

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human CCR7.
Source	Monoclonal Mouse IgG _{2A} Clone # 150503
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human CCR7 transfectants Met1-Pro378 Accession # AAA58615
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 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. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	See Below
CyTOF-reported	Mei, H.E. <i>et al.</i> (2015) <i>J. Immunol.</i> 194 : 2022. 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 CCL19/MIP-3β-induced chemotaxis in the BaF3 mouse pro-B cell line transfected with human CCR7. The Neutralization Dose (ND ₅₀) is typically 1-5 µg/mL in the presence of 50 ng/mL Recombinant Human CCL19/MIP-3β.	

DATA

Flow Cytometry

Detection of CCR7 in Human PBMCs by Flow Cytometry.
Human peripheral blood mononuclear cells (PBMCs) were stained with Mouse Anti-Human CD4 PE-conjugated Monoclonal Antibody (Catalog # FAB3791P) and either (A) Mouse Anti-Human CCR7 Monoclonal Antibody (Catalog # MAB197) or (B) Mouse IgG_{2A} Isotype Control (Catalog # MAB003) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). View our protocol for [Staining Membrane-associated Proteins](#).

Immunocytochemistry

CCR7 in Human PBMCs.
CCR7 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using 25 µg/mL Mouse Anti-Human CCR7 Monoclonal Antibody (Catalog # MAB197) for 3 hours at room temperature. Cells were stained (red) and counterstained (green). View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

Immunohistochemistry

CCR7 in Human Lung. CCR7 was detected in immersion fixed paraffin-embedded sections of human lung using Mouse Anti-Human CCR7 Monoclonal Antibody (Catalog # MAB197) at 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 in macrophages. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

Neutralization

Chemotaxis Induced by CCL19/MIP-3β and Neutralization by Human CCR7 Antibody. Recombinant Human CCL19/MIP-3β (Catalog # 361-MI) chemoattracts the BaF3 mouse pro-B cell line transfected with human CCR7 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 CCL19/MIP-3β (50 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human CCR7 Monoclonal Antibody (Catalog # MAB197). The ND₅₀ is typically 1-5 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. <ul style="list-style-type: none">• 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

CCR7 (Chemokine Receptor 7; also CD197) is a 7 transmembrane (7TM) G protein-coupled chemokine receptor for the homeostatic chemokines CCL19/MIP-3 beta and CCL21/6Ckine. CCL19 and CCL21 are constitutively expressed by high endothelial venule epithelial cells or fibroblastic reticular cells in secondary lymphoid organs. CCR7 is upregulated on dendritic cells, naïve and memory T cells, Treg, NK cells, and B cells following inflammatory stimulation. Its expression enables the function of immune cell trafficking to and retention in regional lymph nodes for expansion of the adaptive immune response. Human CCR7 shares 87% amino acid sequence identity with mouse CCR7.