Product Information

Material Number: 563115
Alternate Name: CD24a; HSA; Heat Stable Antigen; Ly-52; Nectadrin; R13-Ag
Size: 50 µg
Concentration: 0.2 mg/ml
Clone: M1/69
Immunogen: C57BL/10 Mouse Splenic T Lymphocytes
Isotype: Rat (DA) IgG2b, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The M1/69 monoclonal antibody specifically binds to CD24 (Heat-Stable Antigen, HSA or HsAg), a variably glycosylated, glycosyl-phosphatidylinositol-anchored membrane protein expressed on erythrocytes, granulocytes, monocytes, lymphocytes, and neurons. Hematopoietic stem cells of the embryonic yolk sac and fetal liver express CD24. Levels of expression of CD24 vary during differentiation of the T and B cell lineages. In the bone marrow, hematopoietic progenitors acquire CD24 expression upon commitment to the B-lymphocyte lineage. Immature B cells in the bone marrow express low CD24 levels whereas peripheral B lymphocytes express intermediate to high levels of CD24. The level of CD24 expression has been reported to rise upon activation of splenic B cells with LPS, but not with CD154 (CD40 Ligand). The majority of thymocytes express high levels of CD24, while most mature thymic and peripheral T lymphocytes do not express CD24. In contrast, TCR-bearing thymocytes which emigrate to the spleen are CD24+. Dendritic cells of the thymus, spleen, liver, and epidermal Langerhans cells have also been reported to express CD24. CD24 is not expressed by NK cells, as determined by staining with J11d mAb (Cat. No. 553146). CD24 is involved in the co-stimulation of CD4+ T cells by B cells, it is a "co-inducer" of in vitro thymocyte maturation, and it is a ligand of CD62P (P-selectin). While the monoclonal antibodies 30-F1, M1/69, and J11d all react with CD24, they show subtle differences in the level of staining of different lymphocyte populations. When possible, investigators should continue to use the same monoclonal anti-CD24 antibody as used in previous studies.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon™ BV510 conjugates are useful for the detection of dim markers off the violet laser.

Two-color flow cytometric analysis of CD24 expression on mouse splenocytes. Splenic leukocytes from a C57BL/6 mouse were stained with APC Rat Anti-Mouse CD3e antibody (Cat. No. 553066/561826) and with either BD Horizon™ BV510 Rat IgG2b, κ Isotype Control (Cat. No. 562951, Left Panel) or with the BD Horizon™ BV510 Rat Anti-Mouse CD24 antibody (Cat. No. 563115, Right Panel). Two-color flow cytometric dot plots showing the correlated expression patterns of CD3e versus CD24 (or Ig isotype control staining) were derived from gated events with the forward and side light-scatter characteristics of viable leukocytes. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer 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™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 were removed.

Application Notes

Suggested Companion Products

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<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
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<tr>
<td>562951</td>
<td>BV510 Rat IgG2b, κ Isotype Control</td>
<td>50 µg</td>
<td>R35-38</td>
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<tr>
<td>558999</td>
<td>Lysing Buffer</td>
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<td>553066</td>
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<td>561826</td>
<td>APC Hamster Anti-Mouse CD3e</td>
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Product Notices

1. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. An isotype control should be used at the same concentration as the antibody of interest.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Brilliant Violet™ 510 is a trademark of Sirigen.

References