

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human CXCR4.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 12G5
<b>Purification</b>	Protein A or G purified from ascites
<b>Immunogen</b>	CP-MAC-infected SUP-T1 human T cell lymphoblastic lymphoma line Accession # P61073
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	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
<b>Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>CytoF-reported</b>	Nair, N. <i>et al.</i> (2016) <i>Mucosal Immunol.</i> 9: 68. Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
<b>Neutralization</b>	Measured by its ability to neutralize CXCL12/SDF-1α-induced chemotaxis in the BaF3 mouse pro-B cell line transfected with human CXCR4. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.3-1.2 µg/mL in the presence of 1 ng/mL Recombinant Human/Feline/Rhesus Macaque CXCL12/SDF-1α.	

**DATA**

**Flow Cytometry**

**Detection of CXCR4 in Human Blood Lymphocytes by Flow Cytometry.** Human peripheral blood lymphocytes were stained with Mouse Anti-Human CD19 APC-conjugated Monoclonal Antibody (Catalog # [FAB4867A](#)) and either (A) Mouse Anti-Human CXCR4 Monoclonal Antibody (Catalog # MAB170) or (B) Mouse IgG<sub>2A</sub> Isotype Control (Catalog # [MAB003](#)) followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # [F0102B](#)). View our protocol for [Staining Membrane-associated Proteins](#).

**Neutralization**

**Chemotaxis Induced by CXCL12/SDF-1α and Neutralization by Human CXCR4 Antibody.** Recombinant Human/Feline/Rhesus Macaque CXCL12/SDF-1α (Catalog # [350-NS](#)) chemoattracts the BaF3 mouse pro-B cell line transfected with human CXCR4 in a dose-dependent manner (orange line). The amount of cells that migrated through to the lower chemotaxis chamber was measured by Resazurin (Catalog # [AR002](#)). Chemotaxis elicited by Recombinant Human/Feline/Rhesus Macaque CXCL12/SDF-1α (1 ng/mL) is neutralized (green line) by increasing concentrations of Human CXCR4 Monoclonal Antibody (Catalog # MAB170). The ND<sub>50</sub> is typically 0.3-1.2 µg/mL.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

CXCR4 is a G-protein-linked seven transmembrane spanning receptor that binds stromal cell-derived factor-1 (SDF-1). CXCR4 acts as a co-factor for T-cell tropic HIV-1 and -2 viral entry into cells.

**References:**

1. Endres, M.J. *et al.* (1996) *Cell* 87:745.