Human CXCR4 Antibody

Monoclonal Mouse IgG_{2A} Clone # 12G5

Catalog Number: MAB170

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CXCR4.
Source	Monoclonal Mouse IgG_{2A} 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. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

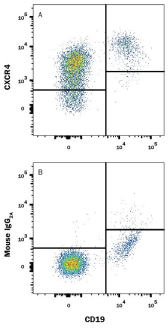
APPLICATIONS

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/10^6 cells	See Below
CyTOF-reported	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.	
Neutralization	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_{50}) is typically 0.3-1.2 µg/mL in the presence of 1 ng/mL Recombinant Human/Feline/Rhesus Macaque CXCL12/SDF-1α.	

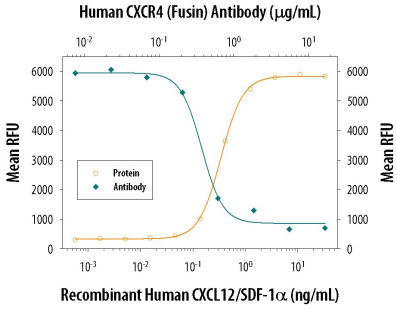
DATA

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_{2A} 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_{50} 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. *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.

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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956