

# **Human CXCR7/RDC-1 Antibody**

Recombinant Monoclonal Mouse  $\lg G_{2A}$  Clone # 358426R Catalog Number: MAB4227R

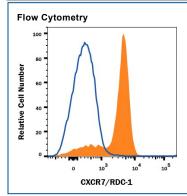
DESCRIPTION			
Species Reactivity	Human		
Specificity	Detects human CXCR7/RDC-1 in direct ELISAs. In flow cytometry, reacts specifically with five distinct human CXCR7 transfectants, but does not react with their respective parental lines or mouse CXCR7 transfectants. In flow cytometry, also reacts with monocytes expressing CXCR7, but does not react with MCF-7 cells which have been reported to have surface-expressing CXCR7 using clone 11G8. Due to the conflicting reports published, use of monoclonal MAB4227 may result in an underestimation of CXCR7 expression on certain cell types.		
Source	Recombinant Monoclonal Mouse IgG <sub>2A</sub> Clone # 358426R		
Purification	Protein A or G purified from hybridoma culture supernatant		
Immunogen	NS0 mouse myeloma cell line transfected with human CXCR7/RDC-1 Met1-Lys362 (Gly131Ser) Accession # AAA62370		
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.		

### **APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

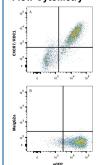
	Recommended Concentration	Sample
Flow Cytometry	0.25 μg/10 <sup>6</sup> cells	See Below
Immunohistochemistry	5-25 μg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

#### DATA



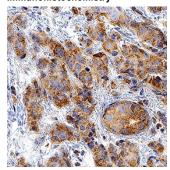
Detection of CXCR7/RDC-1 in Human peripheral blood Monocytes by Flow Cytometry. Human peripheral blood monocytes were stained with Mouse Anti-Human CXCR7/RDC-1 Monoclonal Antibody (Catalog # MAB4227R, filled histogram) or isotype control antibody (Catalog # MAB003, open histogram), followed by APCconjugated Anti-Mouse IgG F(ab')2 Secondary Antibody (Catalog # F0101B). View our protocol for Staining Membraneassociated Proteins.





Detection of CXCR7/RDC-1 in HEK293 Human Cell Line Transfected with Human CXCR7/RDC-1 and eGFP by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with human CXCR7/RDC-1 and eGFP was stained with (A) Mouse Anti-Human CXCR7/RDC-1 Monoclonal Antibody (Catalog # MAB4227R) followed by APC-conjugated Anti-Mouse IgG Secondary Antibody(Catalog # F0101B). Quadrant markers were set based on control antibody staining (Catalog # MAB003). View our protocol for Staining Membrane-associated Proteins.

### Immunohistochemistry



CXCR7/RDC-1 in Human Breast Cancer Tissue. CXCR7/RDC-1 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Mouse Anti-Human CXCR7/RDC-1 Monoclonal Antibody (Catalog # MAB4227R) at 0.5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

## PREPARATION AND STORAGE

Reconstitution Reconstitute at 0.5 mg/mL in sterile PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

\*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

### Stability & Storage

### Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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#### 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) (1, 2) 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 (3). 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:

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

