



Individuals need standards



BD OneFlow™ Solution

on BD FACSCanto™ II and BD FACSLyric™ Flow Cytometers



BD OneFlow™ Solution

Built on the research and validation work of the EuroFlow™ Consortium on the characterization of hematological malignancies for improved diagnostic outcomes,¹ the BD OneFlow™ Solution brings the standardization of leukemia and lymphoma immunophenotyping one step forward. It is a comprehensive set of reagents (BD OneFlow LST, B-CLPD T1, PCST, PCD, and ALOT), setup beads, protocols, and assay templates to reproducibly set up the flow cytometer and stain, acquire, and analyze patient specimens for immunophenotyping of normal and aberrant cell populations. The BD OneFlow solution improves efficiency by providing a standardized and simplified methodology, increasing reliability and enabling accuracy and confidence in results.^{2,3}

The EuroFlow Consortium designed multicolor antibody panels to fully characterize the cell populations in a patient specimen using immunophenotypic markers that are indicative of normal and abnormal cells.¹ In addition to the

optimized multicolor antibody panels, the EuroFlow protocol comprises standardized procedures for cytometer setup, determination of assay settings, sample preparation and staining, sample acquisition, and data analysis.⁴

The single-tube screening panels and multi-tube classification panels fit into the EuroFlow diagnostic algorithm for the identification and classification of hematological disorders. Each tube contains a set of backbone-markers and a set of classification markers.¹

Backbone markers are shared across a particular set of panels and are used to normalize the samples so that data files can be combined and analyzed as a single, large data file. They are markers that identify distinct cell populations in a particular cell lineage. Classification markers have been selected for their diagnostic utility in discriminating between cell types within a given lineage and in classifying the abnormal cell type in the sample.



EFFICIENCY

Optimized workflows improve efficiency

BD OneFlow™ Reagents improve laboratory efficiency by reducing the time spent for sample preparation.^{2,3}

Provided in a ready-to-use, dried, single-test tube format, BD OneFlow™ Reagents allow for direct specimen staining, eliminating the need for antibody pipetting, minimizing operational mistakes and the risk for testing repetition, thus reducing manual workload.

BD OneFlow™ Instrument setup and ready-to-use single-dose compensation beads simplify instrument standardization and reduce technical burden and training needs.

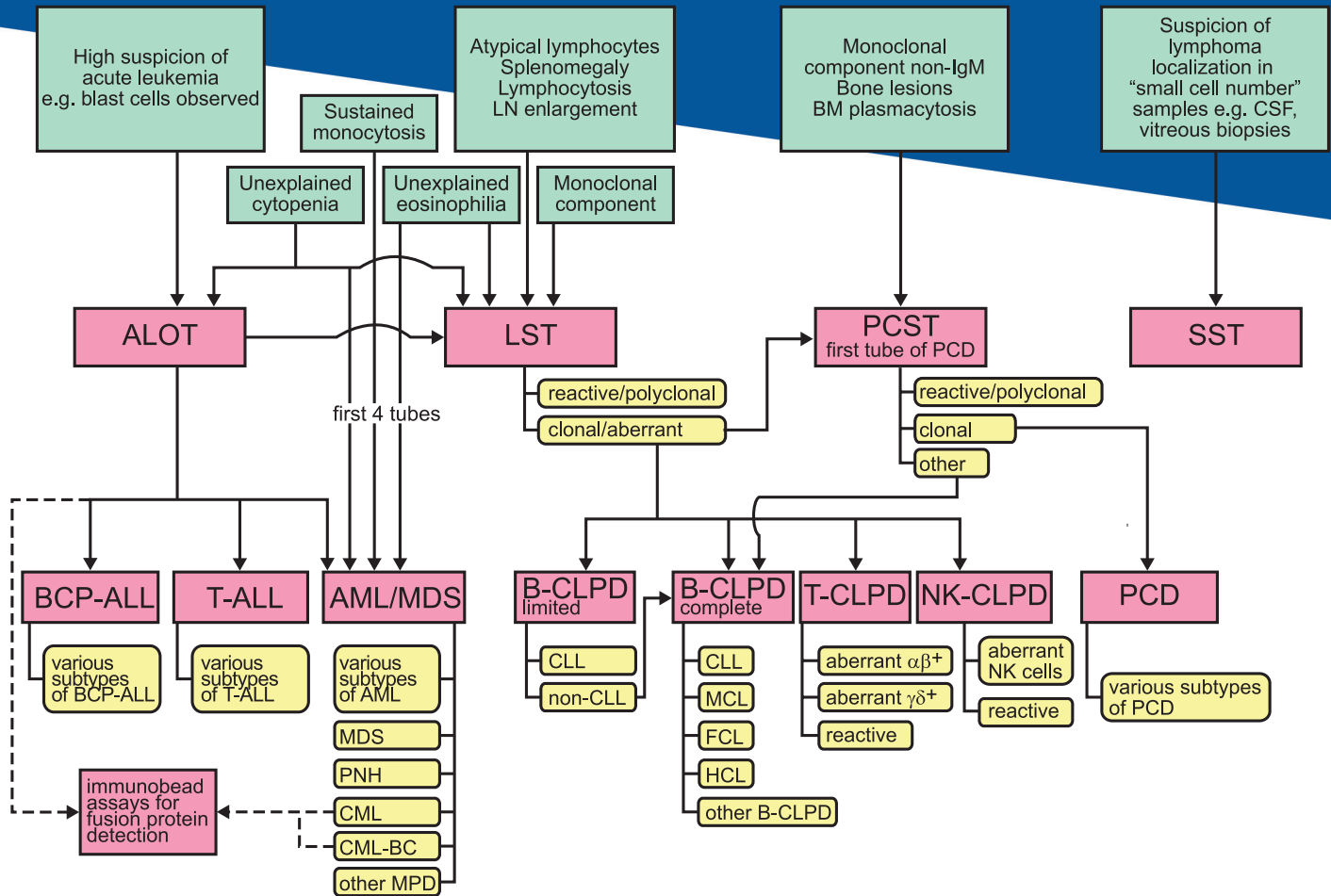


COMPLIANCE

Complete CE/IVD system enables compliancy

The BD OneFlow™ Solution is CE marked to the European In Vitro Diagnostic Medical Device Directive 98/79/EC. The BD OneFlow™ solution also helps laboratories in their accreditation process to comply with EN ISO 15189 standard (“Medical laboratories – Requirements for quality and competence”).

EuroFlow™ Strategy for immunophenotypic characterization of hematological malignancies



J.J.M. van Dongen et al. LEUKEMIA 2012; 26: 1908-1975. This diagram has been provided courtesy of EuroFlow Consortium.



ACCURACY

Standardization improves data accuracy

Standardization of processes supports the quality of results and ultimately support the diagnosis and treatment of patients. Built on the standards defined by the EuroFlow™ Consortium, the predefined, disease-specific 8-color reagent panels provide high diagnostic utility delivering accurate and reproducible results.

"The (EuroFlow) LST detected aberrant B-, T- or NK-cells immunophenotypes in 149/150 (99.4%) of B-CLPD and in 78/83 (94%) of T/NK-CLPD with an overall frequency of 97.4%."*¹

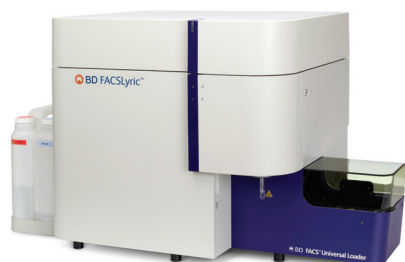
*"An unprecedented orientation efficiency of 98.3% for non-ambiguous lineage cases was shown for the (EuroFlow) ALOT combination with a series of 483 newly diagnosed acute leukemia cases, tested prospectively at different centers."*¹

Workflow

BD OneFlow™ Reagents can be run on both the BD FACSLyric™ and BD FACSCanto™ II Flow Cytometers for equivalent results.

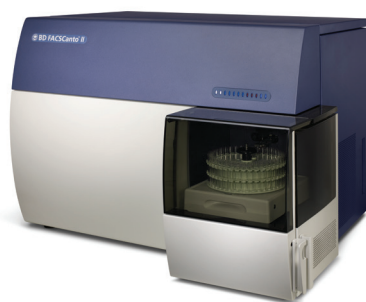
Periodic Setup

Instrument Setup and QC



BD FACSLyric

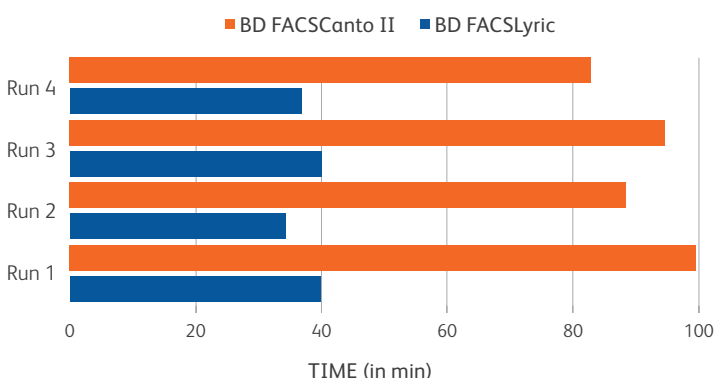
- ▶ Characterization QC with BD™ CS&T Beads (6 months or as needed)
- ▶ Reference settings update with BD™ FC Beads 7-Color and 5-Color Kits (Every 60 days)



BD FACSCanto II (monthly)

- ▶ Performance check with BD FACSDiva™ CS&T IVD Bead
- ▶ PMT voltage adjustment with BD OneFlow™ Setup Beads
- ▶ FSC and SSC adjustments with lysed wash blood
- ▶ Compensation with BD™ FC Beads 8-Color Kit for BD OneFlow Assays

Instrument Setup Time for Operator



BD FACSLyric Instrument Benefits*

- ▶ **69%** annual reduction in periodic instrument setup and QC time
- ▶ **95%** annual reduction in instrument set-up hands-on time to less than **30** minutes annually

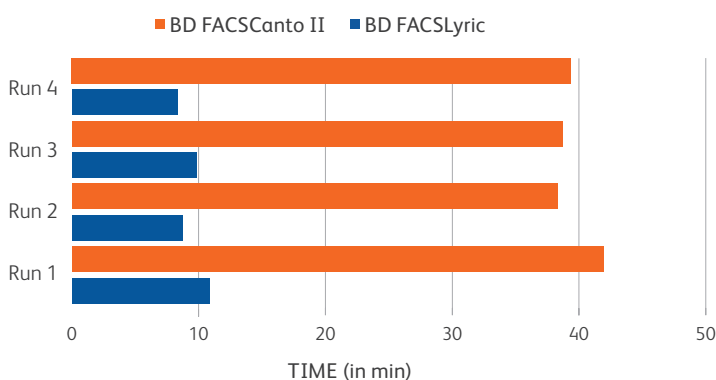
*Relative to BD OneFlow on BD FACSCanto II based upon internal testing. BD FACSLyric warmup time is not included as it is pre-programmable and does not impact operator time. Individual lab performance will vary.

Daily Workflow



BD FACSLyric			
<ul style="list-style-type: none"> ▶ Automatic Startup 	<ul style="list-style-type: none"> ▶ Performance QC with BD CS&T Beads ▶ Assay and Tube Settings Setup with BD CS&T Beads 	<ul style="list-style-type: none"> ▶ Standardized sample preparation with BD OneFlow Reagents 	<ul style="list-style-type: none"> ▶ Sample acquisition and analysis with predefined templates and reports
BD FACSCanto II			
<ul style="list-style-type: none"> ▶ Instrument Start Up ▶ Fluidics Start Up 	<ul style="list-style-type: none"> ▶ Performance QC with BD FACSDiva CS&T IVD Beads ▶ PMT voltage confirmation with OneFlow Setup Beads 	<ul style="list-style-type: none"> ▶ Standardized sample preparation with BD OneFlow Reagents 	<ul style="list-style-type: none"> ▶ Sample acquisition and analysis with predefined templates and reports

Daily Setup Time for Operator



BD FACSLyric Instrument Benefits*

- ▶ **74%** reduction in manual daily startup and setup steps
- ▶ **76%** reduction in daily startup and setup time

BD OneFlow™ LST Lymphoid Screening Tube



20 tests/box

BD OneFlow LST

The BD OneFlow™ LST (Lymphoid Screening Tube) is intended for flowcytometric immunophenotyping of normal and aberrant mature lymphocyte populations of B, T, and NK lineages in peripheral blood, bone marrow, and lymph nodes, as an aid in the diagnosis of hematological disorders.

In chronic lymphoproliferative disorders (CLPD), clonogenic events lead to the expansion and accumulation of mature-appearing lymphocytes, which carry a proliferative and/or survival advantage over their normal counterparts.¹ Thus, the detection of phenotypically aberrant and clonal mature lymphocytes is critical to the diagnosis of CLPD.

“The (EuroFlow) LST detected aberrant B-, T-, or NK-cells immunophenotypes in 149/150 (99.4%) of B-CLPD and in 78/83 (94%) of T/NK-CLPD with an overall frequency of 97.4%.¹¹”

Laser								
Format	BD Horizon™ V450	BD Horizon™ V500-C	FITC	PE	PerCP-Cy5.5	PE-Cy7	APC	APC-H7
Marker	CD20 CD4	CD45	CD8 Igλ	CD56 Igκ	CD5	CD19 TCRγδ-1	CD3	CD38

The antibodies in the BD OneFlow™ LST were chosen for their ability to separate normal lymphocytes into their major subpopulations.

- ▶ CD45 identifies mature lymphocytes and B cell precursors.
- ▶ CD3 identifies T cells.
- ▶ CD3 can also be used to identify B cells and NK cells by exclusion.
- ▶ Anti-TCRγ/δ-1, CD5, CD4, and CD8 can separate T cells into a number of subpopulations.
- ▶ CD19 and CD20 identify B cells, and together with CD45 can separate B cells into mature B lymphocytes (CD19+, CD20hi, CD45hi) and B-cell precursors (CD19+, CD20-/lo, CD45lo). CD19 and CD20 are also used to identify NK cells by exclusion.
- ▶ Anti-Kappa and Anti-Lambda can identify normal and clonally expanded populations of B cells expressing Igκ or Igλ on the surface membrane, respectively.
- ▶ CD38 identifies plasma cells and B cell precursors. In addition, it is informative in the evaluation of a wide variety of lymphoid malignancies. CD38 can also aid in the identification of NK cells.
- ▶ CD56 identifies NK cells.

BD OneFlow™ B-CLPD T1

B Cell Lymphoproliferative Disorders – Tube 1



20 tests/box

BD OneFlow B-CLPD T1

The BD OneFlow B-CLPD T1 (B cell Chronic Lymphoproliferative Diseases Tube 1) shall be used for specimens with B-lineage populations needing further investigation in combination with the BD OneFlow LST (Lymphoid Screening Tube). The BD OneFlow B-CLPD T1 is intended for flow-cytometric immunophenotyping of B cells in peripheral blood and bone marrow as an aid in the diagnosis of chronic lymphocytic leukemia (CLL) and other B cell chronic lymphoproliferative diseases.

Laser								
Format	BD Horizon™ V450	BD Horizon™ V500-C	FITC	PE	PerCP-Cy5.5	PE-Cy7	APC	APC-H7
Marker	CD20	CD45	CD23	CD10	CD79b	CD19	CD200	CD43

The antibodies in BD OneFlow™ B-CLPD T1 were chosen to work in conjunction with the antibodies in BD OneFlow™ LST to distinguish CLL from other B cell chronic lymphoproliferative diseases in patient specimens.

- ▶ CD45, CD19, and CD20 are present in both BD OneFlow™ LST and BD OneFlow B-CLPD T1 and serve as backbone markers, allowing for the direct comparison of specimens stained using the two tubes.
- ▶ CD23, CD200, CD79b, CD43, and CD10 are classification markers and, together with CD5 and CD38 from BD OneFlow LST, allow for specimens to be classified as CLL or as other B cell chronic lymphoproliferative diseases.
- ▶ Anti-Kappa and Anti-Lambda, present in BD OneFlow LST, assess the clonality of the B cell population.

BD OneFlow™ PCST

Plasma Cell Screening Tube



10 tests/box

Plasma cell disorders are a group of diseases most often characterized as having a clonal (neoplastic) population of plasma cells in the bone marrow (BM).¹ The cells may secrete a clonal immunoglobulin that can be detected in the circulation. These disorders comprise several distinct diseases, including multiple myeloma and monoclonal gammopathy of undetermined significance.

BD OneFlow PCST

The BD OneFlow PCST (Plasma Cell Screening Tube) is intended for flow-cytometric immunophenotyping of normal polyclonal and aberrant plasma cell populations in bone marrow as an aid in the diagnosis of hematological disorders.

BD OneFlow™ PCST consists of two single-use tubes containing fluorochrome-conjugated antibodies in an optimized dried formulation. BD OneFlow™ PCST (S) contains antibodies that recognize markers on the surface of cells, and BD OneFlow™ PCST (C) contains antibodies that recognize Igκ and Igλ in the cytoplasm of cells after fixing and permeabilizing them.

Laser								
Format	BD Horizon™ V450	BD Horizon™ V500-C	FITC	PE	PerCP-Cy™ 5.5	PE-Cy™ 7	APC	APC-H7
Marker	CD45 (S)	CD138 (S)	CD38 (S)	CD56 (S)	β2-Microglob. (S)	CD19 (S)	CyIgκ (C)	CyIgλ (C)

The antibodies in the BD OneFlow™ PCST tube were chosen for their ability to identify and characterize plasma cells.

- ▶ CD38, CD138, CD45, and CD19 are backbone markers used to identify plasma cells.
- ▶ CD56 and β2-Microglobulin are classification markers used to identify aberrant plasma cell populations.
- ▶ Anti-Kappa and Anti-Lambda are used to assess the clonality of the plasma cells.
- ▶ CD19, Anti-Kappa, and Anti-Lambda are also used to identify and characterize mature B cells.

BD OneFlow™ PCD

Plasma Cell Disorders Tube



10 tests/box

BD OneFlow PCD

The BD OneFlow PCD (Plasma Cell Disorders) tube, when run in parallel with the BD OneFlow PCST (Plasma Cell Screening Tube), is intended for flow-cytometric immunophenotyping of normal and aberrant plasma cells in bone marrow as an aid in the diagnosis of multiple myeloma and other plasma cell disorders.

Laser								
Format	BD Horizon™ V450	BD Horizon™ V500-C	FITC	PE	PerCP-Cy™5.5	PE-Cy™7	APC	APC-H7
Marker	CD45	CD138	CD38	CD28	CD27	CD19	CD117	CD81

The antibodies in the BD OneFlow PCD tube were chosen for their ability to identify plasma cells.

- ▶ CD38, CD138, CD45, and CD19 are backbone markers used to identify plasma cells.
- ▶ CD27, CD28, CD117, and CD81 are classification markers used to identify aberrant plasma cell populations.

BD OneFlow™ ALOT

Acute Leukemia Orientation Tube



10 tests/box

BD OneFlow ALOT

The BD OneFlow™ ALOT (Acute Leukemia Orientation Tube) is intended for flow-cytometric immunophenotyping of aberrant immature populations of hematopoietic cells (lymphoid and non-lymphoid lineage) in bone marrow and peripheral blood as an aid in the diagnosis of acute lymphoblastic leukemia and non-lymphoid acute leukemia.

BD OneFlow™ ALOT consists of two single-use tubes containing fluorochrome-conjugated antibodies in an optimized dried formulation. The BD OneFlow™ ALOT (S) tube contains antibodies that recognize markers on the surface of cells, and the BD OneFlow™ ALOT (C) tube contains antibodies that recognize antigens in the cytoplasm of cells after fixing and permeabilizing them.

Acute leukemias are a heterogeneous group of diseases characterized as having a clonal (neoplastic) population of immature hematopoietic cells in the peripheral blood (PB) or bone marrow (BM).¹

There are two major classes of acute leukemias: lymphoid precursor leukemias and acute myeloid leukemias (AML). The lymphoid precursor leukemias are divided into B cell and T cell precursor lymphoblastic leukemias (BCP-ALL and T-ALL, respectively).

In addition, a small number of neoplasms do not fit into any of these categories because they either show no clear expression of markers indicative of a particular lineage or they express markers specific to more than one lineage. They include acute undifferentiated leukemia (AUL) and mixed phenotype acute leukemia (MPAL).

Laser								
Format	BD Horizon™ V450	BD Horizon™ V500-C	FITC	PE	PerCP-Cy5.5	PE-Cy7	APC	APC-H7
Marker	cyCD3 (C)	CD45 (S)	cyMPO (C)	cyCD79a (C)	CD34 (S)	CD19 (S)	CD7 (S)	CD3 (S)

The antibodies in the BD OneFlow ALOT were chosen for their ability to identify and characterize aberrant immature populations of hematopoietic cells.

- ▶ CD45, CD34, and CD19 are the backbone markers for the BCP-ALL panel.
- ▶ CD45, cytoplasmic CD3 (cyCD3), and CD3 are the backbone markers for the T-ALL panel.
- ▶ CD45 and CD34 are the backbone markers for the AML panel.
- ▶ CD34 and negative or dim expression of CD45 (CD45^{neg/dim}) are markers for immature cells.
- ▶ Cytoplasmic myeloperoxidase (cyMPO) is a myeloid lineage marker.
- ▶ cyCD3 and CD7 are T cell lineage markers.
- ▶ CD3 is used as a maturity marker for T cells.
- ▶ CD19 and cytoplasmic CD79a (cyCD79a) are B cell lineage markers

BD OneFlow™ setup on the BD FACSCanto II



BD FACSDiva™ CS&T IVD Beads

- ▶ Standardize setup and monitoring for consistent performance.

BD OneFlow™ Setup Beads

- ▶ Ensure data accuracy and reproducibility by providing assay-specific target values, as per EuroFlow™ SOPs.⁴
- ▶ Enable lab efficiency by minimizing the technical burden and training needs.³



BD™ FC Beads 8-Color-Kit for BD OneFlow™ Assays

- ▶ Eliminate the need for using single vial reagents with ready-to-use single-test dye-coupled beads.
- ▶ Enable lab efficiency with a simplified procedure for standardized compensation.³
- ▶ Support consistency of results, eliminating need for using cells for compensation.^{2,3}

BD OneFlow Assays System for the BD FACSCanto II

- ▶ Standardize acquisition and analysis in BD FACSDiva™ v8.0.1, v8.0.2, v8.0.3, and v9.0 with predefined templates for consistency of results.



BD OneFlow™ setup on the BD FACSLyric



BD CS&T IVD Beads

- ▶ Standardize setup and monitoring for consistent performance.
- ▶ Enables single-tube QC for daily setup and performance checks.



BD FC Beads 7-Color and 5-Color Kits

- ▶ Ready-to-use single-test dye-coupled beads for compensation every 60 days.
- ▶ No need for using single vial reagents for label-specific compensation.
- ▶ Enable lab efficiency with automated compensation.

BD OneFlow Assays Installers

- ▶ Standardize acquisition and analysis in BD FACSuite™ Clinical Application v1.4 with predefined templates for consistency of results
- ▶ Supplemental analysis reports for flexibility in examining additional cell populations
- ▶ Reports available in 25 languages



Ordering Information

Product name	Tests	Description	Reg. Status	Product number
BD OneFlow™ LST	20 tests	4 pouches/box – 5 tubes/pouch	CE-IVD	658619
BD OneFlow™ B-CLPD T1	20 tests	4 pouches/box – 5 tubes/pouch	CE-IVD	659293
BD OneFlow™ PCST	10 tests	4 pouches/box (2 S and 2 C) – 5 tubes/pouch	CE-IVD	659912
BD OneFlow™ PCD	10 tests	2 pouches/box – 5 tubes/pouch	CE-IVD	659913
BD OneFlow™ ALOT	10 tests	4 pouches/box (2 S and 2 C) – 5 tubes/pouch	CE-IVD	660228
BD FACSCanto II related products				
BD OneFlow™ Assays System Installer	–	3 USB cards: one each for assays installer, setup guide, and application guides	CE-IVD	659305
BD FACSDiva™ CS&T IVD Beads	50 tests	1 vial	CE-IVD	656046
	150 tests	3 vials of 50 tests each		656047
BD OneFlow™ Setup Beads	25 tests	1 vial + 2 MFI target value cards	CE-IVD	658620
BD™ FC Beads 8-Color Kit for BD OneFlow Assays	5 tests	8 pouches/box (1 pouch/color) - 5 tubes/pouch	CE-IVD	658621
BD FACSLyric related products				
BD OneFlow™ Assays Installer I	–	1 USB card containing BD OneFlow LST, BD OneFlow B-CLPD T1, BD OneFlow PCST, and BD OneFlow PCD assay installers and assays application guides	CE-IVD	664225
BD OneFlow™ Assays Installer II	–	1 USB card for BD OneFlow ALOT assay installer and assay application guide	CE-IVD	664226
BD™ CS&T IVD Beads	50 tests	1 vial	CE-IVD	656504
	150 tests	3 vials of 50 tests each		656505
BD™ FC Beads 7-Color Kit	5 tests	7 pouches/box (1 pouch/color) - 5 tubes/pouch	CE-IVD	656867
BD™ FC Beads 5-Color Kit	5 tests	5 pouches/box (1 pouch/color) - 5 tubes/pouch	CE-IVD	661564

Visit our website for more information on
BD OneFlow™ Solution

eu.bd.com/oneflow



References

1. van Dongen, J.J., Lhermitte, L., Bottcher, S., et al. EuroFlow antibody panels for standardized n-dimensional flow cytometric immunophenotyping of normal, reactive and malignant leukocytes. *Leukemia*. 2012; 26: 1908-1975.
2. van der Velden, V., Flores-Montero, J., Perez-Andres, M., et al. Optimization and testing of dried antibody tube: The EuroFlow LST and PIDOT tubes as examples. *J Immunol Methods*. 2019;475:112287.
3. Moloney, E., Watson, H., Barge, D., et al. Efficiency and Health Economic Evaluations of BD OneFlow™ Flow Cytometry Reagents for Diagnosing Chronic Lymphoid Leukemia. *Cytometry Part B (Clinical Cytometry)*. 2019.
4. Kalina, T., Flores-Montero, J., van der Velden, V.H., et al. EuroFlow standardization of flow cytometer instrument settings and immunophenotyping protocols. *Leukemia*. 2012; 26:1986-2010.

Cy is a trademark of Cytiva.

The EuroFlow™ antibody panels are property of the EuroFlow Consortium and can not be reproduced or published without prior written permission by the EuroFlow coordinator (www.euroflow.org).

Products are CE marked in compliance with the European In Vitro Diagnostic Medical Device Directive 98/79/EC.

The BD FACSLytic™ and BD FACSCanto™ II flow cytometers are Class 1 Laser Product.

The BD FACSLytic™ flow cytometer with the BD FACSuite™ Clinical and BD FACSuite™ applications are CE marked in compliance with the European In Vitro Diagnostic Medical Device Directive 98/79/EC.

The BD FACSCanto™ II flow cytometer is CE marked in compliance with the European In Vitro Diagnostic Medical Device Directive 98/79/EC.

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23-23450-00

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

bdbiosciences.com

Antibodies in EuroFlow™ panels

Alternative tested single vial markers are included



www.euroflow.org

		Violet Laser (405 nm)		Blue Laser (488 nm)				Red Laser (640 nm)		
		1		2	1	2	3	4	1	2
Emission Max		452 nm	448 nm	500 nm	519 nm	578 nm	695 nm	785 nm	660 nm	785 nm
Application**	Tube number	Pacific Blue™	BD Horizon™ V450	BD Horizon™ V500-C	FITC	PE	PerCP-Cy™5.5	PE-Cy™7	APC	APC-H7
LST	1		CD20 clone L27 #655872 ^c	EF CD45 clone 2D1 c.r. ¹	CD8 clone SK1 #345772 ^c	CD56 clone MY31 #345810 ^c	CD5 clone L17F12 #341109 ^c	CD19 clone J3-119	CD3 clone SK7 #345767 ^c	CD38 clone HB7 #656646*
			CD4 clone SK3 #651849*		Igλ clone 1-155-2 #347247 ^c	Igκ clone TB28-2 #347246 ^c		TCRγδ clone 11F2 #655410		
B-CLPD	1		CD20 clone L27 #655872 ^c	EF CD45 clone 2D1 c.r. ¹	CD23 clone EBVCS-5 #656148*	CD10 clone MEM-78 #658366*	CD79b clone SN8 #656644*	CD19 clone J3-119	CD200 clone OX104 #655406*	CD43 clone IG10 #655407*
	2		CD20 clone L27 #655872 ^c	EF CD45 clone 2D1 c.r. ¹	CD31 clone WM59 #555445	LAIR1 clone DX26 #550811	CD11c clone B-Ly6 658330*	CD19 clone J3-119	Igμ clone G20-127 #551062	CD81 clone JS-81 #656647*
	3		CD20 clone L27 #655872 ^c	EF CD45 clone 2D1 c.r. ¹	CD103 clone Ber-ACT8 #550259	CD95 clone DX2 #555674	CD22 clone S-HCL-1 #658329*	CD19 clone J3-119	CXCR5 clone S1505	CD49d clone 9F10 #658332*
	4		CD20 clone L27 #655872 ^c	EF CD45 clone 2D1 c.r. ¹	CD62L clone SK11 #347443*	CD39 clone Tü66 #555464	HLA-DR clone L243 #339216 ^c	CD19 clone J3-119	CD27 clone L128 #337169*	
T-CLPD	1		CD4 clone SK3 #651849*	EF CD45 clone 2D1 c.r. ¹	CD7 clone 4H9 #347483*	CD26 clone L272 #340423*	CD3 clone SK7 #332771 ^c	CD2 clone S5.2 #335821 ^c	CD28 clone CD28.2 #559770	CD8 clone SK1 #641400*
	2		CD4 clone SK3 #651849*	EF CD45 clone 2D1 c.r. ¹	CD27 clone L128 #340424*	CCR7 clone 150503	CD3 clone SK7 #332771 ^c	CD45RO clone UCHL1 #337168*	CD45RA clone HI100 #550855	CD8 clone SK1 #641400*
	3		CD4 clone SK3 #651849*	EF CD45 clone 2D1 c.r. ¹	CD5 clone L17F12 #345781 ^c	CD25 clone 2A3 #341011 ^c	CD3 clone SK7 #332771 ^c	HLA-DR clone L243 #335830 ^c	TCL1 clone 1-21	CD8 clone SK1 #641400*
	4		CD4 clone SK3 #651849*	EF CD45 clone 2D1 c.r. ¹	CD57 clone HNK-1 #333169 ^c	CD30 clone BerH8 #550041	CD3 clone SK7 #332771 ^c		CD11c clone S-HCL-3 #333144 ^c	CD8 clone SK1 #641400*
	5		CD4 clone SK3 #651849*	EF CD45 clone 2D1 c.r. ¹	Perforin clone δG9 #556577	Granzyme clone CLB-GB11	CD3 clone SK7 #332771 ^c	CD16 clone 3G8 #557744	CD94 clone HP-3D9 #559876	CD8 clone SK1 #641400*
	6		CD4 clone SK3 #651849*	EF CD45 clone 2D1 c.r. ¹		CD279 clone MIH4 #557946	CD3 clone SK7 #332771 ^c			CD8 clone SK1 #641400*
NK-CLPD	1		CD2 clone S5.2 #644485*	EF CD45 clone 2D1 c.r. ¹	CD7 clone 4H9 #347483*	CD26 clone L272 #340423*	CD3 clone SK7 #332771 ^c	CD56 clone N901/NKH1	CD5 clone L17F12 #345783 ^c	CD19 clone SJ25C1 #641395*
	2		CD16 clone 3G8 #644489*	EF CD45 clone 2D1 c.r. ¹	CD57 clone HNK-1 #333169 ^c	CD25 clone 2A3 #341011 ^c	CD3 clone SK7 #332771 ^c	CD56 clone N901/NKH1	CD11c clone S-HCL-3 #333144 ^c	CD19 clone SJ25C1 #641395*
	3		HLA-DR clone L243 #655874 ^c	EF CD45 clone 2D1 c.r. ¹	Perforin clone δG9 #556577	Granzyme clone CLB-GB11	CD3 clone SK7 #332771 ^c	CD56 clone N901/NKH1	CD94 clone HP-3D9 #559876	CD19 clone SJ25C1 #641395*

¹ c.r.: to order this reagent, simply contact us at bdb@europe.bd.com

* RUO (GMP) : for Research Use Only (Good Manufacturing Practices). Not for use in diagnostic or therapeutic procedures

^c CE-IVD : CE marked in compliance with the European Directive 98/79/EC (Directive of the European parliament and of the Council of 27 October 1998 on in vitro diagnostic medical devices)



Antibodies in EuroFlow™ panels

Alternative tested single vial markers are included

		Violet Laser (405 nm)			Blue Laser (488 nm)				Red Laser (640 nm)	
		1		2	1	2	3	4	1	2
Emission Max		452 nm	448 nm	500 nm	519 nm	578 nm	695 nm	785 nm	660 nm	785 nm
Application**	Tube number	Pacific Blue™	BD Horizon™ V450	BD Horizon™ V500-C	FITC	PE	PerCP-Cy™5.5	PE-Cy™7	APC	APC-H7
SST	1		CD20 clone L27 #655872 ^c	EF CD45 clone 2D1 c.r. ¹	CD8 clone SK1 #345772 ^c	CD56 clone MY31 #345810 ^c	CD4 clone SK3 #332772 ^c	CD19 clone J3-119	CD3 clone SK7 #345767 ^c	CD38 clone HB7 #656646*
					Igλ clone 1-155-2 #347247 ^c	Igκ clone TB28-2 #347246 ^c			CD14 clone MΦP9 #345787 ^c	

		Violet Laser (405 nm)			Blue Laser (488 nm)				Red Laser (640 nm)	
		1		2	1	2	3	4	1	2
Emission Max		452 nm	448 nm	500 nm	519 nm	578 nm	695 nm	785 nm	660 nm	785 nm
Application**	Tube number	Pacific Blue™	BD Horizon™ V450	BD Horizon™ V500-C	FITC	PE	PerCP-Cy™5.5	PE-Cy™7	APC	APC-H7
PCST	1		CD45 Clone 2D1 #642275*	CD138 clone MI15 #650659*	CD38 clone HB7 #340909 ^c	CD56 clone MY31 #345810 ^c	β-2 microglobulin clone T099 #656645*	CD19 clone J3-119	Igκ polyclonal	Igλ clone 1-155-2 #656648*
PCD	2		CD45 Clone 2D1 #642275*	CD138 clone MI15 #650659*	CD38 clone HB7 #340909 ^c	CD28 clone L293 #348047*	CD27 clone L128 #656643*	CD19 clone J3-119	CD117 clone 104D2 #333233 ^c	CD81 clone JS-81 #656647*

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Antibodies in EuroFlow™ panels

Alternative tested single vial markers are included



www.euroflow.org

		Violet Laser (405 nm)			Blue Laser (488 nm)				Red Laser (640 nm)	
		1		2	1	2	3	4	1	2
Emission Max		452 nm	448 nm	500 nm	519 nm	578 nm	695 nm	785 nm	660 nm	785 nm
Application**	Tube number	Pacific Blue™	BD Horizon™ V450	BD Horizon™ V500-C	FITC	PE	PerCP-Cy™5.5	PE-Cy™7	APC	APC-H7
ALOT	1		CD3 clone UCHT1 #560365	EF CD45 clone 2D1 c.r. ¹	MPO clone MPO7	CD79a clone HM57	CD34 clone 8G12 #347222 ^c	CD19 clone J3-119	CD7 clone M-T701 #653311*	CD3 clone SK7 #641415 ^c
BCP-ALL	1		CD20 clone L27 #655872 ^c	EF CD45 clone 2D1 c.r. ¹	CD58 clone 1C3 #555920	CD66c clone KOR-SA3544	CD34 clone 8G12 #347222 ^c	CD19 clone J3-119	CD10 clone HI10a #332777 ^c	CD38 clone HB7 #656646*
	2		Igκ clone TB28-2 658286*	EF CD45 clone 2D1 c.r. ¹	Igμ polyclonal rabbit serum	CD33 clone P67.6 #345799 ^c	CD34 clone 8G12 #347222 ^c	CD19 clone J3-119	Igμ clone G20-127 #551062 + CD117 clone 104D2 #333233 ^c	Igλ clone 1-155-2 #656648*
	3		CD9 clone M-L13 #658167*	EF CD45 clone 2D1 c.r. ¹	nuTdT clone HT6	CD13 clone L138 #347406 ^c	CD34 clone 8G12 #347222 ^c	CD19 clone J3-119	CD22 clone S-HCL-1 #333145 ^c	CD24 clone ML5 #658331*
	4		CD21 clone B-ly4 #658169*	EF CD45 clone 2D1 c.r. ¹	CD15 clone MMA #332778 ^c CDw65 clone 88H7	NG2 clone 7.1	CD34 clone 8G12 #347222 ^c	CD19 clone J3-119	CD123 clone 9F5 #658171*	CD81 clone JS-81 #656647*
T-ALL	1		CD3 clone UCHT1 #560365	EF CD45 clone 2D1 c.r. ¹	nuTdT clone HT6	CD99 clone Tü12 #555689	CD5 clone L17F12 #341109 ^c	CD10 clone HI10A #341112 ^c	CD1a clone HI149 #559775	CD3 clone SK7 #641415 ^c
	2		CD3 clone UCHT1 #560365	EF CD45 clone 2D1 c.r. ¹	CD2 clone RPA-2.10 #555326	CD117 clone 104D2 #332785 ^c	CD4 clone SK3 #332772 ^c	CD8 clone SFCl21Thy2D3	CD7 clone M-T701 #653311*	CD3 clone SK7 #641415 ^c
	3		CD3 clone UCHT1 #560365	EF CD45 clone 2D1 c.r. ¹	TCRγδ clone IMMU510	TCRαβ clone IP26A	CD33 clone P67.6 #333146 ^c	CD56 clone N901/NKH1	TCRβ clone 8A3	CD3 clone SK7 #641415 ^c
	4		CD3 clone UCHT1 #560365	EF CD45 clone 2D1 c.r. ¹	CD44 clone L178 #347943*	CD13 clone L138 #347406 ^c	HLA-DR clone L243 #339216 ^c	CD45RA clone L48 #337186 ^c	CD123 clone 9F5 #658171*	CD3 clone SK7 #641415 ^c

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Antibodies in EuroFlow™ panels

Alternative tested single vial markers are included



www.euroflow.org

		Violet Laser (405 nm)			Blue Laser (488 nm)				Red Laser (640 nm)		
		1		2	1	2	3	4	1	2	
Emission Max		452 nm	448 nm	500 nm	519 nm	578 nm	695 nm	785 nm	660 nm	785 nm	
Application**	Tube number	Pacific Blue™	BD Horizon™ V450	BD Horizon™ V500-C	FITC	PE	PerCP-Cy™5.5	PE-Cy™7	APC	APC-H7	
AML / MDS	1		HLA-DR clone L243 #655874 ^c	EF CD45 clone 2D1 c.r. ¹	CD16 clone CLB-FcGran1 #656146*	CD13 clone L138 #347406 ^c	CD34 clone 8G12 #347222 ^c	CD117 clone 104D2D1	CD11b clone D12 #333143 ^c	CD10 Clone HI10A #655404*	
	2		HLA-DR clone L243 #655874 ^c	EF CD45 clone 2D1 c.r. ¹	CD35 clone E11 #555452	CD64 clone 10.1 #644385*	CD34 clone 8G12 #347222 ^c	CD117 clone 104D2D1	IREM-2 (CD300e) clone UP-H2 #656158*	CD14 Clone MΦP9 #641394*	
	3		HLA-DR clone L243 #655874 ^c	EF CD45 c.r. ¹	CD36 clone CLB-IVC7 #656151*	CD105 clone 266 #560839	CD34 clone 8G12 #347222 ^c	CD117 clone 104D2D1	CD33 clone P67,6 #345800 ^c	CD71 clone M-A712 #655408*	
	4		HLA-DR clone L243 #655874 ^c	EF CD45 clone 2D1 c.r. ¹	nuTdT clone HT6	CD56 clone MY31 #345810 ^c	CD34 clone 8G12 #347222 ^c	CD117 clone 104D2D1	CD7 clone M-T701 #653311*	CD19 clone SJ25C1 #641395*	
	AML	5		HLA-DR clone L243 #655874 ^c	EF CD45 clone 2D1 c.r. ¹	CD15 clone MMA #332778 ^c	NG2 clone 7.1	CD34 clone 8G12 #347222 ^c	CD117 clone 104D2D1	CD22 clone S-HCL-1 #333145 ^c	CD38 clone HB7 #656646*
		6		HLA-DR clone L243 #655874 ^c	EF CD45 clone 2D1 c.r. ¹	CD42a clone Beb1 #348083 ^c	CD203c clone NP4DS #562972*	CD34 clone 8G12 #347222 ^c	CD117 clone 104D2D1	CD123 clone 9F5 #658171*	CD4 clone SK3 #641398*
						CD61 clone RUU-PL7F12 #347407 ^c					
AML-M7	7		HLA-DR clone L243 #655874 ^c	EF CD45 clone 2D1 c.r. ¹	CD41a clone HIP8 #333147 ^c	CD25 clone 2A3 #341011 ^c	CD34 clone 8G12 #347222 ^c	CD117 clone 104D2D1	CD42b clone HIP1 #551061	CD9 clone M-L13 #655409*	

** For more information, please refer to: the issue 26 of Leukemia (2012) and in particular to:

J.J.M. van Dongen, L. Lhermitte, S. Böttcher, J. Almeida, V.H.J. van der Velden, J. Flores-Montero, A. Rawstron, V.Asnafi, Q. L'Écresse, P. Lucio, E. Mejstrikova, T. Szczepanski, T. Kalina, R. de Tute, M. Brüggemann, L. Sedek, M. Cullen, A.W. Langerak, A. Mendonça, E. Macintyre, M. Martin-Ayuso, O. Hrusak, M.B. Vidriales, and A. Orfao on behalf of the EuroFlow Consortium (EU-FP6, LSHB-CT-2006-018708), 'EuroFlow antibody panels for standardized n-dimensional flow cytometric immunophenotyping of normal, reactive and malignant leukocytes'; Leukemia 2012, 26 (9): 1908-75

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