Technical Data Sheet

PE-Cy™5 Rat Anti-Integrin β7

Product Information

Material Number: 551059
Alternate Name: Itgb7; Integrin β7; Integrin beta 7; ITB7; Ly-69; Ly69
Size: 10 Tests
Vol. per Test: 20 µl
Clone: FIB504
Immunogen: Mouse T lymphoma line TK1
Isotype: Rat (F344) IgG2a, κ
Reactivity: QC Testing: Human
Workshop: VI A024, VI 6T-101
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The FIB504 monoclonal antibody specifically recognizes mouse integrin β7 subunit (130 kDa) but also crossreacts with human integrin β7. Integrin β7 associates with α4 (CD49d) expressed on subsets of lymphocytes and thymocytes. It also associates with αE (CD103) expressed on T cells adjacent to mucosal epithelium and intraepithelial lymphocytes. Integrin β7 plays an important role in the adhesion of leukocytes to endothelial cells promoting the transmigration of leucocytes to extravascular spaces during the inflammatory response.

Flow cytometric analysis of Integrin β7 expression on human peripheral blood lymphocytes. Whole blood was stained with either PE-Cy™5 Rat IgG2a, κ Isotype Control (Cat. No. 551066; dashed line histogram) or PE-Cy™5 Rat Anti-Human Integrin β7 antibody (Cat. No. 551059; solid line histogram). Erythrocytes were lysed with BD FACS Lysing Solution (Cat. No. 349202). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes.

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 PE-Cy5 (formerly known as BD Cy-Chrome™) under optimum conditions, and unconjugated antibody and free PE-Cy5 were removed.

Application Notes

Application
Flow cytometry Routinely Tested
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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<tbody>
<tr>
<td>551066</td>
<td>PE-Cy5™S Rat IgG2a, κ Isotype Control</td>
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<tr>
<td>349202</td>
<td>BD FACS™™ Lysing Solution</td>
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<tr>
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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).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. PE-Cy5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the PE-Cy5 tandem fluorochrome, extra care must be taken when using dual-laser cytometers which may directly excite both PE and Cy5™.
7. PE-Cy5 is a tandem fluorochrome composed of R-phycoerythrin (PE), which is excited by the 488 nm light of an Argon ion laser and serves as an energy donor, coupled to the cyanine dye Cy5, which acts as an energy acceptor and fluoresces at 670 nm. BD Biosciences Pharmingen has maximized the fluorochrome energy transfer in PE-Cy5, thus maximizing its fluorescence emission intensity, minimizing residual emission from PE, and minimizing lot-to-lot variation.
8. PE-Cy5 tandem fluorochromes have been reported to bind some classes of human macrophages and granulocytes via Fc receptors, and PE has been reported to bind to mouse B lymphocytes via Fc receptors. Preincubation of mouse leukocytes with Mouse BD Fc Block™ purified anti-mouse CD16/CD32 mAb 2.4G2 can reduce the non-specific binding of PE-Cy5-conjugated reagents to mouse B cells. However, PE-Cy5 conjugated reagents should not be used to stain splenocytes of SJL, NOD, and MRL mice as B lymphocytes and/or other leukocytes have been reported to non-specifically stain regardless of the use of Mouse BD Fc Block™ (the CD72c complex has been implicated for PE-Cy5 binding in these strains). Reagents conjugated to PE, PerCP, PerCP-Cy5.5, APC, and APC-Cy7 tandem fluorochrome can be used on leukocytes from these mouse strains.
9. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
10. Cy is a trademark of GE Healthcare.
11. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.

References