Technical Data Sheet

Purified Rat Anti-Human CD184

Product Information
Material Number: 551413
Alternate Name: CXCR4, Fusin
Size: 0.1 mg
Concentration: 0.5 mg/ml
Clone: ID9
Immunogen: Human CXCR4 fusion protein
Isotype: Rat IgG2a, κ
Reactivity: QC Testing: Human
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description
The monoclonal antibody 1D9 reacts with the human CD184 which is also known as CXC chemokine receptor, CXCR4. CXCR4 (previously known as fusin, LESTR and HUMSTR), a seven-transmembrane, G-protein-coupled receptor, is the specific receptor for CXC chemokines, SDF-1/CXCL12. CXCR4 was widely expressed by hematopoietic and non-hematopoietic cell types including PMN, monocytes, T cells, B cells, CD34+ progenitor cells, endothelial cells, neurons and astrocytes. The human CXCR4 is used by T-tropic HIV-1 as a co-receptor for viral entry. The human CXCR4 gene has been mapped to chromosome 2q21. The immunogen used to generate 1D9 hybridoma was human CXCR4 fusion protein.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Preparation and Storage
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4°C.

Application Notes
Application
Flow cytometry
Routinely Tested

Recommended Assay Procedure:
The purified 1D9 antibody can be used for the immunofluorescent staining and flow cytometric analyses of human leukocytes and cell lines that express CXCR4 (see figure).
A multistep staining procedure is recommended to amplify immunofluorescent signals for the flow cytometric analysis of human CXCR4 expression:

Step 1: Incubate 10^6 cells with 0.06 - 0.5 μg of purified 1D9 antibody at 4°C for 15 - 20 minutes. Wash cells two times with staining medium containing sodium azide (e.g., Dulbecco's PBS or tissue culture medium [without phenol red and biotin] with 0.09% sodium azide and 2% heat-inactivated FCS or 0.2% BSA).

Step 2: Incubate the cells with biotinylated mouse anti-rat IgG2a (Cat. No. 553894) at 4°C for 20 minutes. Wash cells two times.

Step 3: Incubate the cells with ≤0.06 μg of streptavidin-phycocerythrin (Cat. No. 554061) at 4°C for 20 minutes. Wash two times. Resuspend cells in staining medium and analyze stained cells by flow cytometry.

### Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
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<tbody>
<tr>
<td>554061</td>
<td>PE Streptavidin</td>
<td>0.5 mg</td>
<td>(none)</td>
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<tr>
<td>553894</td>
<td>Biotin Mouse Anti-Rat IgG2a</td>
<td>0.5 mg</td>
<td>RG7/1.30</td>
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<tr>
<td>555841</td>
<td>Purified Rat IgG2a, κ Isotype Control</td>
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<td>R35-95</td>
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### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. 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.

### References