Technical Data Sheet

FITC Hamster Anti-Mouse CD79b

Product Information

Material Number: 555303
Alternate Name: Igβ
Size: 0.5 mg
Concentration: 0.5 mg/ml
Clone: HM79b (also known as HM79-16)
Immunogen: Mouse B lymphoma, WEHI-123
Isotype: Armenian Hamster IgG2, λ1
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The HM79b antibody reacts with an extracellular epitope of Ig β chain (Igβ or CD79b), a 35-40-kDa transmembrane protein which forms an 80-90-kDa disulfide-linked heterodimer with Ig α chain (Igα or CD79a, 30-35 kDa). On mature B lymphocytes, the CD79a/CD79b heterodimers are non-covalently associated with surface IgM to form the B-cell receptor complex (BCR). The presence of CD79a/CD79b is necessary for surface expression of the BCR and signal transduction via the BCR in B lymphocytes and pre-B cells. It was recently reported that CD79b may be expressed on the cell surface preceding the appearance of surface IgM during B-lymphocyte development. At this pro-B-cell stage, CD79b participates in signal transduction involved in the regulation of B-cell development. It should be noted that multi-parameter flow cytometric analyses of bone marrow suspensions performed at BD Biosciences Pharmingen have been unable to detect surface staining by HM79b mAb on CD45R/B220+ IgM- cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with FITC under optimum conditions, and unreacted FITC was removed. Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

| Flow cytometry | Routinely Tested |

Two-color analysis of the expression of CD79b on mouse bone marrow cells. A single-cell suspension of BALB/c bone marrow was simultaneously stained with PE-conjugated anti-mouse CD45R/B220 RA3-6B2 (Cat. No. 553089/553090) and FITC-conjugated HM79b monoclonal antibodies. Flow cytometry was performed on a BD FACSCalibur™ flow cytometry system.
Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>553089</td>
<td>PE Rat Anti-Mouse CD45R/B220</td>
<td>0.1 mg</td>
<td>RA3-6B2</td>
</tr>
<tr>
<td>553964</td>
<td>FITC Hamster IgG2, λ1 Isotype Control</td>
<td>0.25 mg</td>
<td>Ha4/8</td>
</tr>
</tbody>
</table>

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.
4. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/pharmingen/hamster_chart_11x17.pdf.

References

Nagata K, Nakamura T, Kitamura F, et al. The Ig alpha/igbeta heterodimer on mu-negative proB cells is competent for transducing signals to induce early B cell differentiation. Immunity. 1997; 7(4):559-570. (Biology)
Papavasiliou F, Misulovin Z, Suh H, Nussenzweig MC. The role of Ig beta in precursor B cell transition and allelic exclusion. Science. 1995; 268(5209):408-411. (Biology)