PE Mouse Anti-Human CD184

**Material Number:** 557145
**Alternate Name:** CXCR4; Fusin; SDF-1 receptor; LAP3; LCR1; LESTR; NPY3R; NPY3R; WHIM; HM89

**Size:** 50 Tests
**Vol. per Test:** 20 µl
**Clone:** 12G5
**Immunogen:** SIVmac variant CP-MAC-infected Sup-T1 cells
**Isotype:** Mouse (BALB/c) IgG2a, κ

**QC Testing:** Human
**Reactivity:** Tested in Development: Rhesus, Cynomolgus, Baboon

**Workshop:** VII 70204, 70305
**Storage Buffer:** Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**
The 12G5 monoclonal antibody specifically binds to CD184, also known as CXCR4 and Fusin. CD184/CXCR4 is a seven-transmembrane domain, G-protein-linked, glycoprotein chemokine receptor. CD184 serves as a receptor for the C-X-C chemokine, SDF-1. It is expressed on a wide variety of hematopoietic cells including lymphoid and myeloid precursor cells, megakaryocytes, platelets, T and B lymphocytes, granulocytes, monocytes/macrophages, and dendritic cells. It is also expressed on vascular endothelial cells, epithelial cells, neurons and astrocytes. CD184 plays a variety of roles in hematopoiesis, vascularization and neural development. CD184 also functions as a coreceptor for infection with T-cell tropic strains of HIV-1 and as a receptor for CD4-independent infection by some HIV isolates. The 12G5 antibody has been reported to block CD4-independent infection by HIV-2 and CD4-dependent infection by some T-cell tropic isolates of HIV-1.

**Preparation and Storage**
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

**Application Notes**

**Application**

<table>
<thead>
<tr>
<th>Flow cytometry</th>
<th>Routinely Tested</th>
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</thead>
</table>

**Recommended Assay Procedure:**

*Flow cytometry:* Chemokine receptors are known to internalize during manipulation resulting in low frequency expression. Investigators are advised to perform immunophenotyping studies of chemokine receptors on freshly collected samples (<24 Hrs). Incubation with the antibody should be done at 4°C in the dark. Cellular manipulation, such as Ficoll separation, freezing, or exposure to cold temperatures prior to staining should be minimized and have been shown to cause a decrease in staining intensity and/or inconsistent results.
Investigators should note that alternative staining procedures may be necessary. A multiple-step staining procedure is strongly recommended, in some instances, to amplify immunofluorescent signals for the flow cytometric analysis of human CXCR4 expression. Investigators may find the Purified Mouse Anti-Human CD184 antibody (Cat. No. 555972) to be useful in conjunction with appropriate secondary and tertiary reagents for detecting low frequency expression, such as with Biotin Goat Anti-Mouse Ig (Cat. No. 553999) and PE Streptavidin (Cat. No. 554061).

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>556653</td>
<td>PE Mouse IgG2a, κ Isotype Control</td>
<td>50 Tests</td>
<td>G155-178</td>
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<tr>
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<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<td>555899</td>
<td>Lysing Buffer</td>
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<td>PE Mouse Anti-Human CD184</td>
<td>100 Tests</td>
<td>12G5</td>
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<td>561733</td>
<td>PE Mouse Anti-Human CD184</td>
<td>25 Tests</td>
<td>12G5</td>
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<td>555972</td>
<td>Purified Mouse Anti-Human CD184</td>
<td>0.1 mg</td>
<td>12G5</td>
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<tr>
<td>553999</td>
<td>Biotin Goat Anti-Mouse Ig (Multiple Adsorption)</td>
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<td>Polyclonal</td>
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<tr>
<td>554061</td>
<td>PE Streptavidin</td>
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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use $1 \times 10^6$ cells in a 100-µl experimental sample (a test).
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.

References