

## Biotin anti-human CD184 (CXCR4) Antibody

<b>Catalog# / Size</b>	306504 / 100 µg
<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.
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. <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 ≤ 0.5 µg per 10 <sup>6</sup> cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
<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>Application References</b>	<ol style="list-style-type: none"> <li>McKnight A, <i>et al.</i> 1997. <i>J. Virol.</i> 71:1692.</li> <li>Endres MJ, <i>et al.</i> 1996. <i>Cell</i> 87:745. (Immunogen, IF)</li> <li>Volin MV, <i>et al.</i> 1998. <i>Biochem. Biophys. Res. Commun.</i> 242:46. (ICC)</li> <li>Berndt C, <i>et al.</i> 1998. <i>P. Natl. Acad. Sci. USA</i> 95:12556. (Block)</li> <li>Ullrich CK, <i>et al.</i> 2000. <i>Blood</i> 96:1438. (Block)</li> <li>Murga M, <i>et al.</i> 2005. <i>Blood</i> 105:1992. (IF)</li> <li>Thompson BD. 2007. <i>J. Biol. Chem.</i> 282:9547. (FC) <a href="#">PubMed</a></li> <li>Isnardi I, <i>et al.</i> 2010. <i>Blood</i> 115:5026. <a href="#">PubMed</a></li> <li>Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC)</li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

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. Vlad A, *et al.* 2009. *Cancer Res.* 69:6387. [PubMed](#)
2. Minamitani T, *et al.* 2015. *Proc Natl Acad Sci U S A.* 112: 11612-11617. [PubMed](#)
3. Evrard M *et al.* 2018. *Immunity.* 48(2):364-379. [PubMed](#)
4. Yang C, *et al.* 2019. *Nat Commun.* 10:3931. [PubMed](#)

**RRID** AB\_314610 (BioLegend Cat. No. 306504)

### Antigen Details

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

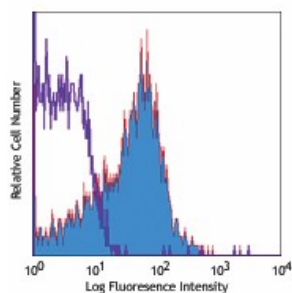
### Related Protocols

[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 stained with biotinylated 12G5, followed by Sav-PE

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