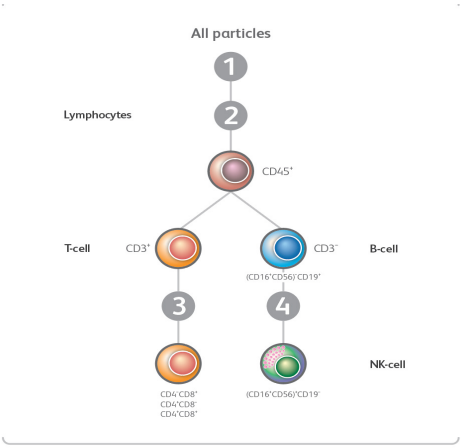
BD Multitest 6-Color TBNK Reagent

More answers from a single tube



BD Multitest™ 6-color TBNK reagent is indicated for use in the immunological assessment of normal individuals, and patients having, or suspected of having, immune deficiency.

BD Multitest™ 6-color TBNK with optional BD Trucount™ tubes is intended for use with BD FACSLyric™, BD FACSCanto™ II, and BD FACSCanto™ flow cytometers to determine the percentages and absolute counts of mature human lymphocyte subsets in peripheral whole blood for immunophenotyping.

Antibodies

- CD45 PerCP-Cy™5.5 for gating on the lymphocyte populations
- CD3 FITC for identification of T lymphocytes
- CD4 PE-Cy™7 for detecting T helper/inducer lymphocytes
- CD8 APC-Cy7 for dentification of the suppressor/ cytotoxic T lymphocyte
- CD19 APC to identify B lymphocytes
- CD16 and CD56 PE for identifying natural killer (NK) lymphocytes

Visit bdbiosciences.com for more information.

Features

- Performs lymphocyte enumeration of T, B, and NK cells in a single tube
- Provides for the option of absolute counts when paired with BD Trucount™ tubes
- Works in a fully integrated system with BD FACS™ Sample Prep Assistant (SPA) for automated lyse/no-wash sample preparation
- Can be used with the BD FACS™ Loader for automated sample acquisition on a BD FACSCanto™ instrument
- Works with BD FACSCanto™ clinical software for instrument setup, QC, acquisition, and analysis with built-in templates

Clinical Utility

Percentages and absolute counts of T and B lymphocytes and ratio of helper/inducer versus suppressor/cytotoxic T cells provide valuable information on immune status for a number of patient conditions. $CD4^+$ helper/inducer T lymphocyte counts are used for monitoring disease progression and therapy efficiency in Human Immunodeficiency Virus (HIV)-infected individuals.[1] Individuals with HIV typically exhibit a steady decrease of CD3+CD4+ lymphocyte counts as the infection progresses.[2]

CD3+CD4+ percentages or counts and total T and B lymphocytes are used to characterize and monitor some forms of immunodeficiency[3-5] and autoimmune diseases.[6,7] Certain forms of autoimmunity have been related to percentages of $CD8^+$ suppressor/cytotoxic T lymphocytes that lie outside the normal reference range.[8]

NK lymphocytes have been shown to mediate cytotoxicity against certain tumors and virus-infected cells. The TBNK reagent defines NK cells by annalyzing the expression of the CD16 and CD56 simultameously using the same conjugation to allow for a precise diagnosis than using the CD56 marker only.[9]

BD

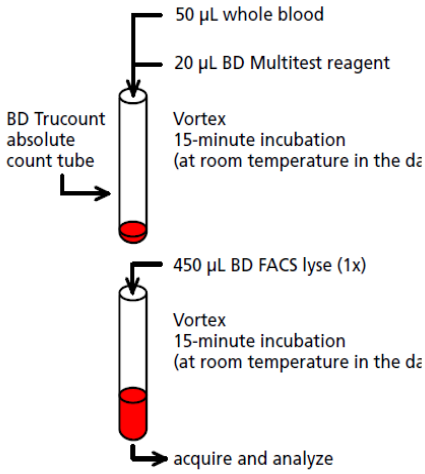


Figure 1. BD Multitest Sample Preparation

Simple procedure (Figure 1)

1. Add whole blood to a 12 x 75-mm BD Falcon™ polystyrene tube or BD Trucount tube.
2. Add BD Multitest 6-color TBNK reagent, vortex, and incubate.
3. Add BD FACS™ lysing solution and incubate.
4. Acquire and analyze with BD FACSCanto clinical software.

An easy-to-use solution

With its single-tube format, the BD Mutlitest 6-color TBNK reagent decreases cost by reducing the number of tubes and sample processing time. The reagent includes a cocktail of multiple fluorescently labeled monoclonal antibodies, premixed at the appropriate titer to ensure quality staining.

Accurate cell counts with BD Trucount tubes

BD Trucount tubes help to ensure more accurate cell counts. The tubes contain a lyophilized pellet of fluorescent beads that serves as an internal standard. BD FACSCanto clinical software (v2.0 or later) automatically calculates lymphocyte absolute counts and subset percentages

Improve safety, reduce hands-on time

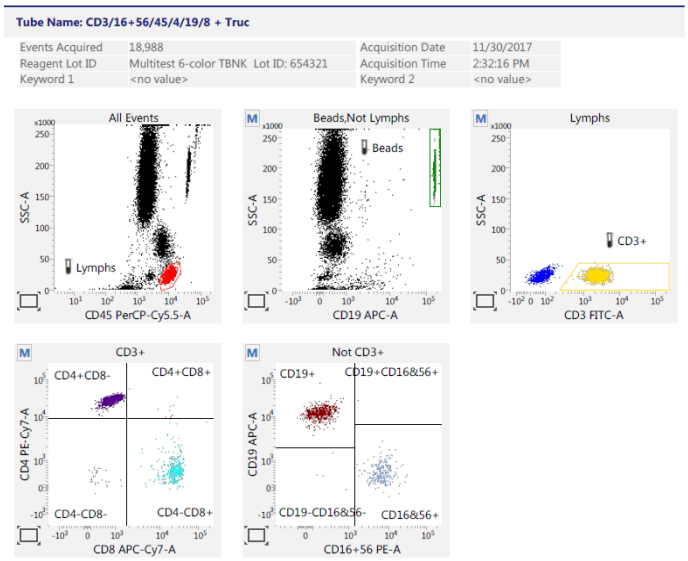
The BD 6-color TBNK reagent employs a no-wash formula that reduces tube handling. Processing fewer tubes in less time may decrease potential exposure to biohazardous material, improving safety for laboratory personnel.

Increase productivity

BD FACS™ 7-color setup beads enable fast and convenient fully automated instrument setup. Together with the BD FACSCanto or BD FACSCanto™ II flow cytometer and BD FACSCanto clinical software, the Loader option and the SPA, the BD Multitest 6-color TBNK reagent provides high performance for lymphocyte enumeration to best suit your routine immunophenotyping needs.

BD Multitest 6-Color TBNK Reagent with BD Trucount Tubes

BD FACSLyric and BD FACSuite Clinical software



Tube Name: CD3/16+56/45/4/19/8 + Truc

Events Acquired	18,988	Acquisition Date	11/30/2017
Reagent Lot ID	Multitest 6-color TBNK Lot ID: 654321	Acquisition Time	2:32:16 PM
Keyword 1	<no value>	Keyword 2	<no value>

Results Summary (Abs Cnt is in cells/µL)

Label	%Lymphs	Value or Abs Cnt
Bead Events		2,210
Lymphs Events		2,498
Lymphs		1,127
CD3+	63.93	720
CD3+CD4+	47.48	535
CD3+CD4+ (excl. dual pos.)	47.00	530
CD3+CD8+	15.73	177
CD3+CD8+ (excl. dual pos.)	15.25	172
CD3+CD4+CD8+	0.48	5
CD3+CD4-CD8-	1.20	14
CD19+	26.14	295
CD3-CD16+CD56+	9.73	110

QC Results

Label	Results
4/8 Ratio	3.02
%T-Sum (<10%)	1.20
Lymphosum (95-105%)	99.80

Figure 2. Example of data from a BD FACSLyric laboratory report obtained for a BD Multitest 6-color TBNK assay with BD Trucount tubes.

Ordering Information

Description	Apps	Reg	Size	Cat.No.
BD Multitest 6-color TBNK Reagent with BD Trucount Tubes	FCM	IVD	50 tests	337166

Note: The BD Multitest 6-color TBNK reagent without BD Trucount tubes is used on the BD FACSLyric with BD FACSuite Clinical software, and BD FACSCanto and BD FACSCanto II systems with BD FACSCanto software v2.4 and later.

BD Multitest 6-Color TBNK Reagent with BD Trucount Tubes

BD FACSCanto and BD FACSCanto II with BD FACSCanto Clinical software

P100721V02 07

Director: RV/TF

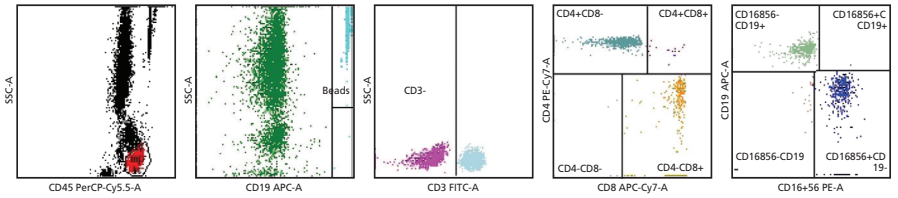
Panel:	6 Color TBNK + TruC
Acquired:	07/21/2005 4:13:20 PM
Analyzed:	10/18/2005 11:08:05 AM
TruC Lot ID:	11806
Bead/Pellet:	49945
Status:	OK
Operator:	SS
Reviewer:	
Results:	18102005.csv

Parameter | Column # 2: | Column # 3:

BD FACSCanto V0002 BD FACSCanto v.20

CD3/CD16+56/CD45/CD4/CD19/CD8 TruC

Total Events: 10068



000633C028.001.fcs Reagent Lot ID: 39825

Parameter	Percent	Value/AbsCnt
Lymph Events		2714
Bead Events		1544
CD3⁺	66.76	1171.51
CD3⁺CD8⁺	14.41	252.79
CD3⁺CD4⁺	52.51	921.30
CD3⁺CD4⁺CD8⁺	0.63	10.99
CD16⁺CD56⁺	16.80	294.82
CD19⁺	15.84	278.01
CD45⁺		1754.68
4/8 Ratio		3.64

QC Messages
% T-Sum is: 0.16
Lymphosum is: 99.40
4/8 ratio is: 3.64

Figure 3. Example of data from a BD FACSCanto laboratory report obtained for a BD Multitest 6-color TBNK assay without BD Trucount tubes.

Ordering Information

Description	Apps	Reg	Size	Cat.No.
BD Multitest 6-color TBNK Reagent with BD Trucount Tubes	FCM	IVD	50 tests	337166

Note: The BD Multitest 6-color TBNK reagent without BD Trucount tubes is used on the BD FACSLyric with BD FACSuite Clinical software, and BD FACSCanto and BD FACSCanto II systems with BD FACSCanto software v2.4 and later.

BD Multitest 6-Color TBNK Reagent without BD Trucount Tubes

BD FACSCanto and BD FACSCanto II with BD FACSCanto Clinical software

003936

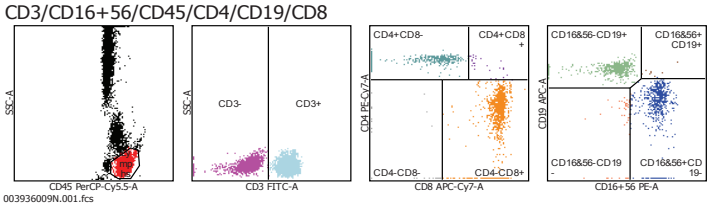
Director: KH

Panel:	6 Color TBNK
Acquired:	12/3/2008 3:28:56 PM
Analyzed:	12/3/2008 3:28:56 PM
Status:	OK
Operator:	PL
Reviewer:	
Results:	03122008.csv

WBC Count (x1000) | Lymphs (%): | Lymphs (x1000):

BD FACSCanto II V96300005 BD FACSCanto v.2.4.3365.10840

CD3/CD16+56/CD45/CD4/CD19/CD8



003936009N.001.fcs

Parameter	Percent	Value/AbsCnt
Lymph Events		4984
CD3⁺	74.04	0
CD3⁺CD8⁺	34.13	0
CD3⁺CD4⁺	39.35	0
CD3⁺CD4⁺CD8⁺	0.50	0
CD16⁺CD56⁺	11.96	0
CD19⁺	12.90	0
CD45⁺		0
4/8 Ratio		1.15

QC Messages
% T-Sum is: 0.56
Lymphosum is: 98.90
4/8 ratio is: 1.15

Comments

Figure 4. Example of data from a BD FACSCanto laboratory report obtained for a BD Multitest 6-color TBNK assay without BD Trucount tubes.

Ordering Information

Description	Apps	Reg	Size	Cat.No.
BD Multitest 6-color TBNK Reagent without BD Trucount Tubes	FCM	IVD	50 tests	644611

Note: The BD Multitest 6-color TBNK reagent without BD Trucount tubes is used on the BD FACSLyric with BD FACSuite Clinical software, and BD FACSCanto and BD FACSCanto II systems with BD FACSCanto software v2.4 and later.

References:

1. Giorgi JV, Detels, R. T-cell subset alterations in HIV-infected homosexual men: NIAID Multicenter AIDS cohort study. Clin Immunol Immunopathol. 1989;52:10-18.
2 Landay A, Ohlsson-Wilhelm B, Giorgi JV. Application of flow cytometry to the study of HIV infection. AIDS. 1990;4:479-497.
3 Schmidt RE. Monoclonal antibodies for diagnosis of immunodeficiencies. Blut. 1989;59:200-206.
4 Nicholson JKA. Use of flow cytometry in the evaluation and diagnosis of primary and secondary immunodeficiency diseases. Arch Pathol Lab Med. 1989;113:598-605.
5 Foucar K, Goeken JA. Clinical application of immunologic techniques to the diagnosis of lymphoproliferative and immunodeficiency disorders. Lab Med. 1982;13:403-413.
6 Cohen SB, Weetman AP. Activated interstitial and intraepithelial thyroid lymphocytes in autoimmune thyroid disease. Acta Endocrinol. 1988;119:161-166.
7 Smolen JS, Chused TM, Leiserson WM, Reeves JP, Alling D, Steinberg AD. Heterogeneity of immunoregulatory T-cell subsets in systemic lupus erythematosus: correlation with clinical features. Am J Med. 1982;72:783-790.
8. Antel J, Bania M, Noronha A, Neely S. Defective suppressor cell function mediated by T8+ cell lines from patients with progressive multiple sclerosis. J Immunol. 1986;137:3436-3439.
9. Brunetta E, Fogli M, Varchetta S, Bozzo L, et al. The decreased expression of Siglec-7 represents an early marker of dysfunctional natural killer-cell subsets associated with high levels of HIV-1 viremia. Blood. 2009;114:3822-3830.

For In Vitro Diagnostic Use.

23-13006-01

BD Life Sciences, San Jose, CA, 95131, USA

bdbiosciences.com