BV421 Mouse Anti-Human CD11c

Product Information

Material Number: 565807
Alternate Name: ITGAX; AlphaX Integrin; Axb2; Integrin alpha-X; CR4; SLEB6; p150,95 alpha
Size: 25 µg
Concentration: 0.2 mg/ml
Clone: 3.9
Immunogen: Human monocytes and synovial cells
Isotype: Mouse IgG1, κ
Reactivity: QC Testing: Human
Tested in Development: Rhesus
Workshop: III 278; IV M66
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 3.9 monoclonal antibody specifically binds to CD11c, which is also known as Integrin alpha X (αX Integrin/ITGAX), or p150,95 Integrin alpha chain. CD11c is a ~150 kDa type I transmembrane glycoprotein. It is expressed on monocytes, macrophages, granulocytes, NK cells, dendritic cells, and subsets of B and T cells. It associates with CD18 (Integrin beta 2/β2 Integrin) to form the CD11c/CD18 complex, which is also known as p150,95 Integrin, or the Type 4 Complement Receptor (CR4). CD11c/CD18 binds fibrinogen and reportedly serves as a receptor for iC3b and ICAM-1/CD54. CD11c/CD18 functions as an adhesion molecule that mediates cellular binding to ligands expressed on stimulated epithelium and endothelium. The 3.9 monoclonal antibody crossreacts with CD11c expressed by Rhesus macaque leucocytes.

The antibody was conjugated to BD Horizon BV421 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue conjugates.

Analysis of CD11c Expression

Flow cytometric analysis of CD11c expression on Human (Panel 1a) or Rhesus macaque (Panel 1b) peripheral blood leucocytes. Human or Rhesus macaque whole blood (collected with heparin as the preferred anticoagulant rather than EDTA) was stained with either BD Horizon™ BV421 Mouse IgG1, κ Isotype Control (Cat. No. 562438; Left Plots) or BD Horizon BV421 Mouse Anti-Human CD11c antibody (Cat. No. 565806/565807; Right Plots). Erythrocytes were lysed with BD FACSTM Lysing Solution (Cat. No. 349202). Two-parameter flow cytometric contour plots showing the correlated expression of CD11c (or Ig Isotype control staining) versus side light-scatter (SSC-A) signals were derived from gated events with the forward and side light-scatter characteristics of intact leucocyte populations. Flow cytometry and data analysis were performed using a BD LSIRFortessa™ Cell Analyzer System and FlowJo® software. Routine flow cytometric analysis is performed on human peripheral blood leucocytes. Data shown on this Technical Data Sheet are not lot specific.

Three-color Immunofluorescence (IF) analysis of CD11c expression by cells in human tonsil (Panel 2). A human tonsil cryosection (5 µm) was fixed with BD Cytofix™ Fixation Buffer (Cat. No. 554655), blocked with 5% goat serum and 1% BSA diluted in 1x PBS, and stained with Purified Mouse Anti-Human CD3 antibody (Cat. No. 555330) followed by BD Horizon™ BV480 Goat Anti-Mouse Ig second step antibody (Cat. No. 564877, pseudocolored red). Sections were thoroughly washed, then stained with BD Horizon™ BV421 Mouse Anti-Human CD11c antibody (Cat. No. 565806/565807, pseudocolored green) and Alexa Fluor® 488 CD19 antibody (Cat. No. 557697, pseudocolored blue). Slides were mounted with ProLong® Gold. The images were captured using a standard epifluorescence microscope and merged. Original magnification, 20×.
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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon BV421 were removed.

Application Notes

<table>
<thead>
<tr>
<th>Application</th>
<th>Flow cytometry</th>
<th>Routinely Tested</th>
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<tbody>
<tr>
<td>Immunofluorescence</td>
<td></td>
<td>Tested During Development</td>
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Recommended Assay Procedure:

Note: The binding of the 3.9 antibody to CD11c is divalent cation dependent. Therefore, heparin is recommended for use as the blood anticoagulant rather than the EDTA chelating agent that might adversely affect 3.9 antibody binding and cellular staining.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) 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. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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</thead>
<tbody>
<tr>
<td>562438</td>
<td>BV421 Mouse IgG1, k Isotype Control</td>
<td>50 µg</td>
<td>X40</td>
</tr>
<tr>
<td>565806</td>
<td>BV421 Mouse Anti-Human CD11c</td>
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<td>3.9</td>
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<td>349202</td>
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<tr>
<td>555899</td>
<td>Lysing Buffer</td>
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<td>Purified Mouse Anti-Human CD3</td>
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<td>UCHT1</td>
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<td>BV480 Goat Anti-Mouse Ig</td>
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<td>557697</td>
<td>Alexa Fluor® 488 Mouse Anti-Human CD19</td>
<td>100 Tests</td>
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<td>563794</td>
<td>Brilliant Stain Buffer</td>
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<tr>
<td>566349</td>
<td>Brilliant Stain Buffer</td>
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<tr>
<td>566385</td>
<td>Brilliant Stain Buffer Plus</td>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
7. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
8. ProLong® is a registered trademark of Thermo Fisher Scientific, Inc. Waltham, MA.
9. BD Horizon Brilliant Violet 421 is covered by one or more of the following US patents: 8,158,444; 8,362,193; 8,575,303; 8,354,239.
10. 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.

References