

# CD184 (CXCR4) Monoclonal Antibody (12G5), PE, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human
Published Species	Sheep, Human
Host/Isotype	Mouse / IgG2a, kappa
Recommended Isotype Control	Mouse IgG2a kappa Isotype Control (eBM2a), PE, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	12G5
Conjugate	PE
Excitation/Emission Max	565/576 nm
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with BSA
Contains	0.09% sodium azide
Storage conditions	4°C, store in dark, DO NOT FREEZE!
RRID	AB_10669164

Applications	Tested Dilution	Publications
Immunohistochemistry (IHC)	-	1 Publication
Flow Cytometry (Flow)	5 µL (0.25 µg)/test	29 Publications

## Product Specific Information

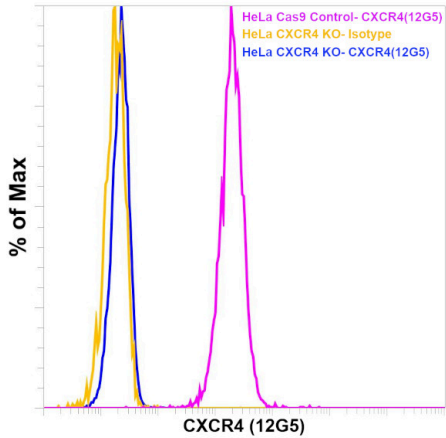
**Description:** The 12G5 monoclonal antibody reacts with human CD184 (CXCR4), also termed Fusin, LESTR, or HUMSTR. CD184 is a member of the G-protein-coupled chemokine receptor family with seven membrane-spanning domains, and functions as a coreceptor for X4 HIV-1 entry into CD4+ cells. CD184 is expressed predominantly on naive T cell subsets of peripheral blood and is rapidly upregulated by PHA and IL-2 stimulation. The 12G5 antibody shows partial inhibition of chemotaxis and calcium influx induced by SDF-1 (the natural ligand of CD184), blocks CD4-independent HIV-2 infection, and blocks CD4-dependent infection by some T-tropic HIV-1 isolates.

**Applications Reported:** This 12G5 antibody has been reported for use in flow cytometric analysis.

**Applications Tested:** The 12G5 antibody has been pre-titrated and tested by flow cytometric analysis of normal human peripheral blood cells. This can be used at 5 µL (0.25 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test.

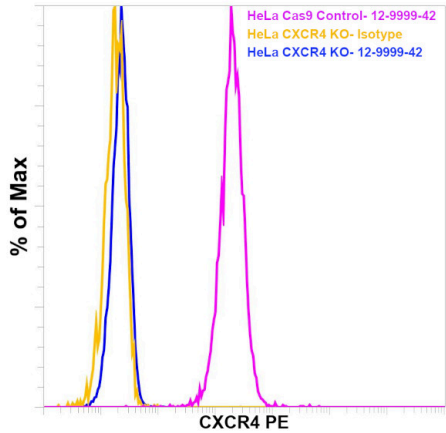
**Excitation:** 488-561 nm; **Emission:** 578 nm; **Laser:** Blue Laser, Green Laser, Yellow-Green Laser.

**Filtration:** 0.2 µm post-manufacturing filtered.



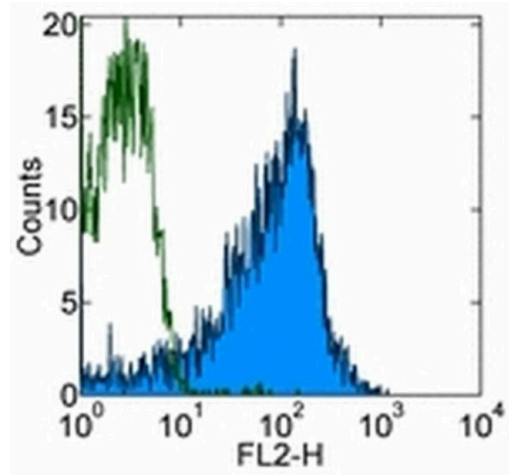
**CD184 (CXCR4) Antibody (12-9999-42)**

Antibody clone (12G5) specificity was demonstrated by CRISPR-Cas9 mediated knockout of target protein. Loss of signal was observed for target protein in CXCR4 KO cells (blue histogram) compared to the control Cas9 cells (pink histogram) using CXCR4 antibody (12G5). Yellow histogram represents staining with the isotype control. {KO}



**CD184 (CXCR4) Antibody (12-9999-42) in Flow**

Knockout of CXCR4 was achieved by CRISPR-Cas9 genome editing using LentiArray™ Lentiviral sgRNA (Product # A32042, Assay ID CRISPR695599\_LV) and LentiArray Cas9 Lentivirus (Product # A32064). Flow cytometry analysis of CXCR4 was performed by staining HeLa CXCR4 Knock out cells with 0.25 µg Mouse IgG2a kappa Isotype Control (eBM2a), PE, eBioscience™ (Product # 12-4724-82, yellow histogram) or 0.25 µg CD184 (CXCR4) Monoclonal Antibody (12G5), PE, eBioscience™ (Product # 12-9999-42, blue histogram). HeLa Cas9 control cells were also stained with 0.25 µg CD184 (CXCR4) Monoclonal Antibody (12G5), PE, eBioscience™ (Product # 12-9999-42, pink histogram). Loss of signal was observed in the CXCR4 KO cells stained with CXCR4 antibody clone 12G5 but not in the control Cas9 cells. Viable cells were used for analysis, as determined by Fixable Viability Dye Fluor™780 (Product # 65-0865-18).



**CD184 (CXCR4) Antibody (12-9999-42) in Flow**

Staining of normal human peripheral blood cells with Mouse IgG2a K Isotype Control PE (Product # 12-4724-81) (open histogram) or Anti-Human CD184 (CXCR4) PE (filled histogram). Cells in the lymphocyte gate were used for analysis.

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Immunohistochemistry (1)

Journal of tissue engineering and regenerative medicine	Year 2018
Improving the biological function of decellularized heart valves through integration of protein tethering and three-dimensional cell seeding in a bioreactor.	Species Sheep
"12-9999-42 was used in Flow Cytometry, Immunohistochemistry to show that integration of SDF-1 immobilization and 3D cell seeding in a bioreactor might provide a novel, promising approach for production of functional heart valves."	Dilution 1:20
Authors: Namiri M,Kazemi Ashtiani M,Abbasalizadeh S,Mazidi Z,Mahmoudi E,Nikeghbalian S,Aghdami N,Baharvand H	

Flow Cytometry (29)

International journal of cancer	Year 2023
Dynamics of CXCR4 positive circulating tumor cells in prostate cancer patients during radiotherapy.	
"Published figure using CD184 (CXCR4) monoclonal antibody (Product # 12-9999-42) in Flow Cytometry"	
Authors: Klusa D,Lohaus F,Franken A,Baumbach M,Cojoc M,Dowling P,Linge A,Offermann A,Löck S,Hušman D,Rivandi M,Polzer B,Freytag V,Lange T,Neubauer H,Kücken M,Perner S,Hölscher T,Dubrovskaja A,Krause M,Kurth I,Baumann M,Peitzsch C	

Frontiers in pharmacology	Year 2023
Amanita muscaria extract potentiates production of proinflammatory cytokines by dsRNA-activated human microglia.	
"Published figure using CD184 (CXCR4) monoclonal antibody (Product # 12-9999-42) in Flow Cytometry"	
Authors: Wagner A,Pehar M,Yan Z,Kulka M	

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More applications with references on thermofisher.com

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