Brilliant Violet 510™ anti-human CD184 (CXCR4) Antibody

Catalog# / Size	306535 / 25 tests 306536 / 100 tests
Clone	12G5
Regulatory Status	RUO
Workshop	VII 70204
Other Names	CXCR4, Fusin
Isotype	Mouse IgG2a, κ
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.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	African Green, Baboon, Chimpanzee, Sooty Mangabey
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	CP-MAC-infected Sup-T1 cells
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 510™ 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 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. 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	Additional reported applications (for the relevant formats) include: immunohistochemical staining of paraffin-embedded tissue sections[11], immunocytochemistry[3], 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 Ultra-LEAF™ purified antibody (Endotoxin <0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. Nos. 306539 & 306540).
Application References **(PubMed link indicates BioLegend citation)**	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)
RRID	AB_2810460 (BioLegend Cat. No. 306535) AB_2810461 (BioLegend Cat. No. 306536)

Antigen Details

Structure	Rhodopsin family, G-protein linked seven transmembrane glycoprotein, 45 kD
Distribution	T cells and B cells, dendritic cells, monocytes, granulocytes, hematopoietic progenitors, endothelial cells
Function	B lymphopoiesis and myelopoiesis, cardiogenesis, blood vessel formation, cerebellar development
Ligand/Receptor	SDF-1 receptor, coreceptor for X4 HIV-1
Cell Type	B cells, Dendritic cells, Endothelial cells, Granulocytes, Hematopoietic stem and progenitors, Mesenchymal Stem Cells, Monocytes, Neural Stem Cells, T cells, Tregs
Biology Area	Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience, Neuroscience Cell Markers, Stem Cells
Molecular Family	CD Molecules, Cytokine/Chemokine Receptors, GPCR
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.
Gene ID	7852

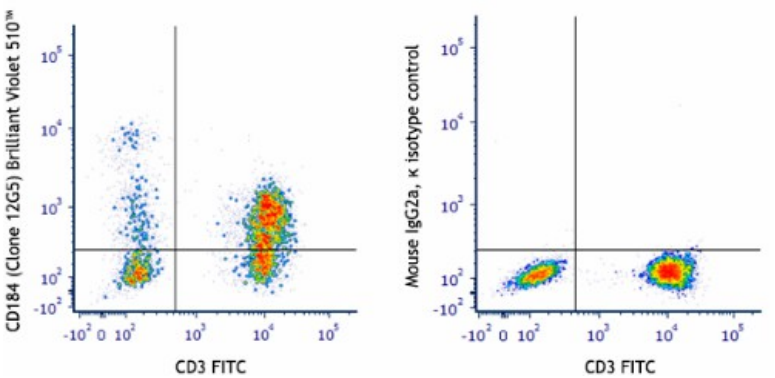
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

APC anti-human CD184 (CXCR4), Biotin anti-human CD184 (CXCR4), PE anti-human CD184 (CXCR4), PE/Cyanine5 anti-human CD184 (CXCR4), Purified anti-human CD184 (CXCR4), PerCP/Cyanine5.5 anti-human CD184 (CXCR4), PE/Cyanine7 anti-human CD184 (CXCR4), Brilliant Violet 421™ anti-human CD184 (CXCR4), Brilliant Violet 605™ anti-human CD184 (CXCR4), Purified anti-human CD184 (CXCR4) (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD184 (CXCR4), APC/Cyanine7 anti-human CD184 (CXCR4), Brilliant Violet 785™ anti-human CD184 (CXCR4), TotalSeq™-A0366 anti-human CD184 (CXCR4), TotalSeq™-C0366 anti-human CD184 (CXCR4), Brilliant Violet 510™ anti-human CD184 (CXCR4), Ultra-LEAF™ Purified anti-human CD184 (CXCR4), APC/Fire™ 750 anti-human CD184 (CXCR4), TotalSeq™-B0366 anti-human CD184 (CXCR4)

Product Data



Human peripheral blood lymphocytes were stained with CD3 FITC and CD184 (CXCR4) (clone 12G5) Brilliant Violet 510™ (left) or mouse IgG2a, κ isotype control Brilliant Violet 510™ (right).

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