

## Antibodies

Catalog #60089

### Anti-Human CD184 (CXCR4) Antibody, Clone 12G5

Mouse monoclonal IgG2a antibody  
against human, rhesus, cynomolgus  
CD184 (CXCR4), unconjugated

100 µg 0.5 mg/mL



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## Product Description

The 12G5 antibody reacts with CD184 (CXCR4 or fusin), an ~45 kDa seven transmembrane G-protein-coupled receptor expressed on the surface of a broad range of cells, including T and B cells, dendritic cells, monocytes, macrophages, granulocytes, platelets, endothelial and epithelial cells, astrocytes and neurons. At least two isoforms of CD184 are generated by alternate mRNA splicing. Ligands for CD184 include the CXC chemokine SDF-1 and ubiquitin. CD184 has functional roles in mediating chemotaxis, B cell lymphopoiesis and myelopoiesis, cardiogenesis, vascularization and neuronal guidance. CD184 acts as a co-receptor for infection by some T cell-tropic isolates of HIV-1 and as an alternative receptor for CD4-independent infection by HIV-2; functions that are blocked by binding of the 12G5 antibody. The antibody also partially inhibits SDF-1-induced chemotaxis and calcium influx. In differentiation studies, CD184 is used along with other markers such as CD117 to monitor the emergence of definitive endoderm.

Target Antigen Name:	CD184 (CXCR4)
Alternative Names:	C-X-C chemokine receptor type 4, CXCR4, fusin, HM89, HUMSTR, LAP3, LCR1, LESTR, NPY3R, NPY3R, SDF-1 receptor, WHIM
Gene ID:	7852
Species Reactivity:	Human, Rhesus, Cynomolgus, Baboon, Chimpanzee, African Green Monkey, Sooty Mangabey
Host Species:	Mouse (BALB/c)
Clonality:	Monoclonal
Clone:	12G5
Isotype:	IgG2a, kappa
Immunogen:	CP-MAC virus-infected SUP-T1 cells of human origin
Conjugate:	Unconjugated

## Applications

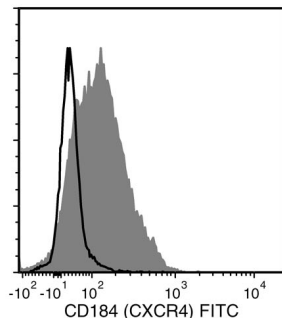
Verified:	CellSep, FC
Reported:	CyTOF®, FA, FC, ICC, IF, IHC
Special Applications:	This antibody clone has been verified for purity assessments of cells cultured with STEMdiff™ Definitive Endoderm Kit (Catalog #05110).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

## Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is $\leq 1 \mu\text{g}$ per $1 \times 10^6$ cells in 100 µL volume or per 100 µL whole blood. It is recommended that the antibody be titrated for optimal performance for each application.

## Data



Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs; gated on lymphocytes) labeled with Anti-Human CD184 (CXCR4) Antibody, Clone 12G5, followed by anti-mouse IgG, FITC (filled histogram), or Mouse IgG2a, kappa Isotype Control Antibody, Clone MOPC-173 (Catalog #60071), followed by anti-mouse IgG, FITC (solid line histogram).

## Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at [www.stemcell.com/antibodies](http://www.stemcell.com/antibodies) or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

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6. Yoshino N et al. (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of cynomolgus monkeys (*Macaca fascicularis*) by using anti-human cross-reactive antibodies. *Exp Anim* 49(2): 97–110. (FC)
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9. Endres MJ et al. (1996) CD4-independent infection by HIV-2 is mediated by fusin/CXCR4. *Cell* 87(4): 745–56. (IHC)

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