

BD FACSuite™ Research Assays

Integrating Hardware, Software, and Reagent Solutions for Immune Function Research

Features

Take advantage of robust instrument setup for increased reproducibility

Intelligent experimental setup reduces time

Quickly generate reports of results

Optimized for BD FastImmune™ 3- and 4-color CD4 intracellular detection kits

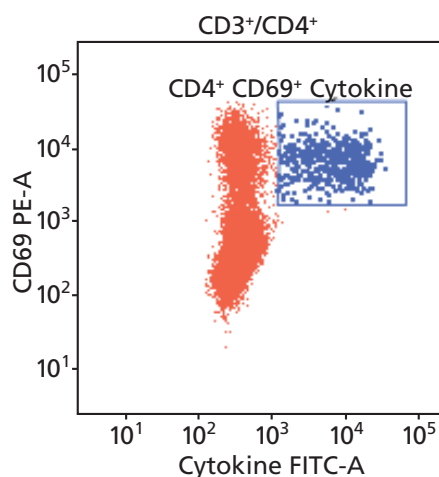


Figure 1. Human whole blood stimulated with SEB and stained with the BD FastImmune CD4 intracellular IFN- γ detection kit (Cat. No. 337185) and acquired on the BD FACSVerser flow cytometer.

Hardware and Software

The BD FACSVerser™ flow cytometer equipped with BD FACSuite™ software can standardize routine applications. BD FACSuite research assays consist of defined acquisition workspaces that include all of the data plots, gates, and statistics needed to acquire and analyze data that is consistent with the reagent manual or technical data sheet. After acquisition, results are displayed on formatted reports that include specific plots and statistics for each tube, as well as summarized results for side-by-side comparison of data for related tubes. Coupled with a novel setup function in BD FACSuite software, these research assays provide a new level of standardization for the study of immune function.

Reagent Kits

BD FastImmune™ products are designed for multiparametric analysis of lymphocyte activation at the single-cell level, allowing the sensitive detection of intracellular cytokines in only hours. This streamlined method uses whole blood samples to maintain the in vivo environment as closely as possible.

BD FastImmune 3- and 4-color CD4 intracellular detection kits contain multicolor antibody combinations that have been optimized to work together and measure the cytokine responses (IFN- γ , IL-2, or TNF) to direct antigen stimulation in helper T cells. The 3-color kits include antibodies to CD4 to identify the helper T cells, CD69 to denote activated cells, and an anti-cytokine antibody. The 4-color kits add CD3 to allow for optimal gating on T lymphocytes. All of the kits also include reagents for fixation and permeabilization, blockage of protein transport, and positive control stimulation.

Results Reports

Since cytokine responses, especially those due to antigen-specific stimulation, can be rare events, it is important to have the appropriate controls. BD FastImmune assays compare unstimulated, positive controls (stimulated), and cells stimulated with an experimental compound. The results table (Table 1) compares the lymphocyte, CD4⁺ lymphocyte, and CD4⁺/CD69⁺/cytokine⁺ populations in all three conditions. And, a cross-tube analysis is performed by calculating the cellular response—subtraction of the cytokine response from the untreated sample from that of the experimental sample.

Users can customize many properties of results reports, including requiring approvals and e-signatures, as well as data export and printing preferences.

Visit bdbiosciences.com/verse for more information.

BD FACSuite™ Research Assays Solutions for Immune Function Research

Table 1. Example Results Summary from the BD FastImmune Assay.

Result Summary			
	Unstimulated	Positive Control	Stimulated
Lymphocyte # Events	24025	30964	41078
CD4+ Lymphocyte # Events	9762	12279	16431
CD69+ Cytokine # Events	6	12106	2420
FITC MFI of CD4+ Cytokine	1801	8410	8521
Cytokine+ % of CD4+ Lymphocytes	0.00	98.60	14.73

Cross Tube Result Summary	
	Results
Cell Response CD4+ Lymphocytes	14.73

Product List

Description	Contents	Size	Cat. No.
BD FACSuite Research Assay Software	Installation DVD	1 disc	651363
BD FastImmune CD4 Intracellular IFN-γ Detection Kit, 3-color combination	Antibody Cocktail (IFN-γ FITC, CD69 PE, CD4 PerCP-Cy5.5), Isotype Control Cocktail, Co-Stimulatory Antibodies (CD28/CD49d), Brefeldin A (BFA) Solution, EDTA Solution, BD FACSTM Lysing Solution (10X), BD FACSTM Permeabilizing Solution 2 (10X)	25 tests	340970
BD FastImmune CD4 Intracellular IL-2 Detection Kit, 3-color combination	Antibody Cocktail (IL-2 FITC, CD69 PE, CD4 PerCP-Cy5.5), Isotype Control Cocktail, Co-Stimulatory Antibodies (CD28/CD49d), Brefeldin A (BFA) Solution, EDTA Solution, BD FACS Lysing Solution (10X), BD FACS Permeabilizing Solution 2 (10X)	25 tests	340971
BD FastImmune CD4 Intracellular TNF Detection Kit, 3-color combination	Antibody Cocktail (TNF FITC, CD69 PE, CD4 PerCP-Cy5.5), Isotype Control Cocktail, Co-Stimulatory Antibodies (CD28/CD49d), Brefeldin A (BFA) Solution, EDTA Solution, BD FACS Lysing Solution (10X), BD FACS Permeabilizing Solution 2 (10X)	25 tests	340972
BD FastImmune CD4 Intracellular IFN-γ Detection Kit, 4-color combination	Antibody Cocktail (IFN-γ FITC, CD69 PE, CD4 PerCP-Cy5.5, CD3 APC), Isotype Control Cocktail, Co-Stimulatory Antibodies (CD28/CD49d), Brefeldin A (BFA) Solution, EDTA Solution, BD FACS Lysing Solution (10X), BD FACS Permeabilizing Solution 2 (10X)	25 tests	337185
BD FastImmune CD4 Intracellular IL-2 Detection Kit, 4-color combination	Antibody Cocktail (IL-2 FITC, CD69 PE, CD4 PerCP-Cy5.5, CD3 APC), Isotype Control Cocktail, Co-Stimulatory Antibodies (CD28/CD49d), Brefeldin A (BFA) Solution, EDTA Solution, BD FACS Lysing Solution (10X), BD FACS Permeabilizing Solution 2 (10X)	25 tests	337187
BD FastImmune CD4 Intracellular TNF Detection Kit, 4-color combination	Antibody Cocktail (TNF FITC, CD69 PE, CD4 PerCP-Cy5.5, CD3 APC), Isotype Control Cocktail, Co-Stimulatory Antibodies (CD28/CD49d), Brefeldin A (BFA) Solution, EDTA Solution, BD FACS Lysing Solution (10X), BD FACS Permeabilizing Solution 2 (10X)	25 tests	337189



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The BD FACSVers flow cytometer is covered by one or more of the following US patents: 7,787,197; 7,129,505; 6,897,954; 6,809,804; 6,683,314; and 6,510,007.

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