

Brilliant Violet 605™ anti-human CD184 (CXCR4) Antibody

Catalog# / Size	306521 / 25 tests 306522 / 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 605™ 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 605™ excites at 405 nm and emits at 603 nm. The bandpass filter 610/20 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 605™ is a trademark of Sirigen Group Ltd.

[Learn more about Brilliant Violet™.](#)

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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	<ol style="list-style-type: none"> 1. McKnight A, <i>et al.</i> 1997. <i>J. Virol.</i> 71:1692. 2. Endres MJ, <i>et al.</i> 1996. <i>Cell</i> 87:745. (Immunogen, IF) 3. Volin MV, <i>et al.</i> 1998. <i>Biochem. Biophys. Res. Commun.</i> 242:46. (ICC) 4. Berndt C, <i>et al.</i> 1998. <i>P. Natl. Acad. Sci. USA</i> 95:12556. (Block) 5. Ullrich CK, <i>et al.</i> 2000. <i>Blood</i> 96:1438. (Block) 6. Murga M, <i>et al.</i> 2005. <i>Blood</i> 105:1992. (IF) 7. Thompson BD. 2007. <i>J. Biol. Chem.</i> 282:9547. (FC) PubMed 8. Isnardi I, <i>et al.</i> 2010. <i>Blood</i> 115:5026. PubMed 9. Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC) 10. Fischer T, <i>et al.</i> 2008. <i>PLoS One</i> 3:e4069. 11. Schmid BC, <i>et al.</i> 2004. <i>Breast Cancer Res. Treat.</i> 84:247. (IHC)
(PubMed link indicates BioLegend citation)	
Product Citations	<ol style="list-style-type: none"> 1. Martrus G, <i>et al.</i> 2017. <i>PLoS One.</i> 10.1371/journal.pone.0182532. PubMed
RRID	<p>AB_2562443 (BioLegend Cat. No. 306521)</p> <p>AB_2563631 (BioLegend Cat. No. 306522)</p>

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	<ol style="list-style-type: none"> 1. Berger E, <i>et al.</i> 1999. <i>Annu. Rev. Immunol.</i> 17:657. 2. Loetscher P, <i>et al.</i> 2000. <i>Adv. Immunol.</i> 74:127. 3. Murphy P, <i>et al.</i> 2000. <i>Pharmacol. Rev.</i> 52:145.
Gene ID	7852

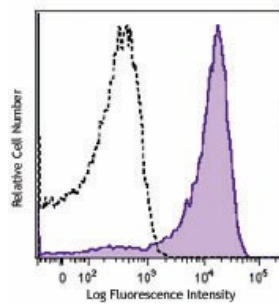
Related Protocols

[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), TotalSeq™-D0366 anti-human CD184 (CXCR4)

Product Data



Human peripheral blood lymphocytes were stained with CD184 (clone 12G5) Brilliant Violet 605™ (filled histogram) or mouse IgG2a, κ Brilliant Violet 605™ isotype control (open histogram).

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