Technical Data Sheet

PE-CF594 Mouse Anti-Human CD11c

Product Information

Material Number: 565920
Alternate Name: ITGAX; AlphaX Integrin; Axb2; Integrin alpha-X; CR4; SLEB6; p150,95 alpha
Size: 0.1 mg
Concentration: 0.2 mg/ml
Clone: 3.9
Immunogen: Human monocytes and synovial cells
Isotype: Mouse IgG1, κ
Reactivity: QC Testing: Human
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.

This antibody is conjugated to BD Horizon PE-CF594, which has been developed exclusively by BD Biosciences as a better alternative to PE-Texas Red®. PE-CF594 excites and emits at similar wavelengths to PE-Texas Red® yet exhibits improved brightness and spectral characteristics. Due to PE having maximal absorption peaks at 496 nm and 564 nm, PE-CF594 can be excited by the blue (488-nm), green (532-nm) and yellow-green (561-nm) lasers and can be detected with the same filter set as PE-Texas Red® (eg, 610/20-nm filter).

Multiparameter flow cytometric analysis of CD11c expression on human peripheral blood leucocyte populations.

Human whole blood (collected with heparin as the preferred anticoagulant rather than EDTA) was stained with either BD Horizon™ PE-CF594 Mouse IgG1, κ Isotype Control (Cat. No. 562292; Left Plot) or BD Horizon™ PE-CF594 Mouse Anti-Human CD11c antibody (Cat. No. 565919/565920; Right Plot) at 1 µg/test. Erythrocytes were lysed with BD FACS Lysing Solution (Cat. No. 349202). Two-parameter pseudocolor dot 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 cytometric analysis was performed using a BD FACS Cytometer System. Data shown on this Technical Data Sheet are not lot specific.
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 supernant or ascites by affinity chromatography.
The antibody was conjugated with BD Horizon™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594 were removed.

Application Notes

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.

Suggested Companion Products

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<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
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<tbody>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
<td>(none)</td>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<tr>
<td>555899</td>
<td>Lysing Buffer</td>
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<tr>
<td>349202</td>
<td>BD FACSTM Lysing Solution</td>
<td>100 mL</td>
<td>(none)</td>
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<tr>
<td>565919</td>
<td>PE-CF594 Mouse Anti-Human CD11c</td>
<td>25 µg</td>
<td>3.9</td>
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<tr>
<td>562292</td>
<td>PE-CF594 Mouse IgG1, κ Isotype Control</td>
<td>0.1 mg</td>
<td>X40</td>
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</table>

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. 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. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
8. CF™ is a trademark of Biotium, Inc.
9. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
10. This product is provided under an Agreement between BIOTIUM and BD Biosciences. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications owned or licensed by Biotium, Inc. This product, and only in the amount purchased by buyer, may be used solely for buyer’s own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. This product is for research use only. Diagnostic uses require a separate license from Biotium, Inc. For information on purchasing a license to this product including for purposes other than research, contact Biotium, Inc., 3159 Corporate Place, Hayward, CA 94545, Tel: (510) 265-1027. Fax: (510) 265-1352. Email: btinfo@biotium.com.
11. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which may directly excite both PE and CF™594.
12. 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


565920 Rev. 1