Technical Data Sheet

# PE Hamster anti-Mouse CD183

## Product Information

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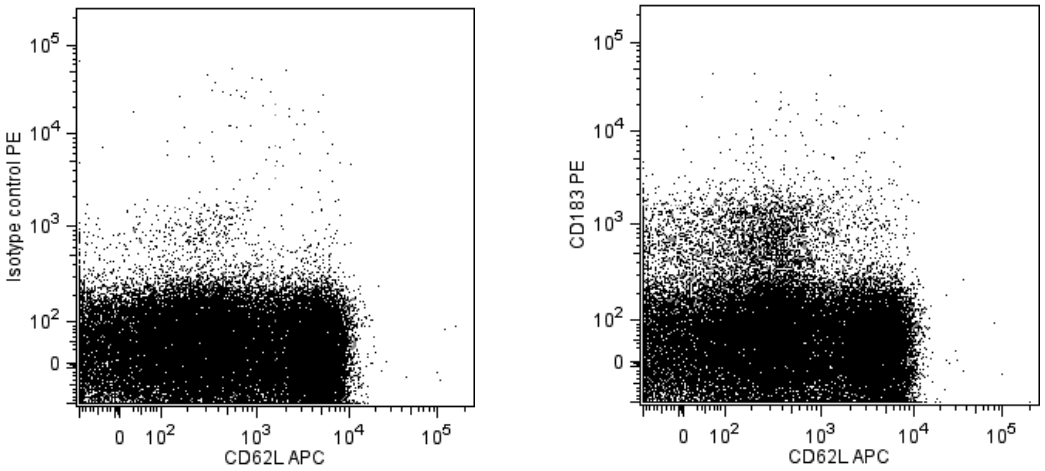
| **Material Number:** | **562152** |
| **Alternate Name:** | CXCR3; Cxcr3; CXC-R3; CXCR-3; GPR9; IP-10 Receptor |
| **Size:** | 0.1 mg |
| **Concentration:** | 0.2 mg/ml |
| **Clone:** | CXCR3-173 |
| **Immunogen:** | Mouse CXCR3 peptide (amino acids 1–37) |
| **Isotype:** | Hamster IgG1, κ |
| **Reactivity:** | QC Testing: Mouse |
| **Storage Buffer:** | Aqueous buffered solution containing ≤0.09% sodium azide. |

## Description

The CXCR3-173 monoclonal antibody specifically binds to mouse CD183, also known as CXCR3. CD183 is a seven transmembrane spanning, G protein-coupled chemokine receptor for CXC chemokines including CXCL9 (Mig), CXCL10 (IP-10) and CXCL11 (I-TAC). These chemokines are induced by inflammatory cytokines including IFN-γ, IFN-α/β, and TNF. CXCR3 is primarily expressed on activated/memory CD4+ and CD8+ T lymphocytes, Foxp+ regulatory T cells, natural killer T (NKT) cells and mature NK cells. Binding of chemokines to CXCR3 induces integrin activation, cytoskeletal changes, and chemotactic migration of activated lymphocytes. CD183 has been reported to play important roles in T cell recruitment and immune responses in a number of inflammatory and autoimmune diseases. The CXCR3-173 antibody reportedly inhibited in vitro chemotactic responses to CXCL10 or CXCL11 significantly but not to CXCL9. When administered systemically to mouse hosts, the CXCR3-173 antibody reportedly prolonged cardiac and pancreatic islet cell allograft survival. In the presence of CXCR3 ligands, especially, CXCL10 and CXCL11, staining with the antibody can be significantly blocked.




***Multicolor flow cytometric analysis of CD183 (CXCR3) expression on C57BL/6 mouse splenocytes.*** *Spleen cells were stained with APC Rat Anti-Mouse CD62L (Cat. No. 553152) and with either PE Hamster IgG1 κ Isotype Control (Hamster IgG1, Cat. No. 553972; Left Panel) or PE Hamster Anti-Mouse CD183 (Cat. No. 562152; Right Panel). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). Two-color flow cytometric dot plots show the correlated expression patterns of CD62L versus CD183/CXCR3 (or Ig isotype control staining) for gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry 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 R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

## Application Notes

**Application**

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| Flow cytometry | Routinely Tested |

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## Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|---|---|---|---|
| 553972 | PE Hamster IgG1 κ Isotype Control | 0.1 mg | A19-3 |
| 555899 | Lysing Buffer | 100 ml | (none) |
| 554656 | Stain Buffer (FBS) | 500 ml | (none) |
| 552845 | Anti-Rat and Anti-Hamster Ig κ /Negative Control Compensation Particles Set | 6.0 ml | RG7/7.6 |

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
5. 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.
6. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/pharmingen/hamster_chart_11x17.pdf.

## References


Krug A, Uppaluri R, Facchetti F, et al. IFN-producing cells respond to CXCR3 ligands in the presence of CXCL12 and secrete inflammatory chemokines upon activation. *J Immunol.* 2002; 169(11):6079-6083. (Biology)

Soto H, Wang W, Strieter RM, et al. The CC chemokine 6Ckine binds the CXC chemokine receptor CXCR3. *Proc Natl Acad Sci U S A.* 1998; 95(14):8205-8210. (Biology)

Tamaru M, Tominaga Y, Yatsunami K, Narumi S. Cloning of the murine interferon-inducible protein 10 (IP-10) receptor and its specific expression in lymphoid organs. *Biochem Biophys Res Commun.* 1998; 251(1):41-48. (Biology)

Uppaluri R, Sheehan KC, Wang L, et al. Prolongation of cardiac and islet allograft survival by a blocking hamster anti-mouse CXCR3 monoclonal antibody. *Transplantation.* 2008; 86(1):137-147. (Clone-specific: Blocking, Flow cytometry)