Monoclonal Antibodies
Detecting Human Antigens

CD45RA (L48)

Research applications include studies of:
• Memory T-cell subsets in peripheral blood
• T-lymphocyte function
• Immunodeficiency disease
• Multiple sclerosis and other autoimmune diseases

DESCRIPTION
Specificity
The CD45RA antibody recognizes a 220-kilodalton (kDa) molecular weight isoform of the leucocyte common antigen (LCA). The CD45RA antigen is a member of the CD45 antigen family that also includes the CD45, CD45RB, and CD45RO antigens.

Antigen distribution
The CD45RA antigen is present on approximately 50% of CD4+ T lymphocytes, approximately 75% of CD8+ T lymphocytes, and on essentially all B lymphocytes and natural killer (NK) lymphocytes. The suppressor inducer T-lymphocyte subset expresses the phenotype CD4+CD45RA+. The CD45RA antigen is expressed on naive T lymphocytes; antigen density decreases upon in vitro activation. A selective loss of the CD4+CD45RA+ subset during active multiple sclerosis has been demonstrated.

Clone
The CD45RA antibody, clone L48, is derived from hybridization of Sp2/0 mouse myeloma cells with spleen cells from BALB/c mice immunized with low-buoyant-density human lymphocytes.

Composition
The CD45RA 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>FITC</td>
<td>100</td>
<td>20</td>
<td>100</td>
<td>2.0</td>
<td>50</td>
<td>Gelatin</td>
<td>0.1% Sodium azide</td>
</tr>
<tr>
<td>PE-Cy7</td>
<td>100</td>
<td>5</td>
<td>25</td>
<td>0.5</td>
<td>50</td>
<td>Gelatin</td>
<td>0.1% Sodium azide</td>
</tr>
</tbody>
</table>

* Volume required to stain 10⁶ cells.

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.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.
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 peripheral blood and gated on lymphocytes. Laser excitation was at 488 nm. Representative data analyzed with a BD FACSort™ 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 infection and dispose of with proper precautions in accordance with federal, state, and local regulations. Never pipette by mouth. Wear suitable protective clothing, eyewear, 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.

WARRANTY
Unless otherwise indicated in any applicable BD general conditions of sale for non-US customers, the following warranty applies to the purchase of these products.

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REFERENCES


