

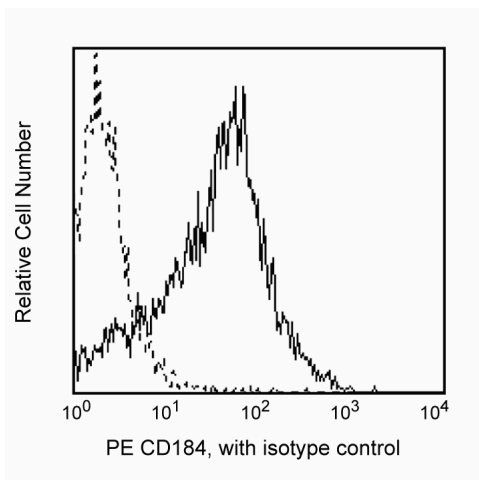
Technical Data Sheet

PE Mouse Anti-Human CD184**Product Information**

Material Number:	557145
Alternate Name:	CXCR4; Fusin; SDF-1 receptor; LAP3; LCR1; LESTR; NPY3R; NPY3R; WHIM; HM89
Size:	50 Tests
Vol. per Test:	20 µl
Clone:	12G5
Immunogen:	SIVmac variant CP-MAC-infected Sup-T1 cells
Isotype:	Mouse (BALB/c) IgG2a, κ
Reactivity:	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon
Workshop:	VII 70204, 70305
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 12G5 monoclonal antibody specifically binds to CD184, also known as CXCR4 and Fusin. CD184/CXCR4 is a seven-transmembrane domain, G-protein-linked, glycoprotein chemokine receptor. CD184 serves as a receptor for the C-X-C chemokine, SDF-1. It is expressed on a wide variety of hematopoietic cells including lymphoid and myeloid precursor cells, megakaryocytes, platelets, T and B lymphocytes, granulocytes, monocytes/macrophages, and dendritic cells. It is also expressed on vascular endothelial cells, epithelial cells, neurons and astrocytes. CD184 plays a variety of roles in hematopoiesis, vascularization and neural development. CD184 also functions as a coreceptor for infection with T-cell tropic strains of HIV-1 and as a receptor for CD4-independent infection by some HIV isolates. The 12G5 antibody has been reported to block CD4-independent infection by HIV-2 and CD4-dependent infection by some T-cell tropic isolates of HIV-1.



Flow cytometric analysis of CD184 expression on human peripheral blood lymphocytes. Whole blood was stained with either PE Mouse IgG2a, κ Isotype Control (Cat. No. 555574; dashed line histogram) or PE Mouse Anti-Human CD184 (Cat. No. 555974/561733/557145; solid line histogram). Erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). Fluorescent histograms were derived from gated events with the side and forward light-scattering characteristics of viable lymphocytes.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes**Application**

Flow cytometry	Routinely Tested
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Recommended Assay Procedure:

Flow cytometry: Chemokine receptors are known to internalize during manipulation resulting in low frequency expression. Investigators are advised to perform immunophenotyping studies of chemokine receptors on freshly collected samples (<24 Hrs). Incubation with the antibody should be done at 4°C in the dark. Cellular manipulation, such as Ficoll separation, freezing, or exposure to cold temperatures prior to staining should be minimized and have been shown to cause a decrease in staining intensity and/or inconsistent results.

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Investigators should note that alternative staining procedures may be necessary. A multiple-step staining procedure is strongly recommended, in some instances, to amplify immunofluorescent signals for the flow cytometric analysis of human CXCR4 expression. Investigators may find the Purified Mouse Anti-Human CD184 antibody (Cat. No. 555972) to be useful in conjunction with appropriate secondary and tertiary reagents for detecting low frequency expression, such as with Biotin Goat Anti-Mouse Ig (Cat. No. 553999) and PE Streptavidin (Cat. No. 554061).

Suggested Companion Products

Catalog Number	Name	Size	Clone
556653	PE Mouse IgG2a, κ Isotype Control	50 Tests	G155-178
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
349202	BD FACS™ Lysing Solution	100 mL	(none)
555899	Lysing Buffer	100 mL	(none)
555974	PE Mouse Anti-Human CD184	100 Tests	12G5
561733	PE Mouse Anti-Human CD184	25 Tests	12G5
555972	Purified Mouse Anti-Human CD184	0.1 mg	12G5
553999	Biotin Goat Anti-Mouse Ig (Multiple Adsorption)	0.5 mg	Polyclonal
554061	PE Streptavidin	0.5 mg	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
6. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

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- Loetscher M, Geiser T, O'Reilly T, Zwahlen R, Baggiolini M, Moser B. Cloning of a human seven-transmembrane domain receptor, LESTR, that is highly expressed in leukocytes. *J Biol Chem*. 1994; 269(1):232-237. (Biology)
- Nagasawa T, Nakajima T, Tachibana K, et al. Molecular cloning and characterization of a murine pre-B-cell growth-stimulating factor/stromal cell-derived factor 1 receptor, a murine homolog of the human immunodeficiency virus 1 entry coreceptor fusin. *Proc Natl Acad Sci U S A*. 1996; 93(25):14726-14729. (Biology)