Technical Data Sheet

Biotin Rat Anti-Mouse Early B Lineage

Product Information

Material Number: 550434
Size: 0.1 mg
Concentration: 0.5 mg/ml
Clone: 493
Immunogen: Pro-B cell line R2BFL derived from the fetal liver of a RAG-2/-Bcl2-transgenic mouse
Isotype: Rat (LEW) IgG2a, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 493 antibody reacts with a cell-surface protein of 130-140 kDa expressed on immature B lymphocytes and a small fraction of newly formed B cells, but not on mature B lymphocytes. The antigen’s distribution was defined through the use of antibodies to CD24 (Heat Stable Antigen), IgM, IgD, and CD45R/B220, which are commonly used to discriminate B-cell maturation stages. 493 mAb reacts with the majority of B220+ cells in bone marrow and a fraction of B220+ B cells in spleen, which are CD24[high], IgM[high], and IgD[low]. Cells binding 493 mAb were not detected in thymus, lymph nodes, or peritoneal cavity. This result suggested that 493 mAb does not stain B-1 B cells (CD5+ B lymphocytes), which are particularly found in the peritoneal cavity. The 493 mAb does not seem to have any biological effect when incubated with immature B lymphocytes. It has been observed that the staining pattern of mAb 493 is similar to that of mAb AA4.1 (Cat. no. 559156), that both antibodies precipitate molecules of the same molecular weight, and that staining by mAb AA4.1 is not blocked by mAb 493, suggesting that the antibodies recognize separate epitopes of the same Early B Lineage antigen.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry Routinely Tested
Recommended Assay Procedure:
To minimize non-specific staining via Fc receptors, we recommend the use of Mouse BD Fc Block, purified anti-mouse CD16/CD32 mAb 2.4G2 (Cat. no. 553141/553142). For detection of the Early B Lineage antigen in the spleen, we recommend the use of a "bright" second-step reagent, such as Streptavidin-PE (Cat. no. 554061).

Suggested Companion Products

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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</thead>
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<tr>
<td>559156</td>
<td>FITC Rat Anti-Mouse Early B Lineage</td>
<td>0.5 mg</td>
<td>AA4.1</td>
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<tr>
<td>553141</td>
<td>Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)</td>
<td>0.1 mg</td>
<td>2.4G2</td>
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<tr>
<td>553087</td>
<td>FITC Rat Anti-Mouse CD45R/B220</td>
<td>0.1 mg</td>
<td>RA3-6B2</td>
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<td>553928</td>
<td>Biotin Rat IgG2a κ Isotype Control</td>
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<td>R35-95</td>
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<tr>
<td>554061</td>
<td>PE Streptavidin</td>
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<tr>
<td>557398</td>
<td>FITC Rat Anti-Mouse CD19</td>
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Product Notices
1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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.

References