

## PE anti-human CD184 (CXCR4) Antibody

<b>Catalog# / Size</b>	306505 / 25 tests 306506 / 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 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>Application References</b>	<ol style="list-style-type: none"> <li>1. McKnight A, <i>et al.</i> 1997. <i>J. Virol.</i> 71:1692.</li> <li>2. Endres MJ, <i>et al.</i> 1996. <i>Cell</i> 87:745. (Immunogen, IF)</li> <li>3. Volin MV, <i>et al.</i> 1998. <i>Biochem. Biophys. Res. Commun.</i> 242:46. (ICC)</li> <li>4. Berndt C, <i>et al.</i> 1998. <i>P. Natl. Acad. Sci. USA</i> 95:12556. (Block)</li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

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. Corral-Jara KF, *et al.* 2021. *Mol Biomed.* 2:9. [PubMed](#)
2. Liu J, *et al.* 2022. *Front Neurol.* 12:807646. [PubMed](#)
3. Guo P, *et al.* 2012. *Biomaterials.* 33:8104. [PubMed](#)
4. Wang B, *et al.* 2013. *Carcinogenesis.* 35:282. [PubMed](#)
5. Blengio F, *et al.* 2013. *Immunobiology.* 218:76. [PubMed](#)
6. Li H, *et al.* 2016. *J Immunol.* 196: 4064 - 4074. [PubMed](#)
7. Yang W, *et al.* 2019. *iScience.* 19:450. [PubMed](#)
8. Muir L, *et al.* 2018. *Wellcome Open Res.* 2:97. [PubMed](#)
9. Olga Alekhina, Adriano Marchese 2016. *J Biol Chem.* 291(50):26083-26097. [PubMed](#)
10. Yang C, *et al.* 2020. *J Control Release.* 326:324. [PubMed](#)
11. Wu T, *et al.* 2022. *Cell Death Dis.* 13:624. [PubMed](#)
12. Hou P, *et al.* 2015. *Sci Rep.* 5: 15577. [PubMed](#)
13. Chittasupho C, Anuchapreeda S, and Sarisuta N. 2017. *Eur J Pharm Biopharm.* 10.1016/j.ejpb.2017.07.003. [PubMed](#)
14. Schneider T, *et al.* 2015. *Glycobiology.* 25: 812-824. [PubMed](#)
15. Mandl M, *et al.* 2014. *PLoS One.* 9:112140. [PubMed](#)
16. Mair B *et al.* 2019. *Cell reports.* 27(2):599-615 . [PubMed](#)
17. Adikrisna R, *et al.* 2012. *Gastroenterology.* 143:234. [PubMed](#)
18. Gurevich I, *et al.* 2020. *Biol Open.* . [PubMed](#)
19. Han W, *et al.* 2015. *Stem Cell Dev.* 24: 2536-2546. [PubMed](#)
20. Idorn M, *et al.* 2018. *Oncoimmunology.* 7:e1412029. [PubMed](#)
21. Magri G *et al.* 2017. *Immunity.* 47(1):118-134 . [PubMed](#)
22. Gurevich I, *et al.* 2020. *Biol Open.* . [PubMed](#)
23. Yuan Z, *et al.* 2016. *Cytotherapy.* 18: 860-869. [PubMed](#)
24. Houtsma R, *et al.* 2021. *STAR Protoc.* 2:100864. [PubMed](#)
25. Jung Y, *et al.* 2018. *Cancer Res.* 78:2026. [PubMed](#)
26. Suan D *et al.* 2017. *Immunity.* 47(6):1142-1153 . [PubMed](#)
27. Hartmann T, *et al.* 2008. *J Leukoc Biol.* 84:1130. [PubMed](#)
28. subtypes N 2015. *Nat Commun.* 6: 10183. [PubMed](#)
29. Chen HJ, *et al.* 2019. *J Exp Med.* 216:674. [PubMed](#)
30. Xu J, *et al.* 2017. *Clin Cancer Res.* 23:4482. [PubMed](#)
31. Zhang B, *et al.* 2021. *Nat Commun.* 12:1714. [PubMed](#)
32. Yin S, *et al.* 2015. *Sci Rep.* 5: 14432. [PubMed](#)
33. Nevins AM, *et al.* 2017. *Methods Mol Biol.* 1722:151. [PubMed](#)
34. Subramaniam N, *et al.* 2021. *Blood Adv.* 5:1259. [PubMed](#)
35. Smith N, *et al.* 2017. *Nat Commun.* 8:14253. [PubMed](#)
36. Bettman N, *et al.* 2015. *Blood Cells Mol Dis.* 55: 180-186. [PubMed](#)
37. Zhang Y *et al.* 2018. *Cell stem cell.* 23(4):516-529 . [PubMed](#)
38. He S, *et al.* 2021. *iScience.* 24:103305. [PubMed](#)

**RRID** AB\_314611 (BioLegend Cat. No. 306505)  
 AB\_314612 (BioLegend Cat. No. 306506)

## 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>

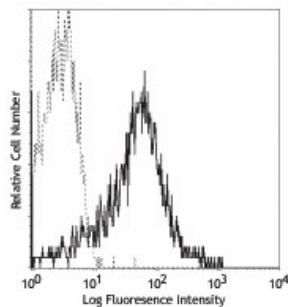
## Related Protocols

[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 12G5 PE

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Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587