Species Reactivity: Mouse
Specificity: Detects mouse CCR7.
Source: Monoclonal Rat IgG2A Clone # 4B12
Purification: Protein A or G purified from hybridoma culture supernatant
Immunogen: RBC-2H3 cells expressing mouse CCR7
Accession #: NP_031745
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>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Cytometry</td>
<td>0.25 µg/10⁶ cells</td>
</tr>
<tr>
<td>Immunocytochemistry</td>
<td>8-25 µg/mL</td>
</tr>
</tbody>
</table>

CyTOF-reported

Neutralization
Measured by its ability to neutralize CCL19/MIP-3β-induced chemotaxis in the BaF3 mouse pro-B cell line transfected with mouse CCR7. The Neutralization Dose (ND₅₀) is typically 2-10 µg/mL in the presence of 25 ng/mL Recombinant Mouse CCL19/MIP-3β.

DATA

Immunocytochemistry

CCR7 in Mouse Splenocytes. CCR7 was detected in immersion fixed non-stimulated mouse splenocytes using 25 µg/mL Rat Anti-Mouse CCR7 Monoclonal Antibody (Catalog # MAB3477) for 3 hours at room temperature. Cells were stained (red) and counterstained (green). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

Neutralization

Chemotaxis Induced by CCL19/MIP-3β and Neutralization by Mouse CCR7 Antibody. Recombinant Mouse CCL19/MIP-3β (Catalog # 440-M3) chemoattracts the BaF3 mouse pro-B cell line transfected with mouse 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 Mouse CCL19/MIP-3β (25 ng/mL) is neutralized (green line) by increasing concentrations of Rat Anti-Mouse CCR7 Monoclonal Antibody (Catalog # MAB3477). The ND₅₀ is typically 2-10 µg/mL.

Flow Cytometry

Detection of CCR7 in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes were stained with Rat Anti-Mouse CD3 PE-conjugated Monoclonal Antibody (Catalog # FAB4841P) and either (A) Rat Anti-Mouse CCR7 Monoclonal Antibody (Catalog # MAB3477) or (B) Rat IgG2A Isotype Control (Catalog # MAB006) followed by Allophycocyanin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0113). View our protocol for Staining Membrane-associated Proteins.
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

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. Mouse CCR7 shares 87% amino acid sequence identity with human CCR7.