Human CXCR4 Antibody
Monoclonal Mouse IgG2A Clone # 12G5
Catalog Number: MAB170

DESCRIPTION
Species Reactivity Human
Specificity Detects human CXCR4.
Source Monoclonal Mouse IgG2A Clone # 12G5
Purification Protein A or G purified from ascites
Immunogen CP-MAC-infected SUP-T1 human T cell lymphoblastic lymphoma line Accession # P61073
Endotoxin Level <0.10 EU per 1 µg of the antibody by the LAL method.
Formulation Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

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.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tbody>
<tr>
<td>Flow Cytometry 0.25 µg/10⁶ cells</td>
<td>See Below</td>
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<tr>
<td>CyTOF-reported</td>
<td>Nair, N. et al. (2016) Mucosal Immunol. 9: 68. Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.</td>
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<tr>
<td>Neutralization</td>
<td>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 (ND₅₀) is typically 0.3-1.2 µg/mL in the presence of 1 ng/mL Recombinant Human/Feline/Rhesus Macaque CXCL12/SDF-1α.</td>
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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 IgG2A Isotype Control (Catalog # NA8003) 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 ND₅₀ is typically 0.3-1.2 µg/mL.

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.

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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CXCR4, also known as CD184, 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. While primarily a membrane protein, CXCR4 undergoes trafficking and internalization in response to stimulation with phorbol esters and ligand (1). Cytoplasmic and nuclear localization of CXCR4 has been observed in colorectal and renal carcinomas (2,3) and it has been used as the basis of prognosis and metastatic state (3,4,5).

References: