

# Monoclonal Anti-human/mouse CXCR7/RDC-1-Phycoerythrin

Catalog Number: FAB4227P

Lot Number: AAEU04

100 Tests

## Reagents Provided

### Phycoerythrin (PE)-conjugated mouse monoclonal

**anti-human/mouse CXCR7/RDC-1:** Supplied as 75 µg of antibody in 1 mL saline containing up to 0.5% BSA and 0.1% sodium azide.

**Clone #:** 11G8

**Isotype:** mouse IgG<sub>1</sub>

## Reagents Not Provided

- Flow Cytometry Staining Buffer (Catalog # FC001) or other BSA-supplemented saline buffer.

## Storage

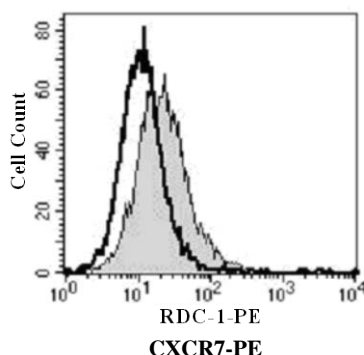
Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2° - 8° C.

## Intended Use

Designed to quantitatively determine the percentage of cells bearing CXCR7/RDC-1 within a population and qualitatively determine the density of CXCR7/RDC-1 on cell surfaces by flow cytometry.

## Product Description

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with a plasmid encoding human CXCR7/RDC-1 (hCXCR7/RDC-1; Accession # P25106). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. The purified antibody was then conjugated to PE fluorochrome. Cell surface expression of CXCR7/RDC-1 is determined by flow cytometry using 488 nm wavelength excitation and monitoring emitted fluorescence with a detector optimized to collect peak emissions at 565 - 605 nm.



MCF-7 cells were stained with PE-conjugated anti-human/mouse CXCR7/RDC-1 (Catalog # FAB4227P, filled histogram) or PE-conjugated isotype control (Catalog # IC002P, open histogram).

## Background Information

The G protein-coupled receptor RDC-1 belongs to a subgroup of chemokine receptors and has been designated CXCR7. CXCR7 can bind with high-affinity to CXCL12/SDF-1 and CXCL11/I-TAC. It is also a co-receptor for several HIV and SIV strains. In their N-termini and extracellular loops 1, 2, and 3, human and mouse CXCR7 share 84%, 100%, 96% and 86% amino acid sequence identity, respectively. Reports of mRNA levels and/or protein expression (as assessed using anti-CXCR7, clone 9C4) indicate that CXCR7 occurs on a wide variety of tissues and cells including monocytes, B cells, T cells and mature dendritic cells.<sup>1,2</sup> In contrast, based on ligand binding and receptor level analyses (as assessed using anti-CXCR7, clone 11G8), surface expression of CXCR7 was reported to be restricted primarily to tumor cells, activated endothelial cells, and fetal liver cells.<sup>3</sup> The basis of these inconsistent observations is not known but may be attributed to cell context and the use of different antibodies that may recognize different epitopes.

## References

- Balabanian, K. *et al.* (2005) J. Biol. Chem. **280**:35760.
- Infantino, S. *et al.* (2006) J. Immunol. **176**:2197.
- Burns, J.M. *et al.* (2006) J. Exp. Med. **203**:2201.

## Flow Cytometry Validation

This antibody was tested for flow cytometry using MCF-7 cells.

- Cells may be Fc-blocked with 1 µg of human IgG/10<sup>5</sup> cells for 15 minutes at room temperature. Do not wash excess blocking IgG from this reaction.
- After blocking, 10 µL of conjugated antibody was added to up to 1 x 10<sup>6</sup> cells and incubated for 30 minutes at room temperature.
- Unbound antibody was removed by washing the cells twice in Flow Cytometry Staining Buffer (Catalog # FC001). Note that whole blood requires a RBC lysis step at this point using Flow Cytometry Human Lyse Buffer (Catalog # FC002).
- The cells were resuspended in Flow Cytometry Staining Buffer for analysis by flow cytometry. As a control for this analysis, cells in a separate tube should be treated with PE-labeled mouse IgG<sub>1</sub> antibody. This procedure may need to be modified, depending upon cell type and final utilization. Individual users may need to titrate to determine optimal reagent amount for their specific use.

**Warning:** Contains sodium azide as a preservative - sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.