PE/Cyanine7 anti-human CD184 (CXCR4) Antibody

Catalog# / Size	306513 / 25 tests 306514 / 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 PE/Cyanine7 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.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 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).
Additional Product Notes	BioLegend is in the process of converting the name PE/Cy7 to PE/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine7 products. Please contact Technical Service if you have any questions.
Application References	

(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. Raposo R, *et al.* 2013. J Leukoc Biol. 94:1051. PubMed
2. Lourenco S, *et al.* 2015. J Immunol. 194:3463. PubMed
3. Martínez-Cingolani C, *et al.* 2014. Blood. 124:2411. PubMed
4. Velázquez–Avila M, *et al.* 2019. Leukemia. 33:1337. PubMed
5. Dräger NM, *et al.* 2022. Nat Neurosci. 25:1149. PubMed
6. Zhu Y, *et al.* 2019. Cell Stem Cell. 25:542. PubMed
7. Albanese M, *et al.* 2022. Nat Methods. 19:81. PubMed
8. Li YR, *et al.* 2021. Cell Rep Med. 2:100449. PubMed
9. Vlahos K *et al.* 2018. Stem cell research. 1723:40:00 . PubMed
10. Howden S *et al.* 2019. Stem Cell Res. 1728:53:00 . PubMed
11. Felker S, *et al.* 2022. JCI Insight. 7:. PubMed
12. Smith N, *et al.* 2016. Sci Rep. 6:29891. PubMed
13. Hosseini Far H *et al.* 2019. Stem Cell Res. 1727:49:00 . PubMed
14. Rodriguez A, *et al.* 2021. Cell Stem Cell. 28:33. PubMed

RRID

AB_2089652 (BioLegend Cat. No. 306513)
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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

1. Berger E, *et al.* 1999. *Annu. Rev. Immunol.* 17:657.
2. Loetscher P, *et al.* 2000. *Adv. Immunol.* 74:127.
3. Murphy P, *et al.* 2000. *Pharmacol. Rev.* 52:145.

Gene ID

7852

Related Protocols

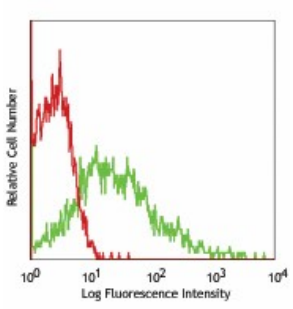
Cell Surface Flow Cytometry Staining Protocol

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 stained with 12G5 PE/Cyanine7

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