

Spark PLUS YG581™ anti-human CD184 (CXCR4) Antibody

Catalog# / Size	306549 / 25 tests 306550 / 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
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 Spark PLUS YG581™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
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 μ L per million cells in 100 μ L staining volume or 5 μ L per 100 μ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * Spark PLUS YG581™ has a maximum excitation of 562 nm and a maximum emission of 581 nm.
Excitation Laser	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/ μ g, Azide-Free, 0.2 μ m filtered) is recommended for functional assays (Cat. Nos. 306539 & 306540).

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)

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, <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

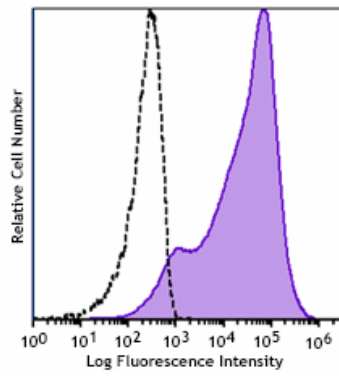
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

TotalSeq™-D0366 anti-human CD184 (CXCR4), PE/Dazzle™ 594 anti-human CD184 (CXCR4), APC/Cyanine7 anti-human CD184 (CXCR4), Brilliant Violet 785™ anti-human CD184 (CXCR4), PE/Cyanine5 anti-human CD184 (CXCR4), APC anti-human CD184 (CXCR4), Biotin anti-human CD184 (CXCR4), PE anti-human CD184 (CXCR4), PE/Cyanine7 anti-human CD184 (CXCR4), PerCP/Cyanine5.5 anti-human CD184 (CXCR4), Purified anti-human CD184 (CXCR4), Brilliant Violet 421™ anti-human CD184 (CXCR4), Brilliant Violet 650™ anti-human CD184 (CXCR4), Spark PLUS UV395™ anti-human CD184 (CXCR4) Antibody, TotalSeq™-A0366 anti-human CD184 (CXCR4), TotalSeq™-C0366 anti-human CD184 (CXCR4), Brilliant Violet 510™ anti-human CD184 (CXCR4), APC/Fire™ 750 anti-human CD184 (CXCR4), TotalSeq™-B0366 anti-human CD184 (CXCR4), Brilliant Violet 605™ anti-human CD184 (CXCR4), Spark PLUS YG581™ anti-human CD184 (CXCR4), Ultra-LEAF™ Purified anti-human CD184 (CXCR4), Purified anti-human CD184 (CXCR4) (Maxpar® Ready)

Product Data



Human peripheral blood cells were stained with anti-human CD184 (CXCR4) (clone 12G5) Spark PLUS YG581™ (filled histogram). Open histogram represents unstained cells. Data shown are gated on the lymphocyte population.

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