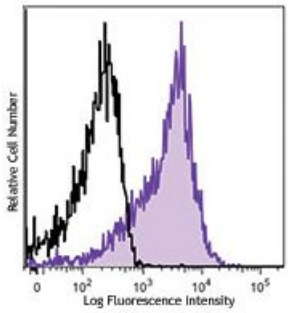
SONY

Product Data Sheet

Brilliant Violet 421™ anti-human CD184 (CXCR4)

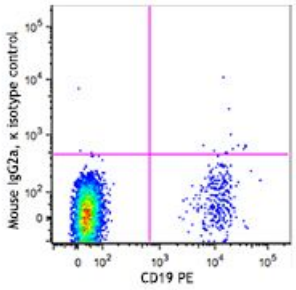
Catalog # / Size:	2132585 / 25 tests 2132590 / 100 tests
Clone:	12G5
Isotype:	Mouse IgG2a, κ
Immunogen:	CP-MAC-infected Sup-T1 cells
Reactivity:	Human, Non-human primate, Other
Preparation:	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions.
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 µl per million cells or 5 µl per 100 µl 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.



Human peripheral blood lymphocytes were stained with anti-human CD3 FITC and anti-human CD279 (PD-1) PE/Fire™ 640 (clone EH12.2H7) (left), or mouse IgG1, κ PE/Fire™ 640 (right).

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Application Notes: Additional reported applications (for the relevant formats) include: immunohistochemical staining of paraffin-embedded tissue sections[11], 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:

1. McKnight A, *et al.* 1997. *J. Virol.* 71:1692.
2. Endres MJ, *et al.* 1996. *Cell* 87:745. (Immunogen, IF)
3. 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)

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.

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