

Brilliant Violet 421™ anti-human CD184 (CXCR4)

Catalog # / Size: 2132585 / 25 tests
2132590 / 100 tests

Clone: 12G5

Isotype: Mouse IgG2a, κ

Immunogen: CP-MAC-infected Sup-T1 cells

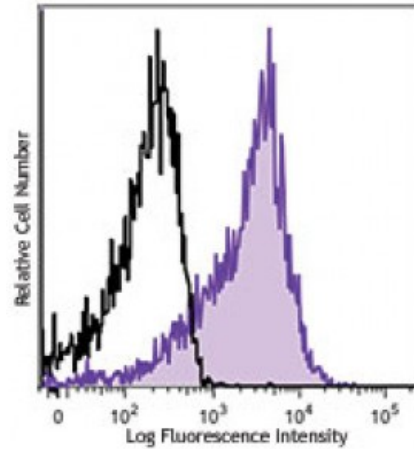
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 421™ and unconjugated antibody.

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

Workshop Number: VII 70204

Concentration: Lot-specific



Human peripheral blood lymphocytes were stained with CD184 (clone 12G5) Brilliant Violet 421™ (filled histogram) or mouse IgG2a, κ Brilliant Violet 421™ 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 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.

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Application Notes: Additional reported applications (for the relevant formats) include: immunohistochemical staining of paraffin-embedded tissue sections¹¹, immunocytochemistry³, immunofluorescence microscopy^{2,6}, and blocking of CD4-independent infection by HIV-2 and CD4-dependent infection by some T cell-tropic isolates of HIV-1^{4,5}. Clone 12G5 may not be suitable for Western blotting.¹⁰ The LEAF™ purified antibody (Endotoxin <0.1 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. No. 306512).

Application References:

- McKnight A, *et al.* 1997. *J. Virol.* 71:1692.
- Endres MJ, *et al.* 1996. *Cell* 87:745. (Immunogen, IF)
- Volin MV, *et al.* 1998. *Biochem. Biophys. Res. Commun.* 242:46. (ICC)

4. Berndt C, *et al.* 1998. *P. Natl. Acad. Sci. USA* 95:12556. (Block)
 5. Ullrich CK, *et al.* 2000. *Blood* 96:1438. (Block)
 6. Murga M, *et al.* 2005. *Blood* 105:1992. (IF)
 7. Thompson BD. 2007. *J. Biol. Chem.* 282:9547. (FC) [PubMed](#)
 8. Isnardi I, *et al.* 2010. *Blood* 115:5026. [PubMed](#)
 9. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
 10. Fischer T, *et al.* 2008. *PLoS One* 3:e4069.
 11. Schmid BC, *et al.* 2004. *Breast Cancer Res. Treat.* 84:247. (IHC)
 12. Tabler CO, *et al.* 2014. *J. Virol.* 88:4976. [PubMed](#)
 13. Demberg T, *et al.* 2014. *Clin Immunol.* 153:264. [PubMed](#)
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Description: CD184, also known as fusin or CXCR4, is a 45 kD seven transmembrane G-protein-linked CXC chemokine receptor. CD184 is widely expressed on blood and tissue cells, including B and T cells, monocytes, macrophages, dendritic cells, granulocytes, megakaryocytes/platelets, lymphoid, myeloid precursor cells, endothelial cells, epithelial cells, astrocytes, and neurons, among other tissue cells. CD184 is the receptor for CXC chemokine SDF-1, mediates blood cell migration, and is involved in B lymphopoiesis and myelopoiesis, cardiogenesis, blood vessel formation, and cerebellar development. CXCR4 is also a coreceptor of X4 HIV-1 and an alternative receptor for some isolates of HIV-2.

**Antigen
References:**

1. Berger E, *et al.* 1999. *Annu. Rev. Immunol.* 17:657.
2. Loetscher P, *et al.* 2000. *Adv. Immunol.* 74:127.
3. Murphy P, *et al.* 2000. *Pharmacol. Rev.* 52:145.