

Biotin anti-human CD184 (CXCR4) Antibody

Catalog# / Size	306504 / 100 µg
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.
Preparation	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. 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 ≤ 0.5 µg per 10 ⁶ 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.
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"> McKnight A, <i>et al.</i> 1997. <i>J. Virol.</i> 71:1692. Endres MJ, <i>et al.</i> 1996. <i>Cell</i> 87:745. (Immunogen, IF) Volin MV, <i>et al.</i> 1998. <i>Biochem. Biophys. Res. Commun.</i> 242:46. (ICC) Berndt C, <i>et al.</i> 1998. <i>P. Natl. Acad. Sci. USA</i> 95:12556. (Block) Ullrich CK, <i>et al.</i> 2000. <i>Blood</i> 96:1438. (Block) Murga M, <i>et al.</i> 2005. <i>Blood</i> 105:1992. (IF) Thompson BD. 2007. <i>J. Biol. Chem.</i> 282:9547. (FC) PubMed Isnardi I, <i>et al.</i> 2010. <i>Blood</i> 115:5026. PubMed Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC)
(PubMed link indicates BioLegend citation)	

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

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

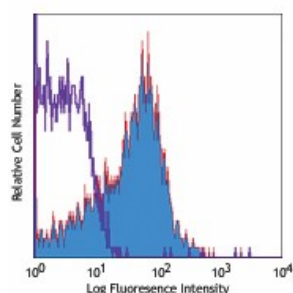
Related Protocols

[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)

Product Data



Human peripheral blood lymphocytes stained with biotinylated 12G5, followed by Sav-PE

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8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587