Monoclonal Antibodies Detecting Human Antigens

CD13 (L138)

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

Research applications include:
- Immunophenotyping of leukemias1-9
- Investigation of myeloid cell function8,10-12
- Delineation of cellular differentiation and hematopoietic maturation10-12
- Enumeration of myeloid cell subsets5,6,13

DESCRIPTION

Specificity

The CD13 antibody specifically binds to a glycosylated 150-kilodalton (kDa) type II integral membrane zinc-metalloprotease. The CD13 antigen is also known as aminopeptidase N, APN, ANPEP, and gp150.14

Antigen distribution

The CD13 antigen is expressed on granulocytes, monocytes, mast cells, and granulocyte/macrophage progenitor cells (CFU-GM), but not on lymphocytes, platelets, or erythrocytes.15,16 It is expressed on most acute myeloid leukemia (AML) cells and some chronic myeloid leukemia (CML) cells. The CD13 antigen is also expressed on epithelial cells of the kidney, small intestine, and respiratory tract, as well as in synaptic membranes in the central nervous system (CNS).

The CD13 antigen is involved in the metabolism of many regulatory peptides.14 Clustering of the CD13 antigen by various forms of ligation promotes the adhesion between monocytes and endothelial cells.17 The CD13 antigen is the receptor for human coronavirus 229E, the causative agent for some cases of upper respiratory infection.18

Clone

The CD13 antibody, clone L138 (also known as Leu-M7),19,20 is derived from the hybridization of Sp2/0 mouse myeloma cells with spleen cells isolated from BALB/c × C57BL/6 hybrid mice immunized with the KG-1a cell line.

Composition

The CD13 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>Pure</td>
<td>100</td>
<td>20</td>
<td>50</td>
<td>2.0</td>
<td>25</td>
<td>Gelatin</td>
<td>0.1% Sodium azide</td>
</tr>
<tr>
<td>PE</td>
<td>100</td>
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</tr>
</tbody>
</table>

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CAUTION  Some PE-Cy7 and APC-R700 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 protocol for direct immunofluorescence.

REPRESENTATIVE DATA  Flow cytometric analysis was performed on normal whole blood stained with the indicated conjugated antibody and gated on lymphocytes (negative) and monocytes (positive). Laser excitation was at 488 nm or 640 nm. The APC-R700 conjugate is read off the red laser (640 nm) using a 685 longpass mirror with a 712/21 bandpass filter. Representative data analyzed with a BD FACSTM brand flow cytometer is shown in the following plots.

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 infection21,22 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.

Some reagents are bottled with ProClin 300, and contain 0.003% of a mixture of CMIT/MIT (3:1), CAS number 55965-84-9.

Warning  H317 May cause an allergic skin reaction.
Wear protective gloves / eye protection. Wear protective clothing. Avoid breathing mist/vapours/spray. If skin irritation or rash occurs: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. Dispose of contents/container in accordance with local/regional/national/international regulations.

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


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