BB700 Mouse Anti-Human CD19

Product Information

Material Number: 566397
Alternate Name: B4; B-lymphocyte antigen CD19; Leu-12
Size: 25 Tests
Vol. per Test: 5 µl
Clone: SJ25C1 (also known as SJ25-C1)
Immunogen: Human NALM1 + NALM16 cells
Isotype: Mouse (BALB/c) IgG1, κ
Reactivity: QC Testing: Human
Workshop: II L17; III 073
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The SJ25C1 monoclonal antibody specifically binds to CD19, a B lymphocyte-lineage differentiation antigen. CD19, a 90-kDa transmembrane glycoprotein, is a member of the immunoglobulin superfamily and is expressed throughout B-lymphocyte development from the pro-B cell through the mature B-cell stages. Terminally differentiated plasma cells do not express CD19. On the surface of mature B cells, the CD19 molecule associates with CD21 (CR-2) and CD81 (TAPA-1), and this multimolecular complex synergizes with surface immunoglobulin to promote cellular activation. Studies with CD19-deficient mice have suggested that the level of CD19 expression affects the generation and maturation of B cells in the bone marrow and periphery. B-1 lineage B cells, also known as CD5+ B cells, are drastically reduced or absent in CD19-deficient mice. Increased levels of CD19 expression correlate with increased frequencies of peritoneal and splenic B-1 cells and reduced numbers of conventional B lymphocytes in the periphery. CD19 participates in B-lymphocyte development, B-cell activation, maturation of memory B cells and regulation of tolerance. CD19 has also been detected on peritoneal mast cells, co-localized with CD21/CD35, and it is proposed to play a role in complement-mediated mast-cell activation.

The antibody was conjugated to BD Horizon BB700, which is part of the BD Horizon Brilliant™ Blue family of dyes. It is a polymer-based tandem dye developed exclusively by BD Biosciences. With an excitation max of 485 nm and an emission max of 693 nm, BD Horizon BB700 can be excited by the 488 nm laser and detected in a standard PerCP-Cy™5.5 set (eg, 695/40-nm filter). This dye provides a much brighter alternative to PerCP-Cy5.5 with less cross laser excitation off the 405 nm and 355 nm lasers.

Flow cytometric analysis of CD19 expression on human peripheral blood lymphocytes. Human whole blood was stained with either BD Horizon™ BB700 Mouse IgG1, κ Isotype Control (Cat. No. 566404; dashed line histogram) or BD Horizon BB700 Mouse Anti-Human CD19 antibody (Cat. No. 566396/566397; solid line histogram). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The fluorescence histogram showing CD19 expression (or Ig Isotype control staining) was derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometric analysis was performed using a BD LSRFortessa™ X-20 Cell Analyzer 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 with BD Horizon™ BB700 under optimum conditions, and unconjugated antibody and free BD Horizon BB700 were removed.
**Application Notes**

**Flow cytometry Routinely Tested**

**Recommended Assay Procedure:**
For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794 or 566349).

When setting up compensation, it is recommended to compare spillover values obtained from cells and BD™ CompBeads to ensure that beads will provide sufficiently accurate spillover values.

For optimal results, it is recommended to perform two washes after staining with antibodies. Cells may be prepared, stained with antibodies and washed twice with wash buffer per established protocols for immunofluorescent staining, prior to acquisition on a flow cytometer. Performing fewer than the recommended wash steps may lead to increased spread of the negative population.

**Suggested Companion Products**

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
<td>(none)</td>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>566404</td>
<td>BB700 Mouse IgG1, κ Isotype Control</td>
<td>50 μg</td>
<td>X40</td>
</tr>
<tr>
<td>566396</td>
<td>BB700 Mouse Anti-Human CD19</td>
<td>100 Tests</td>
<td>SJ25C1</td>
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<tr>
<td>349202</td>
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<tr>
<td>555899</td>
<td>Lysing Buffer</td>
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<tr>
<td>563794</td>
<td>Brilliant Stain Buffer</td>
<td>100 Tests</td>
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</tr>
<tr>
<td>566349</td>
<td>Brilliant Stain Buffer</td>
<td>1000 Tests</td>
<td>(none)</td>
</tr>
</tbody>
</table>

**Product Notices**
1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications. This product, and only in the amount purchased by buyer, may be used solely for buyer’s own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. Diagnostic uses require a separate license.
6. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
7. BD Horizon Brilliant Blue 700 is covered by one or more of the following US patents: 8,455,613 and 8,575,303.
8. Cy is a trademark of GE Healthcare.
9. An isotype control should be used at the same concentration as the antibody of interest.

**References**


