Alexa Fluor® 700 Mouse Anti-Human CD45

Material Number: 560566
Alternate Name: PTPRC; LCA; Leukocyte Common Antigen; T200; GP180; LY5
Size: 50 Tests
Vol. per Test: 5 µl
Clone: HI30
Immunogen: Human Peripheral Blood Leucocytes
Isotype: Mouse IgG1, κ
QC Testing: Human
Workshop: IV N816
Storage Buffer: Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description
The HI30 monoclonal antibody specifically binds to the 180, 190, 205, 220 kDa protein isoforms of CD45. CD45 is encoded by the PTPRC (Protein tyrosine phosphatase receptor type C) gene. CD45, also known as the leukocyte common antigen (LCA), is a member of the protein tyrosine phosphatase (PTP) family. It is present on all human leukocytes including lymphocytes, monocytes, granulocytes, eosinophils, and thymocytes. CD45 is absent from circulating erythrocytes, platelets, or mature erythroid cells of bone marrow and non-hemopoietic tissues.

Flow cytometric analysis of CD45 expression on human lymphocytes. Whole blood was stained with either Alexa Fluor® 700 Mouse Anti-Human CD45 (Cat. No. 560566; shaded histogram) or Alexa Fluor® 700 Mouse IgG1, κ Isotype Control (Cat. No. 557882; open histogram). Erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). Fluorescent histograms were derived from gated events with the side and forward light-scatter characteristics of viable lymphocytes. Flow cytometry was performed on a BD™ LSR II flow cytometry system.

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 Alexa Fluor® 700 under optimum conditions, and unreacted Alexa Fluor® 700 was removed.

Application Notes
Application
| Flow cytometry | Routinely Tested |

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Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>557882</td>
<td>Alexa Fluor® 700 Mouse IgG1, κ Isotype Control</td>
<td>0.1 mg</td>
<td>MOPC-21</td>
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<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
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<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<tr>
<td>349202</td>
<td>BD FACSTM Lysing Solution</td>
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<tr>
<td>555899</td>
<td>Lysing Buffer</td>
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960566 Rev. 2
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. 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.

4. Alexa Fluor® 700 has an adsorption maximum of ~700nm and a peak fluorescence emission of ~720nm. Before staining cells with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.

5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.

6. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.

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


References


Phipps DJ, Youself S, Branch DR. Increased enzymatic activity of the T-cell antigen receptor-associated fyn protein tyrosine kinase in asymptomatic patients infected with the human immunodeficiency virus. Blood. 1997; 90(9):3603-3612. (Biology)


Terry LA, Brown MH, Beverley PC. The monoclonal antibody, UCHL1, recognizes a 180,000 MW component of the human leucocyte-common antigen, CD45. Immunology. 1988; 64(2):331-336. (Biology)


Wu L, Fu J, Shen SH. SKAP55 coupled with CD45 positively regulates T-cell receptor-mediated gene transcription. Mol Biol Cell. 2002; 22(8):2673-2686. (Biology)