Monoclonal Antibodies Detecting Human Antigens

CD16 (B73.1)

Form       Catalog number
PE          347617
PE-Cy7      335788

Product availability varies by region. Contact BD Biosciences Customer Support or your local sales representative for information.

RESEARCH APPLICATIONS

Research applications include studies of:

- Natural killer (NK) lymphocytes in peripheral blood
- Lymphocyte subsets bearing the CD8 and CD57 antigen
- Subsets of NK cells
- NK-cell cytotoxicity

DESCRIPTION

Specificity

The CD16 (Leu-11c) antibody recognizes a 50 to 65 kilodalton (kDa) antigen present on human NK lymphocytes that is the IgG Fc receptor III.

Antigen distribution

The CD16 antigen is expressed on approximately 15% of peripheral blood lymphocytes and is present on virtually all resting NK lymphocytes. The CD16 antigen can be expressed on CD3⁺ T lymphocytes from certain individuals. The CD16 antigen is also expressed on neutrophils. CD16 (Leu-11c) reacts with neutrophils at a lower intensity than CD16 (Leu-11a) and CD16 (Leu-11b). A variable number of CD16⁺ lymphocytes co-express either the CD57 antigen or low-density CD8 antigen or both. CD16⁺CD56⁺ NK cells demonstrate reciprocal transfer of an activation state with dendritic cells.

Clones

The CD16 (Leu-11c) antibody, clone B73.1, is derived from hybridization of P3-X63-Ag8.653 mouse myeloma cells with spleen cells from BALB/c mice immunized with NK lymphocytes.

CAUTION

The CD16 (Leu-11c) antibody binding is inhibited by human serum or aggregated IgG. In whole blood preparations, the CD16 antibody shows variable reactivity with granulocytes.

Composition

The CD16 (Leu-11c) antibody is composed of mouse IgG₁ heavy chains and kappa light chains.

Product configuration

The following are supplied in phosphate buffered saline (PBS) containing a stabilizer and a preservative.

<table>
<thead>
<tr>
<th>Form</th>
<th>Number of tests</th>
<th>Volume per test (µL)</th>
<th>Amount provided (µg)</th>
<th>Total volume (mL)</th>
<th>Concentration (µg/mL)</th>
<th>Stabilizer</th>
<th>Preservative</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE</td>
<td>100</td>
<td>20</td>
<td>50</td>
<td>2.0</td>
<td>25</td>
<td>Gelatin 0.1%</td>
<td>Sodium azide</td>
</tr>
<tr>
<td>PE-Cy7</td>
<td>100</td>
<td>5</td>
<td>50</td>
<td>0.5</td>
<td>100</td>
<td>Gelatin 0.1%</td>
<td>Sodium azide</td>
</tr>
</tbody>
</table>

a. Volume required to stain 10⁶ cells.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.
CAUTION Some PE-Cy7 conjugates show changes in their emission spectra with prolonged exposure to paraformaldehyde or light. For overnight storage of stained cells, wash and resuspend in buffer without paraformaldehyde after 1 hour of fixation.

PROCEDURE Visit our website (bdbiosciences.com) or contact your local BD representative for the lyse/wash method for direct immunofluorescence.

REPRESENTATIVE DATA Flow cytometric analysis was performed on lysed whole blood and gated on lymphocytes. Laser excitation was at 488 nm and 635 nm. Representative data analyzed with a BD FACSTM brand flow cytometer is shown in the following figure.

HANDLING AND STORAGE Store vials at 2°C–8°C. Conjugated forms should not be frozen. Protect from exposure to light. Each reagent is stable until the expiration date shown on the bottle label when stored as directed.

WARNING All biological specimens and materials coming in contact with them are considered biohazards. Handle as if capable of transmitting infection12,13 and dispose of with proper precautions in accordance with federal, state, and local regulations. Never pipette by mouth. Wear suitable protective clothing, eye wear, and gloves.

CHARACTERIZATION To ensure consistently high-quality reagents, each lot of antibody is tested for conformance with characteristics of a standard reagent. Representative flow cytometric data is included in this data sheet.

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REFERENCES


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