Technical Data Sheet

BUV395 Mouse Anti-Human CD184

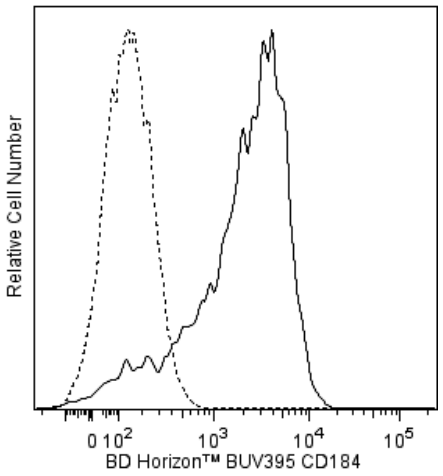
Product Information

Material Number:	**563924**
Alternate Name:	CXCR4; Fusin; SDF-1 receptor; LAP3; LCR1; LESTR; NPYY3R; NPY3R; WHIM; HM8
Size:	50 tests
Vol. per Test:	5 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 hematopietic cells, vascular endothelial cells and cells of the nervous system. 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.

The antibody was conjugated to BD Horizon™ BUV395 which has been exclusively developed by BD Biosciences as an optimal dye for use on a 355 nm laser equipped instrument. With an Ex Max at 348 nm and an Em Max at 395 nm, this dye has virtually no spillover into any other detector. BD Horizon™ BUV395 can be excited with a 355 nm laser and detected with a 379/28 filter.



Flow cytometric analysis of CD184 expression on human peripheral blood lymphocytes . *Human whole blood was stained with either BD Horizon™ BUV395 Mouse IgG2a, κ Isotype Control (Cat. No. 563809; dashed line histogram) or BD Horizon™ BUV395 Mouse Anti-Human CD184 antibody (Cat. No. 563924; solid line histogram). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.*

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 BD Horizon™ BUV395 under optimum conditions, and unconjugated antibody and free BD Horizon™ BUV395 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
554657	Stain Buffer (BSA)	500 ml	(none)
563809	BUV395 Mouse IgG2a, κ Isotype Control	50 µg	G155-178
349202	BD FACS™ Lysing Solution	100 ml	(none)
555899	Lysing Buffer	100 ml	(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-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. 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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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Endres MJ, Clapham PR, Marsh M, et al. CD4-independent infection by HIV-2 is mediated by fusin/CXCR4. *Cell.* 1996; 87(4):745-756. (Immunogen: Blocking, Flow cytometry, Fluorescence microscopy, Functional assay, Immunofluorescence, Inhibition, Neutralization)

Feng Y, Broder CC, Kennedy PE, Berger EA. HIV-1 entry cofactor: functional cDNA cloning of a seven-transmembrane, G protein-coupled receptor. *Science.* 1996; 272(5263):872-877. (Biology)

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Marcher C, Moller BK, Lillevang ST, Kristensen T. CXCR4 and IL17R are downregulated on cord-blood CD34-positive cells during short-term culture. In: Mason D, Andre P, Bensussan A, ed. *Leucocyte Typing VII : White Cell Differentiation Antigens.* New York: Oxford University Press; 2002:629-632. (Clone-specific: Flow cytometry)

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Zola H, Swart B, Nicholson I, Voss E. *Leukocyte and Stromal Cell Molecules. The CD Markers.* Hoboken, New Jersey: John Wiley & Sons, Inc.; 2007:1-581. (Biology)

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