

## ORDERING INFORMATION

**Catalog Number:** MAB42273

**Clone:** 11G8

**Lot Number:** YQU01

**Size:** 100 µg

**Formulation:** 0.2 µm filtered solution in PBS with 5% trehalose

**Storage:** -20° C

**Reconstitution:** sterile PBS

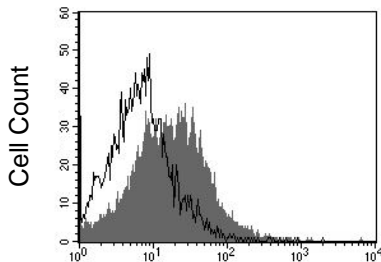
**Specificity:** human CXCR7

**Immunogen:** human CXCR7 encoding plasmid

**Ig class:** mouse IgG<sub>1</sub>

**Recommended Applications:**

Flow cytometry  
Immunohistochemistry



CXCR7 / RDC-1

MCF-7 cells were stained with anti-CXCR7/RDC-1 (R&D Systems, Cat. # MAB42273) or isotype control (R&D Systems, Cat. # MAB002, open histogram) followed by APC-conjugated anti-mouse antibody (R&D Systems, Cat. # F0101B).

## Background

The G protein-coupled receptor, RDC1, 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) (J. Biol. Chem. 2005, **280**(42):35760, J. Immunol. 2006, **176**(4):2197) indicate that CXCR7 occurs on a wide variety of tissues and cells including monocytes, B cells, T cells and mature dendritic cells. In contrast, based on ligand binding analysis and receptor level (as assessed using anti-CXCR7, clone 11G8), surface expression of CXCR7 was reported to be restricted to tumor cells, activated endothelial cells, fetal liver cells, and few other cell types (J. Exp. Med. 2006, **203**(9):2201). 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.

## Preparation

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 (hCXCR7; Accession # P25106). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

## Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

## Reconstitution

Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 µg/mL.

## Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

## Specificity

MAB42273 reacts specifically as detected by flow cytometry with five distinct human CXCR7 transfectants, but not their respective parental lines. It also reacts with MCF-7 cells expression of CXCR7. This antibody does not react with monocytes or lymphocytes by flow cytometry, which have been reported to have surface-expressing CXCR7 using clone 9C4. Due to the conflicting reports published, use of monoclonal MAB42273 may result in an underestimation of CXCR7 expression on certain cell types.

## Applications

**Flow cytometry** - This antibody was tested for flow cytometry using human MCF-7 cells. Dilute this antibody to 50 µg/mL and add 10 µL of the diluted solution to 1 - 2.5 x 10<sup>5</sup> cells in a total reaction volume not exceeding 200 µL. The binding of unlabeled monoclonal antibodies may be visualized by adding a secondary developing reagent such as anti-mouse IgG conjugated to a fluorochrome.

**Immunohistochemistry** - This antibody was used at a concentration of 8 - 25 µg/mL with appropriate secondary reagents to detect CXCR7 in paraffin-embedded sections of nude mice injected with human breast cancer cells. For chromogenic detection of labeling, the use of R&D Systems Cell and Tissue Staining Kits (CTS Series) is recommended.

**Optimal dilutions should be determined by each laboratory for each application.**