

Selectable Lasers Module for the BD Accuri™ C6 Flow Cytometer

Expanding Fluorochrome Combinations for Personal Flow Cytometry

Features

Enables reconfiguration of laser/detector pairings for the BD Accuri™ C6 flow cytometer

Expands the range of fluorochrome combinations that can be analyzed

Includes filters that allow detection of additional fluorochromes

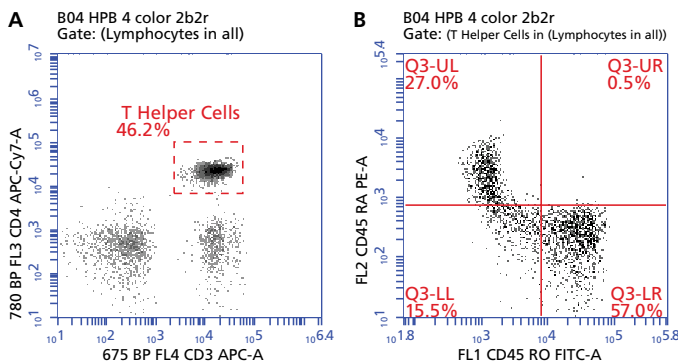


Figure 1. Characterization of helper T cells using the 2-blue 2-red configuration.

Human PBMCs were stained with CD45RO FITC, CD45RA PE, CD3 APC-Cy7, and CD4 APC and analyzed on the BD Accuri C6 in the 2-blue 2-red configuration.

A. APC-Cy7 (FL3) and APC (FL4), both excited by the red laser, were used to gate on CD3⁺CD4⁺ helper T cells. The 780/60 BP filter used to detect APC-Cy7 is included with the module.

B. The gated helper T cells were analyzed for CD45RO (FL1) and CD45RA (FL2), both excited by the blue laser.

In the standard predefined configuration of the BD Accuri C6 flow cytometer, detectors FL1, FL2, and FL3 read fluorescence emissions excited by the blue laser, while detector FL4 reads emissions excited by the red laser. This configuration is called “3-blue 1-red” and is ideal for experiments using up to four standard fluorochromes such as FITC, PE, PE-Cy™5, and APC.

Installation of the optional Selectable Lasers Module (Cat. No. 653126) allows operation of the system in two other configurations: 2-blue 2-red and 4-blue. This significantly expands the fluorochrome combinations that can be analyzed.

In the 2-blue 2-red configuration, detectors FL1 and FL2 read emissions from the blue laser, while FL3 and FL4 read emissions from the red laser. This configuration allows use of both APC and APC-Cy™7 in the same experiment, and can detect fluorochrome combinations such as FITC, PE, APC-Cy7, and APC (Figure 1). The 2-blue 2-red configuration is also needed to run assays with BD™ Cytometric Bead Array (CBA) Flex Sets (Figure 2).

In the 4-blue configuration, all four detectors read emissions from the blue laser. This configuration can detect fluorochrome combinations such as:

FITC, PE, PE-Cy5, and PE-Cy7 (Figure 3)

FITC, PE, PI, and either PE-Cy5, PE-Cy7, PerCP, or PerCP-Cy™5.5

FITC, PE, PE-Texas Red®, and either PE-Cy5 or PE-Cy7

The module includes an activation key and three optical filters that optimize fluorescence detection by the reconfigured detectors. In fact, the filters allow detection of more fluorochromes than the standard configuration permits. The BD Accuri C6 *Optical Filter Guide*, available at bdbiosciences.com, contains recommended optical choices for common fluorophores and alternate laser configurations.

Visit bdbiosciences.com for more information.

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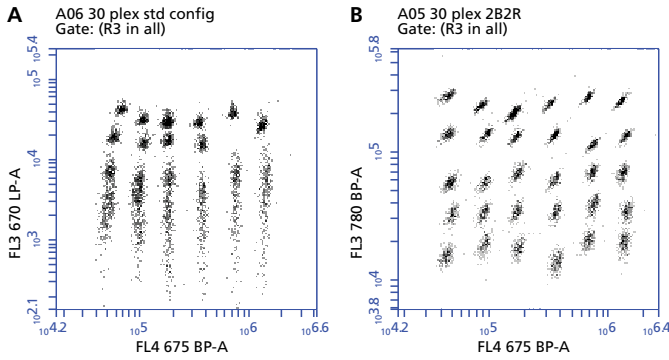


Figure 2. Resolution of BD CBA Flex Set beads using the standard vs 2-blue 2-red configuration.

The entire set of 30 BD CBA Flex Set beads was analyzed on the BD Accuri C6 under two different configurations.

A. In the standard 3-blue 1-red configuration (FL3: 670 LP; FL4: 675/25), the bead populations are not adequately discriminated.

B. In the 2-blue 2-red configuration with the 780/60 BP filter (included) in FL3, all 30 bead populations are resolved clearly.

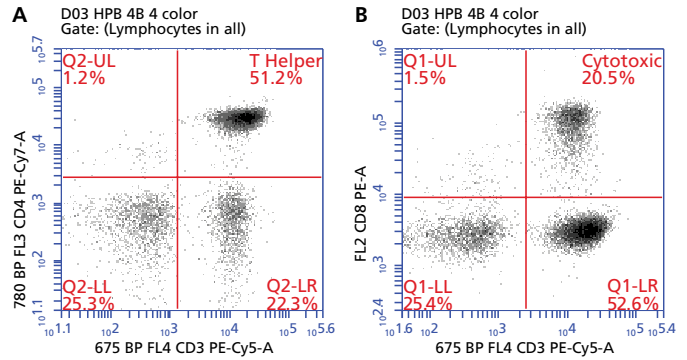


Figure 3. Characterization of lymphocytes using the 4-blue configuration.

Human PBMCs were stained with CD45 FITC, CD8 PE, CD3 PE-Cy5, and CD4 PE-Cy7, gated on lymphocytes, and analyzed on the BD Accuri C6 in the 4-blue configuration. All fluorochromes are excited by the blue laser.

A. CD3⁺CD4⁺ helper T cells appear in the UR quadrant of a PE-Cy5 (FL4) vs PE-Cy7 (FL3) plot. The 780/60 BP filter used to detect PE-Cy7 is included with the module.

B. CD3⁺CD8⁺ cytotoxic T cells appear in the UR quadrant of a PE-Cy5 (FL4) vs PE (FL2) plot.

Ordering Information

Description	Cat. No.
Selectable Lasers Module containing:	
Activation Key	653126
Optical Filter 780/60	
Optical Filter 610/20	
Optical Filter 630/30	

Class 1 Laser Product.

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APC-Cy7: US Patent No. 5,714,386

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23-14755-00



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