BD Mouse T-Lymphocyte Kits and Templates

Analysis of T-Lymphocyte Subsets and Activation on the BD Accuri™ C6 Flow Cytometer

Features

- Preconfigured kits, protocols, and software templates to characterize mouse T-cell subsets and activation markers on the BD Accuri C6
- Support studies involving mouse CD3e, CD4, CD8a, CD25, and CD69
- Enable quick and easy setup and analysis using the BD Accuri C6

BD mouse T-lymphocyte kits, protocols, and software templates for the BD Accuri™ C6 flow cytometer simplify the identification of mouse T lymphocytes, their subsets, and their activation markers. BD offers two mouse T-lymphocyte kits (for studies involving mouse CD3e, CD4, CD8a, CD25, and CD69) that include fluorescent antibodies and isotype controls needed for acquisition and analysis. Both panels are compatible with other markers to further characterize T-cell subpopulations. BD Accuri™ C6 software templates matched to each kit include predefined workspaces, markers, regions, gates, and parameter names for quick and easy setup and analysis.

The two kits are listed below. Figures 1 and 2 show data on the BD Accuri C6 using the preconfigured kits and software templates.

The **BD Pharmingen™ Mouse T-Lymphocyte Subset Antibody Cocktail** (Cat. No. 558431) is a convenient cocktail that enables rapid characterization of mouse $CD3^+CD4^+$ and $CD3^+CD8^+$ T-cell subpopulations.

The **BD Pharmingen™ Mouse T-Lymphocyte Activation Antibody Cocktail** (Cat. No. 557908) enables rapid characterization of activated mouse T cells using the markers CD25 and CD69.

T cells and their subsets can be defined by differential expression of cell surface markers including CD3, CD4, CD8, and CD25. Using panels of directly conjugated fluorescent antibodies to these specific markers, multicolor flow cytometric analysis allows researchers to interrogate the levels of multiple markers simultaneously on individual cells. This can provide information about the cell lineage and state of differentiation of cell subsets in a particular sample. Relative populations of different T-cell subsets and activation markers such as CD69 can provide a useful measurement of immune response to antigens.

In both mouse T-lymphocyte kits, antibodies defining the three key subset or activation markers have been diluted at optimal concentration and pre-mixed to maximize staining performance. The isotype control panels contain equivalent concentrations of fluorochrome- and isotype-matched negative-control immunoglobulins.

Easy to use, simple to maintain, and affordable, the BD Accuri C6 personal flow cytometer is equipped with a blue laser, a red laser, two light scatter detectors, and four fluorescence detectors. Compact design, fixed alignment, and pre-optimized detector settings result in a system that is simple to use, and a nonpressurized fluidics system enables kinetic measurements in real time. For walkaway convenience, the optional BD CSampler™ accessory offers automated sampling from 24-tube racks or multiwell plates.

Visit **bdbiosciences.com** for more information.

BD Mouse T-Lymphocyte Kits and Templates

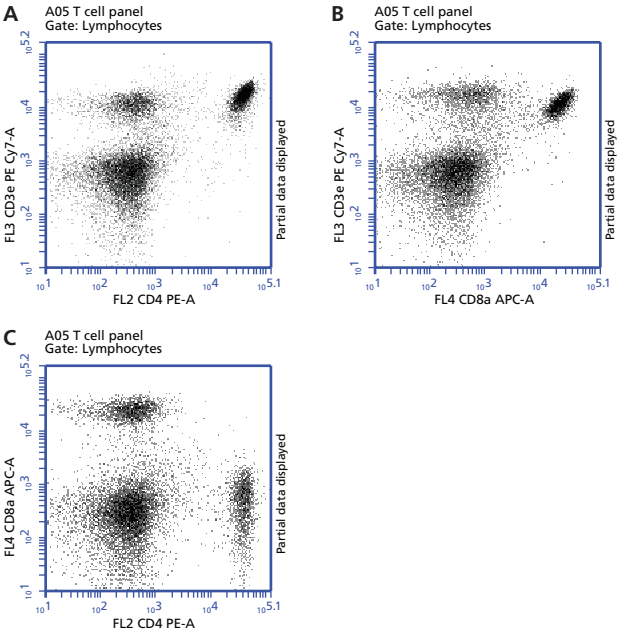

Figure 1. BD Pharmingen Mouse T-Lymphocyte Subset Antibody Cocktail (Cat. No. 558431) analysis on the BD Accuri C6.

BALB/c splenocytes were stained with either the Mouse T-Lymphocyte Subset Antibody Cocktail (three panels shown) or the Mouse T-Lymphocyte Subset Isotype Control (data not shown) according to the kit procedure. Samples were acquired on a BD Accuri C6 flow cytometer using the kit template and analyzed using BD Accuri C6 software. **Results:** The $CD3^+CD4^+$ and $CD3^+CD8^+$ peripheral T-cell subpopulations are clearly visible on the three two-color dot plots. As expected, no cells express both CD4 and CD8.

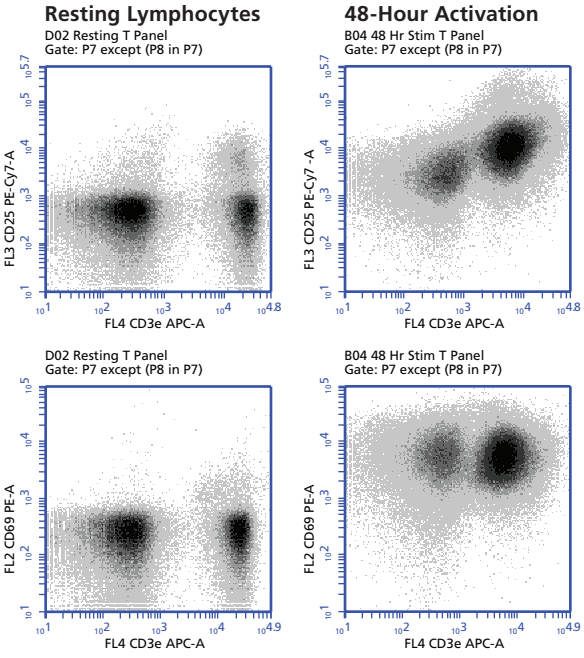

Figure 2. BD Pharmingen Mouse T-Lymphocyte Activation Antibody Cocktail (Cat. No. 557908) analysis on the BD Accuri C6.

BALB/c splenocytes were activated for 48 hours on plate-bound anti-CD3e (mAb 500A2, Cat. No. 553238). The activated splenocytes, along with resting BALB/c splenocytes, were then stained with either the Mouse T-Lymphocyte Activation Antibody Cocktail (four panels shown) or Mouse T-Lymphocyte Activation Isotype Control (not shown) according to the kit procedure. Samples were acquired on a BD Accuri C6 using the kit template and analyzed using BD Accuri C6 software. Scatter plots (not shown) were used to select either resting lymphocytes (left panels) or activated lymphoblasts (right panels) for data analysis. The gating strategy included the removal of doublets from the lymphocytes (P8 in P7 gate). **Results:** Density plots show the $CD3^+$ T lymphocytes that express the activation antigens CD25 (top left vs right) and CD69 (bottom left vs right). As expected, activated T lymphocytes were more likely to express both activation antigens.

Ordering Information

All kits and their associated software templates are available at **bdbiosciences.com/go/templates**.

Description	Clone	Quantity	Number of Tests	Cat. No.
BD Pharmingen Mouse T-Lymphocyte Subset Antibody Cocktail with Isotype Control containing:				
Mouse CD3e PE-Cy™7	145-2C11	20 µL/test	100 tests	**558431**
Mouse CD4 PE	RM4-5			
Mouse CD8a APC	53-6.7			
Isotype Controls as detailed in Technical Data Sheet		20 µL/test	100 tests	

BD Pharmingen Mouse T-Lymphocyte Activation Antibody Cocktail with Isotype Control containing:				
Mouse CD25 PE-Cy7	PC61	20 µL/test	50 tests	**557908**
Mouse CD69 PE	H1.2F3			
Mouse CD3e APC	145-2C11			
Isotype Controls as detailed in Technical Data Sheet		20 µL/test	100 tests	

Related Kits

Description	Cat. No.
BD Pharmingen™ Mouse B-Lymphocyte Subset Antibody Cocktail	**558332**
BD Pharmingen™ Mouse B-Lymphocyte Activation Antibody Cocktail	**558063**
BD Pharmingen™ Mouse Th17/Treg Phenotyping Kit	**560767**
BD Pharmingen™ Mouse Th1/Th2/Th17 Phenotyping Kit	**560758**

Class 1 Laser Product.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

23-16409-00

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