APC Mouse anti-Human CD64

Product Information

- Material Number: 561189
- Alternate Name: FCGR1; FcRI; Fc-gamma RI; IgG Fc Receptor I; High affinity IgG FcRI
- Size: 50 Tests
- Vol. per Test: 5 µl
- Clone: 10.1
- Immunogen: Human Rheumatoid synovial fluid cells and fibronectin-purified monocytes
- Isotype: Mouse (BALB/c) IgG1, κ
- Reactivity: QC Testing: Human
- Workshop: VI MA36
- Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 10.1 monoclonal antibody specifically binds to CD64, a 72 kDa type I transmembrane glycoprotein that is a high affinity receptor for human IgG (FcγRI), especially the IgG1 and IgG3 subclasses. CD64 is expressed on monocytes, macrophages, dendritic cells, granulocytes activated with interferon-gamma and early myeloid lineage cells. CD64 associates with a signaling FcγR homodimer to form the functional high affinity FcγRI complex. CD64 functions in both innate and adaptive immune responses and mediates endocytosis, phagocytosis, antigen presentation, antibody-dependent cellular toxicity, cytokine release and superoxide generation.

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 to APC under optimum conditions, and unconjugated antibody and free APC were removed.

Application Notes

Application

Flow cytometry Routinely Tested

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>554681</td>
<td>APC Mouse IgG1 κ Isotype Control</td>
<td>0.1 mg</td>
<td>MOPC-21</td>
</tr>
<tr>
<td>555899</td>
<td>Lysing Buffer</td>
<td>100 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>349202</td>
<td>BD FACSTM Lysing Solution</td>
<td>100 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
</tbody>
</table>

Flow cytometric analysis of CD64 expression on human peripheral blood monocytes. Whole blood was stained with APC Mouse Anti-Human CD64 antibody (Cat. No. 561189; solid line histogram) or with a APC Mouse IgG1, κ Isotype Control (Cat. No. 554681; dashed line histogram). The erythrocytes were lysed with BD PharmLyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable monocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.
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. An isotype control should be used at the same concentration as the antibody of interest.

3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

4. 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.

5. This APC-conjugated reagent can be used in any flow cytometer equipped with a dye, HeNe, or red diode laser.

6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.


References


Indik ZK, Hunter S, Huang MM, et al. The high affinity Fc gamma receptor (CD64) induces phagocytosis in the absence of its cytoplasmic domain: the gamma subunit of Fc gamma RIIIA imparts phagocytic function to Fc gamma RI. Exp Hematol. 1994; 22(7):599-606. (Biology)
