Monoclonal Antibodies
Detecting Human Antigens

CD34 (My10)

Form: Pure
Catalog number: 347660

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

RESEARCH APPLICATIONS

Research applications include studies of:

- Enrichment of progenitor cells by panning or cell sorting
- Hematopoiesis and progenitor cells
- Characterization of leukemias

DESCRIPTION

Specificity

The CD34 antibody recognizes a 105–120-kilodalton (kDa) single-chain transmembrane glycoprotein. Clone My10 recognizes an epitope on CD34 distinct from the one recognized by clone 8G12; at least three epitopes have been identified. The CD34 antigen is a differentiation stage–specific leucocyte antigen. Terminal deoxynucleotidyl transferase–positive B- and T-lymphoid precursors in normal bone marrow are CD34+. The CD34 antigen is present on early myeloid cells that lack the CD14 and CD15 antigens and on early erythroid cells that express the CD71 antigen and dimly express the CD45 antigen. The antigen is absent on fully differentiated hematopoietic cells. Uncommitted CD34+ progenitor cells are CD38– and lack lineage-specific antigens such as CD71, CD33, CD10, and CD5, while CD34+ cells that are lineage-committed express the CD38 antigen in high density. Most CD34+ cells reciprocally express either the CD45RO or CD45RA antigens, with the CD45RO population being the more primitive. Approximately 60% of acute B-lymphoid leukemias and acute myeloid leukemias (AML) and 1% to 5% of acute T-lymphoid leukemias express the CD34 antigen. The antigen is not expressed on chronic lymphoid leukemias or lymphomas.

Clone

The CD34 antibody, clone My10 (Anti–HPCA*-1), is derived from the hybridization of Sp2/0-Ag14 mouse myeloma cells with spleen cells isolated from BALB/c mice immunized with the human cell line KG-1a.

Composition

The CD34 antibody is composed of mouse IgG1 heavy chains and kappa light chains.

* Human progenitor cell antigen

For Research Use Only. Not for use in diagnostic or therapeutic procedures.
Product configuration

The following reagent is 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)a</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>Pure</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>
</tbody>
</table>

a. Volume required to stain 10^6 cells.

CAUTION Higher levels of nonspecific staining can result when ammonium chloride lysis is used for cell preparation before staining.

PROCEDURE

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

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 infection20,21 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.

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.

The products sold hereunder are warranted only to conform to the quantity and contents stated on the label or in the product labeling at the time of delivery to the customer. BD disclaims hereby all other warranties, expressed or implied, including warranties of merchantability and fitness for any particular purpose and noninfringement. BD’s sole liability is limited to either replacement of the products or refund of the purchase price. BD is not liable for property damage or any incidental or consequential damages, including personal injury, or economic loss, caused by the product.

REFERENCES


