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

## Antibodies

Mouse monoclonal IgG2a antibody against human, rhesus, cynomolgus CD184 (CXCR4), PE-conjugated

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| Catalog | #60089PE | 100 Tests | 5 µL/test |
| | #60089PE.1 | 25 Tests | 5 µL/test |

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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; these functions 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.

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| Target Antigen Name: | CD184 (CXCR4) |
| Alternative Names: | C-X-C chemokine receptor type 4, CXCR4, fusin, HM89, HUMSTR, LAP3, LCR1, LESTR, NPYY3R, 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: | PE (Phycoerythrin) |

## Applications

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| Verified: | FC |
| Reported: | FACS, FC |
| 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

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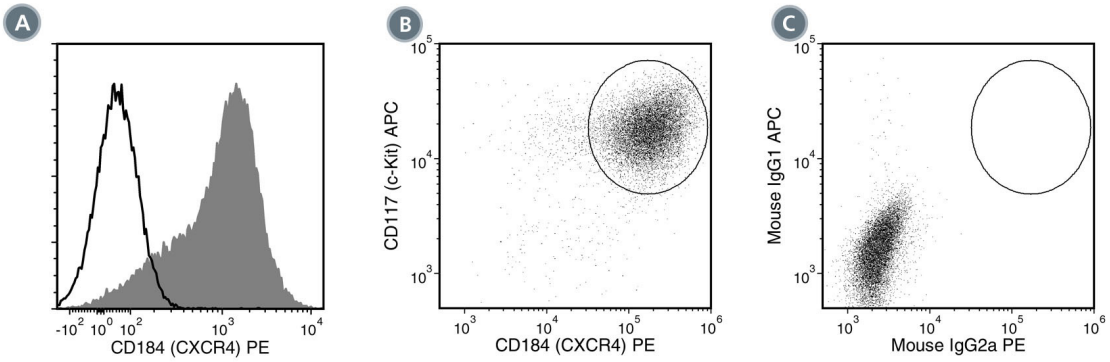
| Formulation: | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin |
| Purification: | The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions. The solution is free of unconjugated PE and unconjugated antibody. |
| Stability and Storage: | Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com. |
| Directions for Use: | For flow cytometry, the suggested use of this antibody is 5 µL per 1 x 10^6 cells in 100 µL or per 100 µL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application. |

## Data




(A) Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD184 (CXCR4) Antibody, Clone 12G5, PE (filled histogram) or Mouse IgG2a, kappa Isotype Control Antibody, Clone MOPC-173, PE (Catalog #60071PE) (solid line histogram).
(B) Flow cytometry analysis of human embryonic stem (ES) cells following differentiation to definitive endoderm using the STEMdiff™ Definitive Endoderm Kit. Cells were labeled with Anti-Human CD117 (c-Kit) Antibody, Clone 104D2, APC (Catalog #60087AZ) and Anti-Human CD184 (CXCR4) Antibody, Clone 12G5, PE. The emergence of definitive endoderm can be monitored by co-expression of CD117 and CD184.
(C) Flow cytometry analysis of human ES cells following differentiation to definitive endoderm using the STEMdiff™ Definitive Endoderm Kit. Cells were labeled with a mouse IgG1, kappa APC isotype control antibody and Mouse IgG2a, kappa Isotype Control Antibody, Clone MOPC-173, PE.

## 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 or contact us at techsupport@stemcell.com.

## References

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