Technical Data Sheet

# Biotin Rat Anti-Human CXCR5

## Product Information

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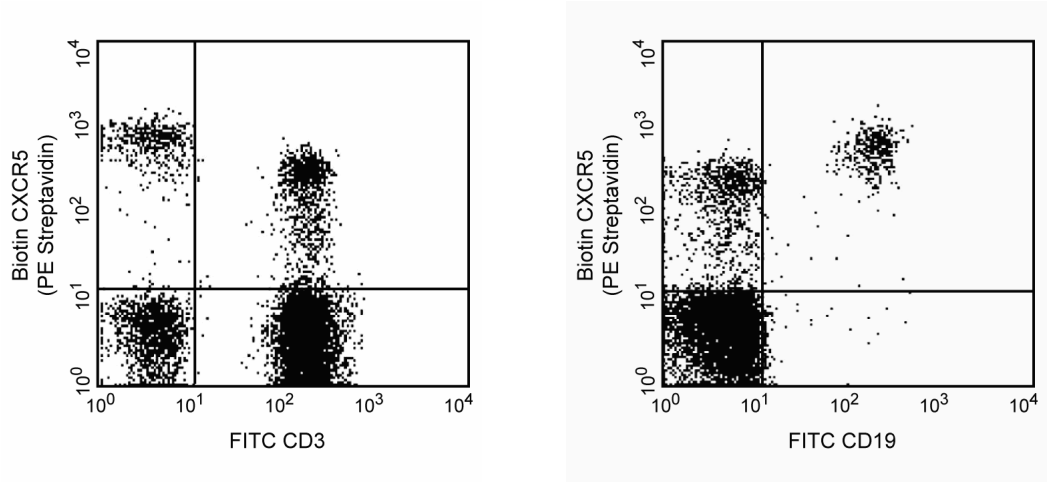
| **Material Number:** | **552118** |
| **Alternate Name:** | CD185; Chemokine C-X-C motif receptor 5; BLR1; MDR-15 |
| **Size:** | 100 Tests |
| **Vol. per Test:** | 20 µl/test |
| **Clone:** | RF8B2 |
| **Immunogen:** | Human CXCR5 |
| **Isotype:** | Rat (LOU) IgG2b, κ |
| **Reactivity:** | QC Testing: Human |
| **Storage Buffer:** | Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide. |

## Description

The RF8B2 monoclonal antibody specifically binds to the human CXC chemokine receptor, CXCR5. CXCR5 (also known as CD185, BLR-1 NLR and MDR15), a seven transmembrane, G-protein-coupled receptor, is the specific receptor for CXC chemokine, CXCL13/BLC/BCA-1. In peripheral blood, CXCR5 expression is restricted to B lymphocytes and a small subset of CD4+ and CD8+ lymphocytes. The restricted expression pattern of CXCR5 on B cells and follicular T helper cells (Tfh) suggests that this receptor functions as a regulator of B and T cell migration. Stimulation of T cells with anti-CD3 monoclonal antibody leads to the down-regulation of CXCR5.




***Detection of CXCR5 expression on human peripheral lymphocytes by biotinylated RF8B2.*** *Human peripheral blood mononuclear cells were stained with Biotin Rat Anti-Human CXCR5 and FITC Mouse Anti-Human CD3 (Cat. No. 555339; Left Panel) or FITC Mouse Anti-Human CD19 (Cat. No. 555412; Right Panel). The data reflects gating on lymphocytes, based on forward and side scattered light signals. The level of nonspecific staining was assessed by using Biotin Rat IgG2b, κ Isotype Control (Cat. No. 555847) and FITC-conjugated mouse IgG2a (Cat. No. 555573) or FITC-conjugated mouse IgG1 (Cat. No. 555748) as isotype controls. The quadrant markers for the bivariate dot plots were set based on the isotype controls.*

## 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 biotin under optimum conditions, and unreacted biotin was removed.

## Application Notes

**Application**

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| Flow cytometry | Routinely Tested |

**Recommended Assay Procedure:**

Biotin Rat Anti-Human CXCR5 is effective for indirect immunofluorescence staining of human cells for flow cytometric analysis using 20 µl/10^6 cells. The biotin-conjugated RF8B2 antibody can be used for the immunofluorescent staining with our Streptavidin-phycoerythrin (Cat. No. 554061) and flow cytometric analyses of human leukocytes and cell lines that express CXCR5 (see image). For chemokine receptors expressed at low frequencies on the surface of cells, a 3-step staining procedure is recommended.

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## Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|---|---|---|---|
| 554061 | PE Streptavidin | 0.5 mg | (none) |
| 555847 | Biotin Rat IgG2b, κ Isotype Control | 100 Tests | R35-38 |
| 554656 | Stain Buffer (FBS) | 500 mL | (none) |
| 555339 | FITC Mouse Anti-Human CD3 | 100 Tests | HIT3a |
| 555412 | FITC Mouse Anti-Human CD19 | 100 Tests | HIB19 |

## 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. 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.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

## References


Barella L, Loetscher M, Tobler A, Baggiolini M, Moser B. Sequence variation of a novel heptahelical leucocyte receptor through alternative transcript formation. *Biochem J.* 1995; 309(3):773-779. (Biology)

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Forster R, Emrich T, Kremmer E, Lipp M. Expression of the G-protein--coupled receptor BLR1 defines mature, recirculating B cells and a subset of T-helper memory cells. *Blood.* 1994; 84(3):830-840. (Immunogen)

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Kouba M, Vanetti M, Wang X, Schafer M, Hollt V. Cloning of a novel putative G-protein-coupled receptor (NLR) which is expressed in neuronal and lymphatic tissue. *FEBS Lett.* 1993; 321(2-3):173-178. (Biology)

Legler DF, Loetscher M, Roos RS, Clark-Lewis I, Baggiolini M, Moser B. B cell-attracting chemokine 1, a human CXC chemokine expressed in lymphoid tissues, selectively attracts B lymphocytes via BLR1/CXCR5. *J Exp Med.* 1998; 187(4):655-660. (Biology)



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