

## PE/Cyanine5 anti-human CD184 (CXCR4) Antibody

<b>Catalog# / Size</b>	306507 / 25 tests 306508 / 100 tests
<b>Clone</b>	12G5
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	VII 70204
<b>Other Names</b>	CXCR4, Fusin
<b>Isotype</b>	Mouse IgG2a, κ
<b>Description</b>	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

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<b>Verified Reactivity</b>	Human, Cynomolgus, Rhesus
<b>Reported Reactivity</b>	African Green, Baboon, Chimpanzee, Sooty Mangabey
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	CP-MAC-infected Sup-T1 cells
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with PE/Cyanine5 under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . 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.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: immunohistochemical staining of paraffin-embedded tissue sections <sup>11</sup> , immunocytochemistry <sup>3</sup> , immunofluorescence microscopy <sup>2,6</sup> , and blocking of CD4-independent infection by HIV-2 and CD4-dependent infection by some T cell-tropic isolates of HIV-1 <sup>4,5</sup> . Clone 12G5 may not be suitable for Western blotting. <sup>10</sup> 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).
<b>Additional Product Notes</b>	BioLegend is in the process of converting the name PE/Cy5 to PE/Cyanine5. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine5 products. Please contact <a href="#">Technical Service</a> if you have any questions.
<b>Application References</b>	

**(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)

**Product Citations**

1. Herati R, *et al.* 2014. *J Immunol.* 193:3528. [PubMed](#)
2. Fujigaki J, *et al.* 2015. *PLoS One.* 10: 0132521. [PubMed](#)
3. Alhaj Hussen K, *et al.* 2017. *Immunity.* 47:680. [PubMed](#)
4. Mold JE, *et al.* 2021. *Cell Reports.* 35(8):109174. [PubMed](#)
5. Sciaranghella G, *et al.* 2015. *J Infect Dis.* 212: 1397 - 1401. [PubMed](#)
6. Herati RS, *et al.* 2022. *Nat Immunol.* 23:1183. [PubMed](#)
7. Wilson TL, *et al.* 2022. *Cancer Discov.* 12:2098. [PubMed](#)

**RRID**

AB\_314613 (BioLegend Cat. No. 306507)  
AB\_314614 (BioLegend Cat. No. 306508)

## Antigen Details

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

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

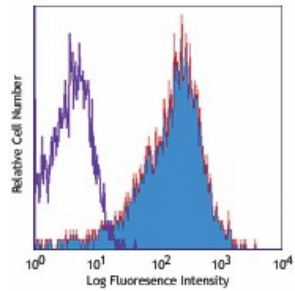
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APC anti-human CD184 (CXCR4), Biotin anti-human CD184 (CXCR4), PE anti-human CD184 (CXCR4), PE/Cyanine5 anti-human CD184 (CXCR4), Purified anti-human CD184 (CXCR4), PerCP/Cyanine5.5 anti-human CD184 (CXCR4), PE/Cyanine7 anti-human CD184 (CXCR4), Brilliant 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

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Human peripheral blood lymphocytes  
stained with 12G5 PE/Cyanine5



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