to your instrument manual or manufacturer for support. Brilliant Violet 510™ is a trademark of Sirigen Group Ltd.

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Human peripheral blood mononuclear cell (PBMC) derived dendritic cells were fixed with 1% paraformaldehyde (PFA), and then stained with 10 microg/ml of CD11c (clone 3.9) Brilliant Violet 510™ (yellow) for 30 minutes at room temperature. Nuclei were

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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 dependent¹². 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/microg).

- Application References:**
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)

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.

- 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.