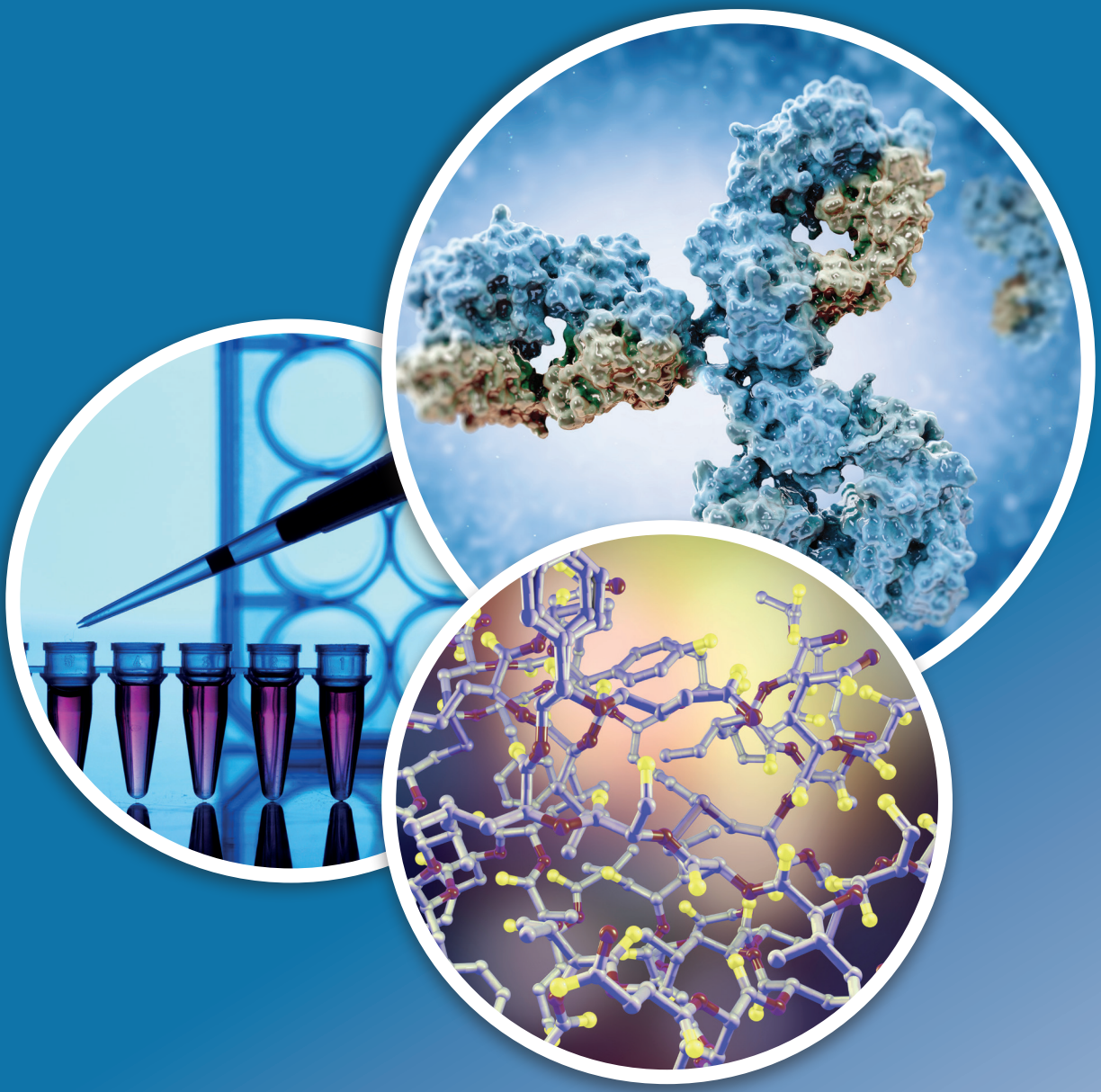
BIOZOL

FIT FOR SCIENCE

FLOW CYTOMETRY

BRINGING QUALITY & EFFICIENCY TO RESEARCH



www.biozol.de

BIOZOL

FIT FOR SCIENCE

Your Partner for Flow Cytometry

Biozol Diagnostica Vertrieb GmbH are proud to have been providing products and services within the life science arena since 1989. We always aspire to give our customers the fastest response times and high standards of customer service.

Flow cytometry is a well-established and powerful technique, utilising antibodies for the analysis of cell surface and intracellular target antigens. With the advent of multiplexing, and use of antibody panels, an ever increasing number of fluorescent antibodies can be detected simultaneously. Making it possible to study complex cell populations and perform high throughput screening for therapeutic drug analysis.

BIOZOL's extensive range of antibodies and kits from the globe's leading life science suppliers will meet all your flow cytometry needs.

BioLegend®
Enabling Legendary Discovery™

Introducing Flex-T™

Produce MHC Tetramers with Your Peptide of Interest

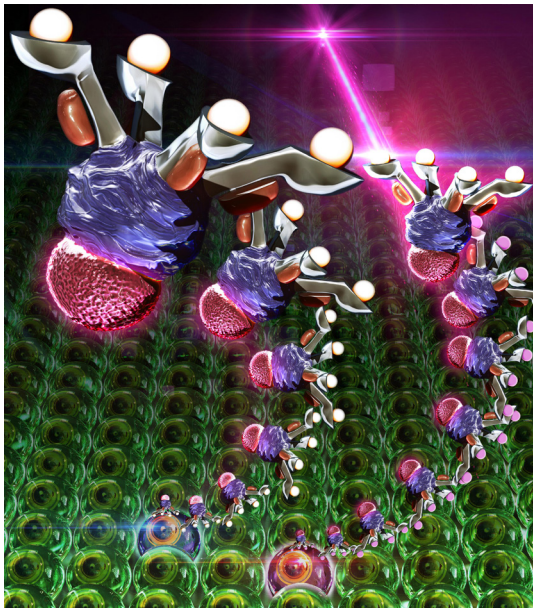
BioLegend is happy to introduce our new family of reagents to study antigen-specific T cells. Flex-T™, Major Histocompatibility Complex (MHC) tetramer products, brings to you the flexibility of loading any peptide of interest into the binding site of the complex, by using ultraviolet light labile peptides. The efficiency of peptide exchange can be monitored through a simple ELISA assay.

Flex-T™ technology features:

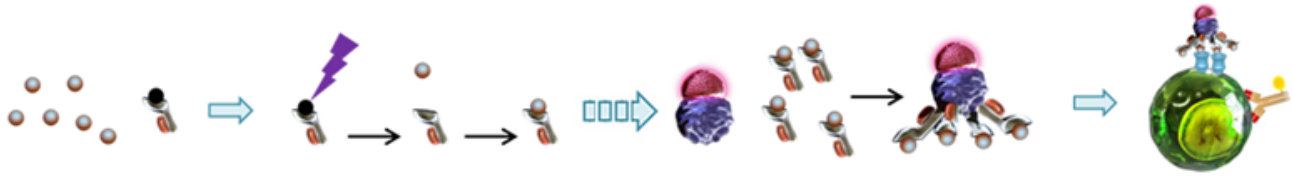
- **Flexible peptide loading**
- **Two color combination capability**
- **High throughput screening capable**
- **High Specificity**
- **Ease of use**
- **Affordability**

Class I Allele Biotinylated Monomer	Size (µg)	Price (USD)	Cat. No.
Flex-T™ HLA-A*01:01 Monomer UVX	50	950	280001
Flex-T™ HLA-A*02:01 Monomer UVX	50 | 200	950 | 2400	280003 | 280004
Flex-T™ HLA-A*03:01 Monomer UVX	50	950	280005
Flex-T™ HLA-A*11:01 Monomer UVX	50	950	280007
Flex-T™ HLA-B*07:02 Monomer UVX	50	950	280009
Flex-T™ HLA-B*08:01 Monomer UVX	50	950	280011

Accessories	Size (µg)	Price (USD)	Cat. No.
Flex-T™ HLA Class I ELISA Control	20	350	280301
Purified Streptavidin	250	35	280302
HRP anti-human ß2-microglobulin	50	200	280303



Learn more at: biolegend.com/flex-t

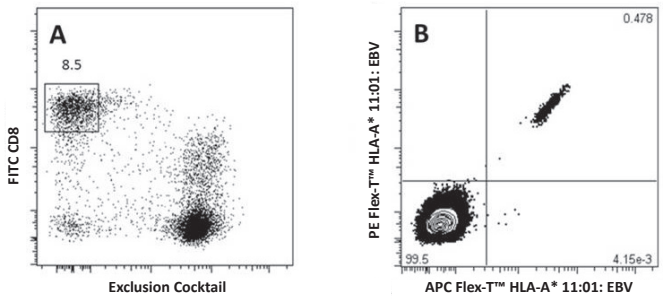


Peptide of interest mixed with labile peptide-loaded Flex-T™ monomers

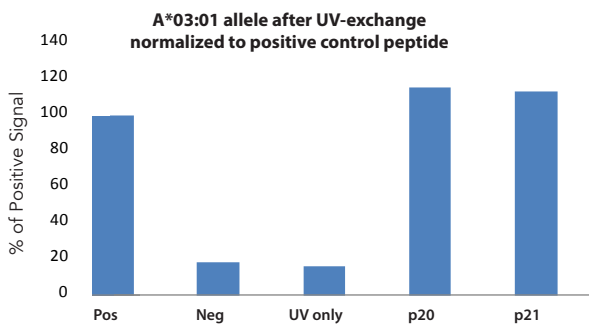
UV light degrades labile peptide, allowing for substitution by peptide of interest

Mix peptide-exchanged monomers with fluorophore-Streptavidin to produce tetramers

Identify Antigen-specific CD8⁺ T Cell



We recommend a two color staining with the same allele/peptide combination to increase the resolution and specificity of the assay. **A)** $CD8^+$ T Cells previously gated on lymphocytes (FSC vs SSC) and 7-AAD negative events, stained with FITC anti-CD8a and an exclusion cocktail containing Alexa Fluor® 700 anti- CD4, CD19, CD14, and CD16 **B)** Antigen-specific $CD8^+$ T Cells, gated as described, were detected with Flex-T™ tagged with PE and APC. HLA-A*11:01 Flex-T™ was loaded with an EBV peptide (IVTDFSVIK).



The bar graph shows peptide exchange of HLA-A*03:01 allele. Monomers were irradiated with UV light in the presence of positive (Pos), negative (Neg), p20 (EBV RLRAEAQVK), and p21 (EBV RVRAYTYSK) peptides, or no peptide (UV only). ELISA signal was normalized using the Pos control well.

Brilliant Violet™ Technology

The Brilliant Violet™ family of fluorescent molecules are organic polymers with an extraordinary capacity to absorb energy (extinction coefficient) and a high efficiency with which to convert that absorbed energy to an emitted signal (quantum yield). When conjugated to antibodies, this results in high intensity brightness on labeled cells.

Physical Properties

Brilliant Violet 421™ has an extinction coefficient of 2,500,000 M-1cm-1 at 405 nm, an aqueous solution quantum yield of 65 ± 5%, and solubility in excess of 50 mg/mL in PBS. The extinction coefficient contributes to its superior brightness compared to Pacific Blue™, which has an extinction coefficient of 30,000 M-1cm-1. Brilliant Violet 421™ can also be modified with another dye to produce high stokes shift emissions. Brilliant Violet 570™, Brilliant Violet 605™, Brilliant Violet 650™, Brilliant Violet 711™, and Brilliant Violet 785™ are such derivatives of the Brilliant Violet 421™ polymer, emitting maximally at 570 nm, 603 nm, 645 nm, 711 nm, and 785 nm, respectively, when excited at 405 nm. Brilliant Violet 510™, another High Sensitivity Fluorescence™ polymer, is the newest violet laser excitable fluorophore with maximal emission at 510 nm. This figure provides the emission spectra of the Brilliant Violet™ fluorophores.

Easy to Use and Trouble-Free

Brilliant Violet™ antibody conjugates are simple to use,compatible with standard staining buffers, and stable to fixation. Provided in convenient 5 µl test sizes at optimal ready-to-use concentrations, our Brilliant Violet™ antibody products can easily be added to your multicolor panels. We are now introducing µg sizes for optimal value.

Brilliant Violet™ Fluorophore Family at a Glance

Brilliant Violet **421**™	Brilliant Violet **510**™	Brilliant Violet **570**™
Excitation max = 405 nm	Excitation max = 405 nm	Excitation max = 405 nm
Emission max = 421 nm	Emission max = 510 nm	Emission max = 570 nm
Recommended filter = 450/50	Recommended filter = 510/50	Recommended filter = 585/42
Comparable Fluorophores Pacific Blue™ BD Horizon™ V450 Alexa Fluor® 405 Cascade Blue™ eFluor® 450	Comparable Fluorophores BD Horizon™ V500 AmCyan	Comparable Fluorophores Pacific Orange™ Qdot® 565 Cascade Yellow™ eFluor® 565NC Qdot® 545 Krome Orange™
Brightness = 5 On a scale from 1 to 5, with 5 being the brightest. Molar Extinction Coeff.= 2,500,000 $M^{-1}cm^{-1}$ Quantum Yield = 0.65 in DPBS	Brightness = 3 Molar Extinction Coeff.= 577,000 $M^{-1}cm^{-1}$ Quantum Yield = 0.44 in DPBS	Brightness = 2-3 Molar Extinction Coeff.= 2,300,000 $M^{-1}cm^{-1}$ Quantum Yield = 0.08 in DPBS
MW = 60- 80 kD	MW = 60- 80 kD	MW = 60- 80 kD

Brilliant Violet **605**™	Brilliant Violet **650**™	Brilliant Violet **711**™
Excitation max = 405 nm	Excitation max = 405 nm	Excitation max = 405 nm
Emission max = 603 nm	Emission max = 645 nm	Emission max = 711 nm
Recommended filter = 610/20	Recommended filter = 660/20	Recommended filter = 710/50
Comparable Fluorophores Qdot® 605 eFluor® 605NC	Comparable Fluorophores Qdot® 655 eFluor® 650NC	Comparable Fluorophores eFluor® 700NC Qdot® 705
Brightness = 4 Molar Extinction Coeff.= 2,400,000 $M^{-1}cm^{-1}$ Quantum Yield = 0.29 in DPBS	Brightness = 3 Molar Extinction Coeff.= 2,500,000 $M^{-1}cm^{-1}$ Quantum Yield = 0.17 in DPBS	Brightness = 3 Molar Extinction Coeff.= 2,800,000 $M^{-1}cm^{-1}$ Quantum Yield = 0.15 in DPBS
MW = 60- 80 kD	MW = 60- 80 kD	MW = 60- 80 kD

Brilliant Violet **785**™
Excitation max = 405 nm
Emission max = 785 nm
Recommended filter = 780/60
Comparable Fluorophores Qdot® 800
Brightness = 3 Molar Extinction Coeff.= 2,500,000 $M^{-1}cm^{-1}$ Quantum Yield = 0.04 in DPBS
MW = 60- 80 kD

Lympholyte®

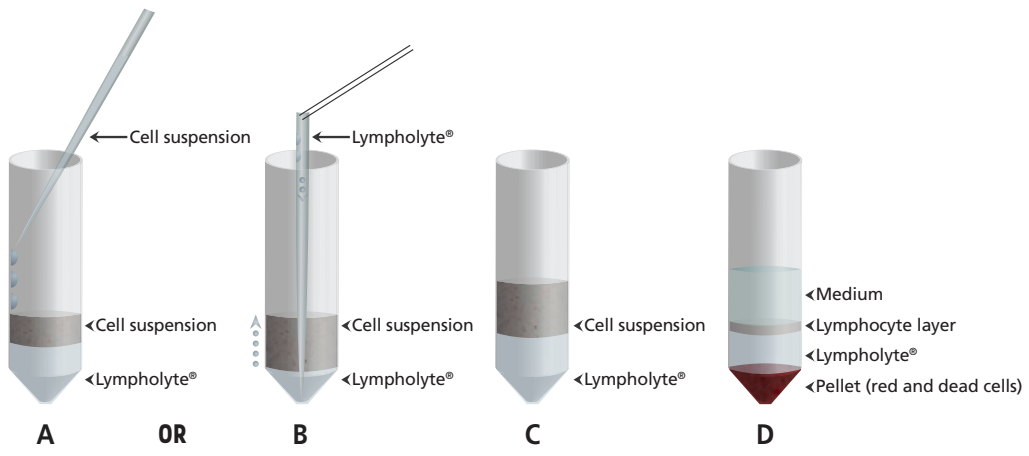
CEDARLANE's Lympholyte® Cell Separation density gradient centrifugation media has been specifically designed for the isolation of viable lymphocytes from mouse, rat, rabbit, human and other mammalian cell populations. The resulting cell population demonstrates a high, nonselective recovery of viable lymphocytes that are suitable for use as target cells in cytotoxicity and FACS assays and in *in vivo* / *in vitro* functional studies. All products are supplied as sterile liquid with varying densities.

Applications for Lympholyte® include:

- Isolation of viable lymphocytes from lymphoid organs by removal of red and dead cells.
- Removal of dead cells from lymphocyte suspensions; for example, after treatment with antibody plus complement or following cell culture.

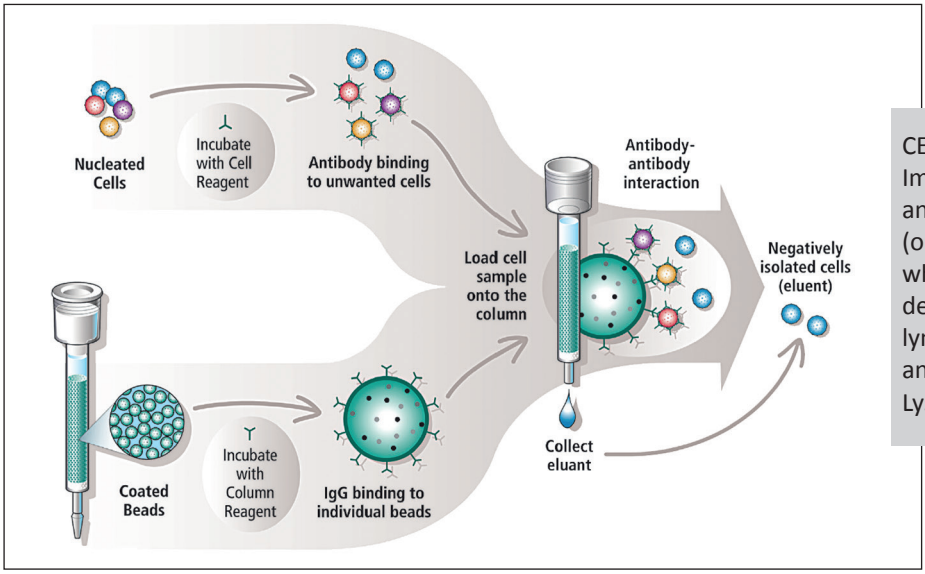
Lympholyte® Cell Separation Media

Product	Density	Size	Main Application	Cat. #
Lympholyte®-H Cell Separation Media	1.0770 ± 0.001 @ 25°C, g/ml	5x30 mL	Isolation of viable **HUMAN** lymphocytes from peripheral blood	**CL5010**
CE	1.0770 ± 0.001 @ 25°C, g/ml	100 mL	Isolation of viable **HUMAN** lymphocytes from peripheral blood	**CL5015**
	1.0770 ± 0.001 @ 25°C, g/ml	6x100 mL	Isolation of viable **HUMAN** lymphocytes from peripheral blood	**CL5016**
	1.0770 ± 0.001 @ 25°C, g/ml	500 mL	Isolation of viable **HUMAN** lymphocytes from peripheral blood	**CL5020**
	1.0770 ± 0.001 @ 25°C, g/ml	6x500 mL	Isolation of viable **HUMAN** lymphocytes from peripheral blood	**CL5026**
Lympholyte®-M Cell Separation Media	1.0875 ± 0.001 @ 25°C, g/ml	5x30 mL	Isolation of viable **MOUSE** lymphocytes from lymphoid tissue	**CL5030**
	1.0875 ± 0.001 @ 25°C, g/ml	100 mL	Isolation of viable **MOUSE** lymphocytes from lymphoid tissue	**CL5031**
	1.0875 ± 0.001 @ 25°C, g/ml	500 mL	Isolation of viable **MOUSE** lymphocytes from lymphoid tissue	**CL5035**
Lympholyte®-Mammal Cell Separation Media	1.0860 ± 0.001 @ 25°C, g/ml	5x30 mL	Isolation of viable lymphocytes from peripheral blood of most **mammalian** species	**CL5110**
For species tested please contact tech@cedarlanelabs.com	1.0860 ± 0.001 @ 25°C, g/ml	100 mL	Isolation of viable lymphocytes from peripheral blood of most **mammalian** species	**CL5115**
	1.0860 ± 0.001 @ 25°C, g/ml	500 mL	Isolation of viable lymphocytes from peripheral blood of most **mammalian** species	**CL5120**
Lympholyte®-Rabbit Cell Separation Media	1.0965 ± 0.001 @ 25°C, g/ml	5x30 mL	Isolation os viable **RABBIT** lymphocytes from lymphoid tissue	**CL5050**
Lympholyte®-R Cell Separation Media	1.0940 ± 0.001 @ 25°C, g/ml	5x30 mL	Isolation of viable **RAT** lymphocytes from lymphoid tissue	**CL5040**
	1.0940 ± 0.001 @ 25°C, g/ml	100 mL	Isolation of viable **RAT** lymphocytes from lymphoid tissue	**CL5041**
	1.0940 ± 0.001 @ 25°C, g/ml	500 mL	Isolation of viable **RAT** lymphocytes from lymphoid tissue	**CL5045**
Lympholyte®-poly Cell Separation Media	1.113 ± 0.001 @ 25°C, g/ml	100 mL	Isolation of viable **HUMAN** polymorphonuclear cells	**CL5070**
	1.113 ± 0.001 @ 25°C, g/ml	250 mL	Isolation of viable **HUMAN** polymorphonuclear cells	**CL5071**
Lympholyte®-1.1	1.100 ± 0.001 @ 25°C, g/ml	500 mL	A high density Lympholyte® solution which can be diluted with PBS (without Ca^{2+}/Mg^{2+}). Isolation of pancreatic islet cells prior to expanding them in vitro	**CL5095**



Immunocolumns

CEDARLANE's cellect™ Immunocolumn kits are simple, rapid, affinity chromatography tools for the gentle, non-magnetic enrichment of immune cell populations in humans, mice and rats. By the process of negative selection, virtually all unwanted cells are removed by the immunocolumns, resulting in a highly enriched population of the desired cells in the eluent. This process ensures that the isolated cells are unaltered and fully viable. The kits are in a sterile, ready-to use format with quality controlled columns and reagents.



CEDARLANE's cellect™ Immunocolumn kits (for mouse and rat) INCLUDE Lympholyte® (our density separation medium which eliminates erythrocytes, dead cells and debris from spleen, lymph node, thymus, bone marrow and blood suspensions), PBS and Lysing Buffer.

Mouse

Product	Format	Size	Cat. #
T Cell Immunocolumns	Kit	10 Col.	**CL101**
	Kit (high capacity)	2 Col.	**CL101-2**
	Kit	5 Col.	**CL101-5**
CD4 Cell Immunocolumns	Kit	10 Col.	**CL111**
	Kit (high capacity)	2 Col.	**CL111-2**
	Kit	5 Col.	**CL111-5**
CD8 Cell Immunocolumns	Kit	10 Col.	**CL121**
	Kit (high capacity)	2 Col.	**CL121-2**
	Kit	5 Col.	**CL121-5**
B Cell Immunocolumns	Kit	10 Col.	**CL131**
	Kit	2 Col.	**CL131-2**
	Kit	5 Col.	**CL131-5**

Rat

Product	Format	Size	Cat. #
T Cell Immunocolumns	Kit	10 Col.	**CL102**
	Kit (high capacity)	2 Col.	**CL102-2**
	Kit	5 Col.	**CL102-5**
	Kit (medium capacity)	5 Col.	**CL102-5PS**
CD4 Cell Immunocolumns	Kit	10 Col.	**CL112**
	Kit	2 Col.	**CL112-2**
	Kit	5 Col.	**CL112-5**
	Kit (medium capacity)	5 Col.	**CL112-5PS**
CD8 Cell Immunocolumns	Kit	10 Col.	**CL122**
	Kit (high capacity)	2 Col.	**CL122-2**
	Kit	5 Col.	**CL122-5**
	Kit (medium capacity)	5 Col.	**CL122-5PS**

Human

Product	Format	Size	Cat. #
Enhanced T Cell Immunocolumns	Kit	10 Col.	**CL100**
	Kit (high capacity)	2 Col.	**CL100-2**
	Kit	5 Col.	**CL100-5**
CD4 Cell Immunocolumns	Kit	10 Col.	**CL110**
	Kit (high capacity)	2 Col.	**CL110-2**
	Kit	5 Col.	**CL110-5**
CD8 Cell Immunocolumns	Kit	10 Col.	**CL120**
	Kit (high capacity)	2 Col.	**CL120-2**
	Kit	5 Col.	**CL120-5**

StatusFlow

Flow Cytometry Control

StatusFlow is a stable preparation of human peripheral leukocytes and erythrocytes designed for use as a control in immunophenotyping when evaluating RBC lysis, antibody reactivity, instrument set-up, and instrument performance by flow cytometry. Assay values are reported as a percent of total lymphocytes and as the number of cells for the following phenotypes : CD3+, CD3+/CD4+, CD3+/CD8+, CD19+, CD3-/CD16+56+, CD20+, CD2+, and HLA-DR+. Target values (for research use only) are also provided for the following CD markers : kappa, lambda, CD8+/CD38+, CD33+/CD14+, CD7+/CD3+, CD5+, CD22+/CD3-, and CD13+. Target values for CD45 and CD14, which are intented for gating purposes only, are also included.

Intended Use

StatusFlow is intended as a complete process control for immunophenotyping by flow cytometry. It is a control for antibody staining, RBC lysis, instrument set-up, instrument performance and data analysis.

Summary and Principle

Lymphocyte immunophenotyping by flow cytometry is a complex, multi-step process. Validity of immunophenotyping results depends on efficient RBC lysis and clear separation of leukocyte subpopulations based on light scatter characteristics and reactivity with cell-specific, fluorescent monoclonal antibodies. StatusFlow is a stable control, with assigned values, that can be used to monitor the immunophenotyping process.

StatusFlow has a closed vial stability of 45 days with an open vial stability of 9 thermal cycles. Each new lot is shipped every month. StatusFlow exists in 2.5 and 4.0 mL hemogard tube.

StatusFlow*Lo*

StatusFlow*LO* is designed to team with StatusFlow to provide a two-level whole blood reference control for monitoring low CD3+/CD4+ cell counts. Assay values are reported as a percent of total lymphocytes and as the number of cells for CD3+, CD3+/CD4+, CD3+/CD8+, CD19+, CD3-/CD16+56+. The CD3+/CD4+ cell count is less than 200 cells/µL.

Intended Use

StatusFlow*LO* is intended as a complete process control for immunophenotyping by flow cytometry. It is a control for antibody staining, RBC lysis, instrument set-up, instrument performance and data analysis.

Summary and Principle

Lymphocyte immunophenotyping by flow cytometry is a complex, multi-step process. Validity of immunophenotyping results depends on efficient RBC lysis and clear separation of leukocyte subpopulations based on light scatter characteristics and reactivity with cell-specific, fluorescent monoclonal antibodies. StatusFlow*Lo* is a stable control, with assigned values, that can be used to monitor the immunophenotyping process.

StatusFlow*Lo* has a closed vial stability of 45 days with an open vial stability of 9 thermal cycles. Each new lot is shipped every month. StatusFlow*Lo* exists in 2.5 mL pierceable hemogard tube.

StatusFlowPRO

Flow Cytometry Control

Status FlowPRO contains human stem cells and can be used with most flow cytometry methods for identifying CD34+ cells. StatusFlowPRO offers two clinically relevant levels of CD34+ cells. Target values for the low level CD34 are ~10 cells/µL. Target values for the high level CD34 are ~ 35 cells/µL. Statusflow PRO facilitates the evaluation of CD34+ gating strategy, evaluation of the CD34 antibody clone selection, lysing reagents and data analysis.

Intended Use

StatusFlowPRO is intended as a complete process control for immunophenotyping by flow cytometry. It is a control for antibody staining, RBC lysis, instrument set-up, instrument performance and data analysis.

Summary and Principle

Immunophenotyping by flow cytometry is a complex, multi-step process. Validity of immunophenotyping results depends on efficient RBC lysis and clear separation of leukocyte subpopulations based on light scatter characteristics and reactivity with cell-specific, fluorescent monoclonal antibodies. StatusFlowPRO is a stable control, with assigned values, that can be used to monitor CD34+ cells.

Status FlowPRO has a closed vial stability of 45 days with an open vial stability of 9 thermal cycles. Status FlowPRO is shipped every month. Status FlowPRO exists in 1.5 ml tube.

Number	Description	
0FC010TA2	Status-Flow	1x 2.5 ml
0FC020TA2	Status-Flow Whole Blood Process Control for FACS	2 x 2.5 ml
0FL100TA2	Status-Flow Low	1 x 2.5 ml
0FP001TD1	Status-Flow Pro Level 3 CD34+	1 x 1.5 ml
0FP002TD1	Status-Flow Pro Level 3 CD34+	2 x 1.5 ml
0FP010TD1	Status-Flow Pro Level 2 CD34+	1 x 1.5 ml
0FL100TA2	Status-Flow Low	1 x 2.5 ml
0FL200TA2	StatusFlow Low	2 x 2.5 ml
0FL400TA2	StatusFlow Low	4 x 2.5 ml
0FP010TA1	StatusFlow Pro Level 2	1 Tube 1.5 ml
0FP020TA1	StatusFlow Pro Level 2	2 Tubes 1.5 ml
0FP002TA1	StatusFlow Pro Level 3	2 Tubes 1.5 ml
0FP011TA1	StatusFlow Pro Mixed 2 Levels	2 x 1.5 ml (0+1+1)

EXBIO is a leading manufacturer of monoclonal antibodies and reagents for research and clinical applications with focus on multi-color flow cytometry analysis of human cellular markers.

Our comprehensive portfolio of more than 4 000 off-the-shelf products covers a diverse set of areas including Hematology, Immunology, Cancer, Stem cells, and Cell Biology. With our experienced cytometry experts and biotech engineers, EXBIO offers our customers long-term validated antibody markers in a broad selection of fluorochrome conjugates.

Our commitment to the customer´s needs, supported by our integrated quality management system compliant with ISO 13485:2016 and ISO 9001:2015 allow us to accomplish our mission.

EXBIO strives to exceed the most demanding customer expectations in the field of analytical cytometry by providing a comprehensive portfolio of high quality products and services at affordable prices.

Vision: A Brighter Future in Flow

EXBIO portfolio

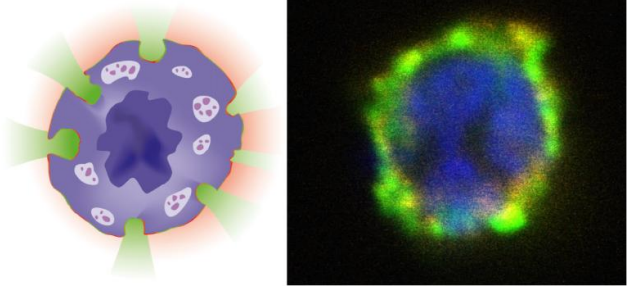
Monoclonal Antibodies	Flow Cytometry Kits
- wide portfolio against different targets mainly CD markers - many fluorochrome formats - about 800 antigens - nearly 900 clones	- for **Allergy Analysis** • BasoFlowEx® Kit + Allergens (Cat. No. EXB-ED7043)
	- for **T-lymphocytes Proliferation Analysis** • T-cell BlastoFlowEx® Kit + Mitogens (Cat. No. EXB-ED7642)
Kombitests	for **Phagocytosis Analysis** • FagoFlowEx® Kit (Cat. No. EXB-ED7042) • IngoFlowEx® Kit (Cat. No. EXB-ED7040)
- wide offer of premixed cocktails of monoclonal antibodies: • 2 color reagents • 3 color reagents • 4 color reagents • 6 color reagents	for **NK Cells Activation Analysis** • NKFlowEx® Kit (Cat. No. EXB-ED7078)
	for **Human Reproduction Analysis** • SpermFlowEx® Kit (Cat. No. EXB-ED7079)
Lysing Solutions	for **T-regulation Cells Analysis** • TregFlowEx® Kit (Cat. No. EXB-ED7417)
• EXCELLYSE® Easy (Cat. No. EXB-ED7066) • EXCELLYSE® Live (Cat. No. EXB-ED7068) • EXCELLYSE® I (Cat. No. EXB-ED7065) • EXCELLYSE® XPerm (Cat. No. EXB-ED7397)	for **Cell Cycle Analysis** • ApoFlowEx® Kit (Cat. No. EXB-ED7044) • CellCycleFlowEx® Kit (Cat. No. EXB-ED7069)
	for **Stem Cells Analysis** • CD34QuantiFlowEx® Kit (Cat. No. EXB-ED7080)

MOST POPULAR PRODUCTS

BasoFlowEx® Kit (CE-IVD)

- The kit is intended for flow cytometry examination of IgE-mediated allergic reactions via the analysis of CD63 antigen surface exposure on basophils in human heparinized whole blood upon allergen stimulation

- EXBIO also offers Allergen Extracts and Recombinant Allergens which have been optimized for use with BasoFlowEx® Kit and are intended for in vitro stimulation of basophils



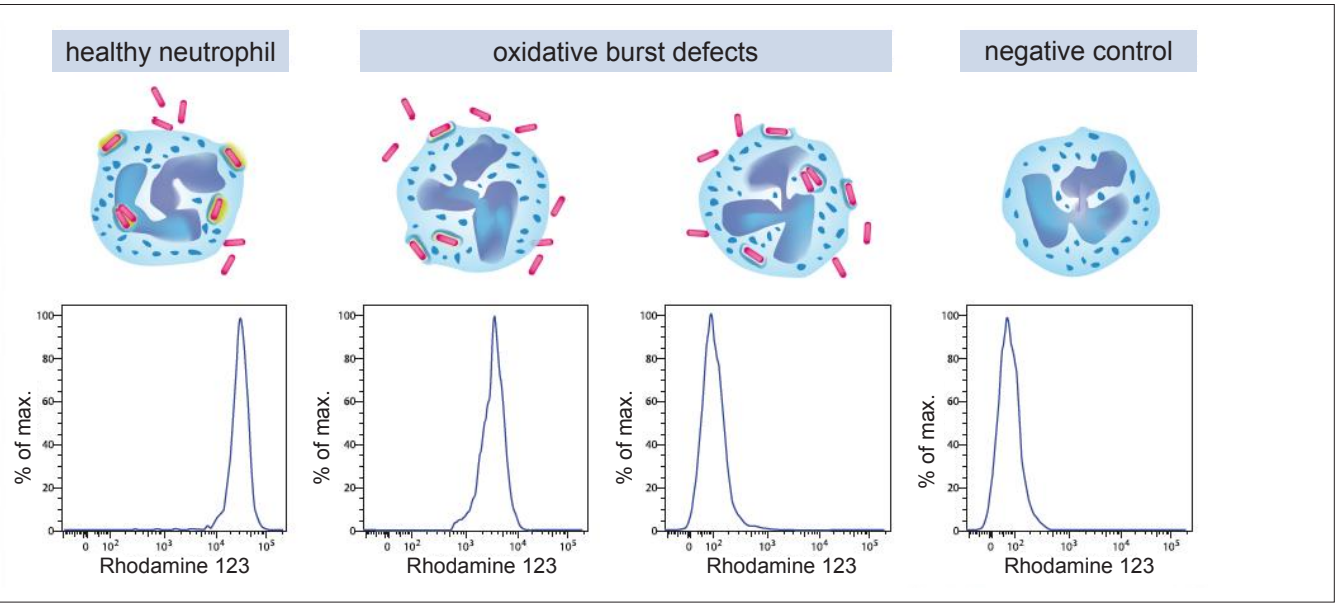
Human basophil

Surface staining of activated human basophils by FITC-conjugated anti-CD63 (green) and PE-conjugated anti-CD203c (red); merged signal yellow. DNA visualised by DAPI (blue).

FagoFlowEx® Kit (CE-IVD)

- The kit is intended for examination of phagocytic activity of granulocytes by measuring the respiratory (oxidative) burst after their stimulation with E. coli bacteria in human heparinized whole blood

- The kit contains dihydrorhodamine 123 which is oxidized to fluorescent rhodamine123



T-Cell BlastoFlowEx® Kit

- The kit is designed to measure proliferative response of T-lympohocytes of activated samples of whole human blood

- EXBIO Stimulation Reagents are dried reagents to induce the blast transformation of lymphocytes

  - Pokeweed mitogen
  - Concanavalin A
  - Phytohemagglutinin
  - CD3/CD28 Stimulation Reagent
  - Stimulation negative control

MHC Tetramer Background

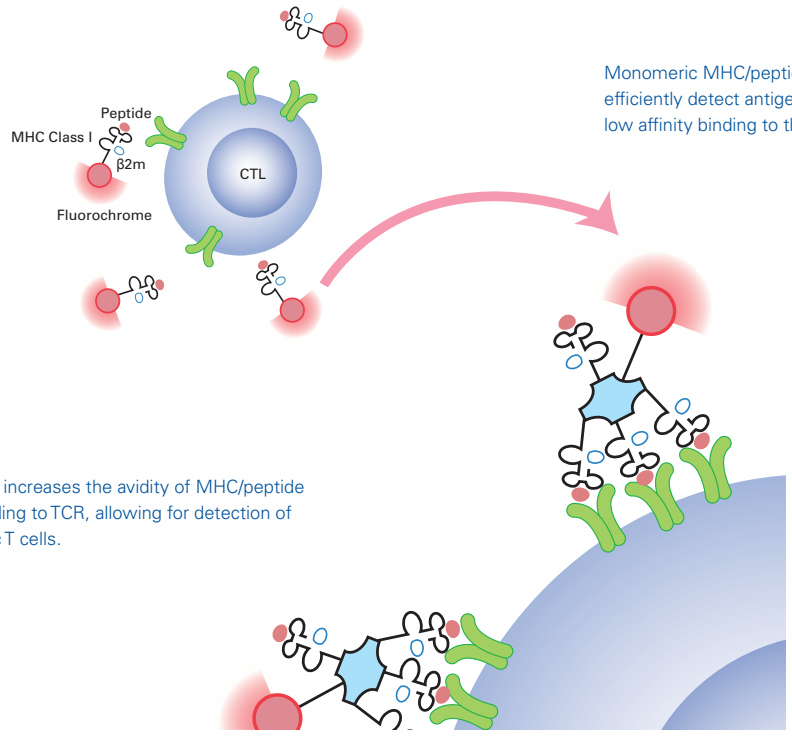
T-Cell Receptors recognize and bind to complexes composed of MHC molecules and specific peptides expressed on the surface of antigen-presenting cells. Biotinylation of MHC/peptide complexes followed by tetramerization with fluorochrome conjugated streptavidin increases their binding affinity. Therefore MHC tetramers bind stably to cognate T-cell receptors and consequently can be used as detection tools. Phycoerythrin (PE), allophycocyanin (APC), or Brilliant Violet™ 421 (BV421) fluorochromes are available for detection of antigen-specific T cells by flow cytometry or fluorescence microscopy using our MHC Multimers.

Class I and Class II MHC Tetramers

CD8+ T cells, also called cytotoxic T lymphocytes (CTLs), recognize complexes of MHC class I molecules and peptide. CTLs directly kill target cells including virus-infected and cancer cells. CD4+ T cells, which include helper and regulatory T cells, recognize complexes of MHC class II molecules and peptide. MHC Class I Tetramers are capable of detecting CD8+ T cells and MHC Class II Tetramers are capable of detecting CD4+ Class II Tetramers.

MHC Monomers

An MHC monomer is a sub-component of an MHC tetramer, made up of the MHC complex (α-chain plus β-2 microglobulin for class I or α-chain plus β-chain for class II) folded together with a specific peptide. Biotinylated monomers are available for most associated tetramer products. Biotinylated MHC monomers, the building blocks of MHC tetramers, are available for tetramer construction flexibility and novel applications.



Superior Quality and Specificity with MBLI's MHC Tetramers and Monomers

- Reduced Background for Human Alleles due to Patented α3 Mutation
- Exceptional Product Breadth: Class I and Class II, over sixty alleles, hundreds of unique targets
- Excellent Quality: Stringent QC to Ensure Product Performance

Patented α3 Mutation for Lower Background

Figure 1a

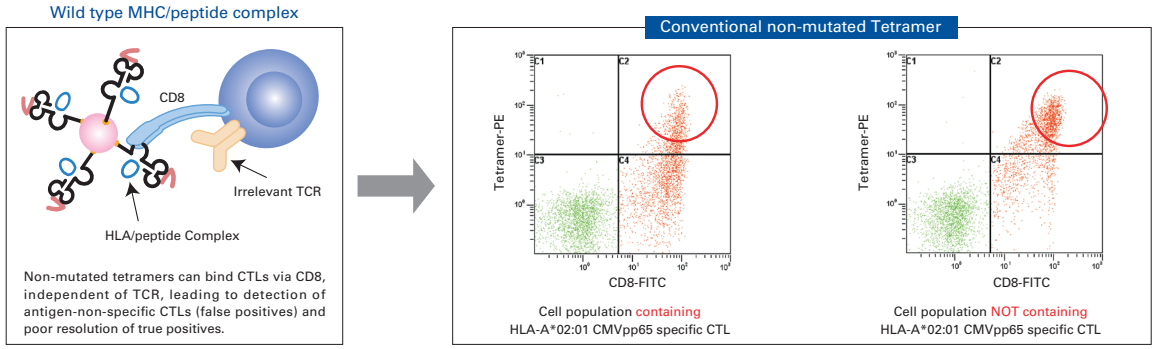
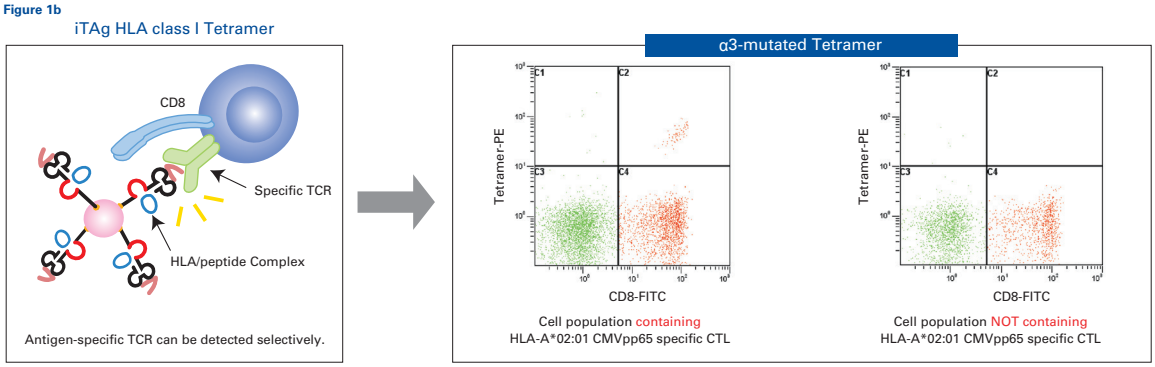


Figure 1b



The human leukocyte antigen (HLA) system is the name of the major histocompatibility complex in humans. CD8 molecules are known to assist binding of HLA to CTL *in vivo* and thus HLA molecules have binding sites for CD8 molecules. Bodinier et al. reported that introducing a mutation (A245V) in the HLA class I heavy chain α3 domain minimized unwanted binding to CD8 molecules and dramatically improved specificity (Nat. Med. 2000, 6: 707). MBLI has incorporated the patented mutation of the α3 domain in their HLA class I tetramers.

Available Alleles

MHC Tetramers: Class I

Human			Mouse	Rhesus Macaque	Chicken
HLA-A*01:01	HLA-A*29:02	HLA-B*40:06	H-2 K^d	Mamu-A*01	BF2*1201
HLA-A*02:01	HLA-A*31:01	HLA-B*42:01	H-2 K^b		BF2*1501
HLA-A*02:06	HLA-B*07:02	HLA-B*52:01	H-2 K^K	Mauritian Cyno	
HLA-A*02:07	HLA-B*08:01	HLA-B*57:01	H-2 D^d	Mafa-A1* 063	Mafa-B*104:01
HLA-A*03:01	HLA-B*15:01	HLA-C*03:03	H-2 D^b	Human-Mouse Chimeras	
HLA-A*11:01	HLA-B*27:05	HLA-C*03:04	H-2 D^K	$A2K^b$	$A24K^b$
HLA-A*23:01	HLA-B*35:01	HLA-C*08:01	H-2 L^d		
HLA-A*24:02	HLA-B*40:01	HLA-C*12:02			
HLA-A*26:01					

MHC Tetramers: Class II

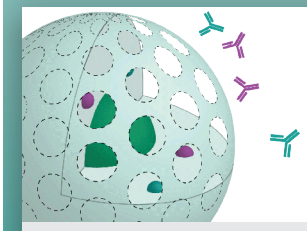
Human		
DPB1*04:01	DRB1*04:05	DRB1*11:01
DRB1*01:01	DRB1*07:01	DRB1*15:01
DRB1*03:01	DRB1*08:03	DRB1*15:02
DRB1*04:01	DRB1*09:01	DRB4*01:01
Mouse Alleles		
I-A^b and I-A^d		

Other Tetramers

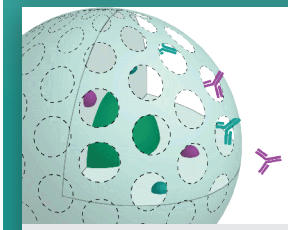
CD1d: Human and Mouse
Human Non-Classical Class I: HLA-E*01:01 and HLA-E*01:03
Mouse Non-Classical Class I: Qa-1b

FIX&PERM®Cell Fixation and Permeabilization Kit

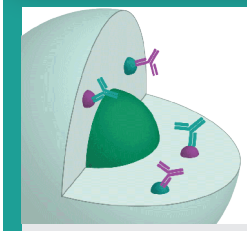
Reagent A gently fixes cells preserving their forward and side-scatter characteristics



Reagent B and labelled antibodies are then added



Reagent B permeabilizes the cell



Allowing binding and detection of intracellular antigens

FIX&PERM® is a simple procedure making use of two reagents. Reagent A gently fixes cells, while Reagent B permeabilizes them.

The specific formulation of FIX&PERM® reduces background while allowing the simultaneous addition of permeabilization medium and fluorochrome labelled antibodies for staining of membrane proteins as well as intracellular components, such as cytoplasmic enzymes, nuclear proteins, oncoproteins, cytokines, immunoglobulins, and so on.

- Mildly fixes cells, preserving their flow cytometric scatter characteristics
- Allows simultaneous characterisation of both intracellular and cell surface markers
- Rapid technique – whole procedure can be carried out in less than one hour, ready for immediate analysis or storage for 24 hours
- Stringent QC procedures – the quality of each lot is determined using well-defined blood samples and subsequent comparison of immunostaining and scatter characteristics of obtained leukocyte populations, ensuring consistent and reliable results - lot after lot
- A range of antibodies to intracellular and membrane antigens with optimised protocols for use with FIX&PERM®

FIX&PERM®Cell Fixation and Permeabilization Kit

Procedure

For each sample to be analysed use 50 µl of whole blood, bone marrow or mononuclear cell suspension in a 5 ml tube

• Add 100 µl of Reagent A (Fixation Medium, stored and used at room temperature)

• Incubate for 15 minutes at room temperature

• Add 5 ml phosphate buffered saline and centrifuge cells for 5 minutes at 300 g

• Remove supernatant and add to cell pellet 100 µl Reagent B and 20 µl of the appropriate monoclonal antibody

• Vortex at low speed for 1-2 seconds

• Incubate for 15 minutes at room temperature

• Wash cells with PBS as above

• Remove supernatant and resuspend cells in sheath fluid for immediate analysis

• Alternativly, resuspend cells in 0.5 ml 1.0 % formaldehyde and store at 2-8°C in the dark.

• Analyse cells within 24 hours

	Size	Cat. Number
Fix&PERM® Kit	2 x 20 mL	GAS-002
Fix&PERM® 1000 Kit	2 x 100 mL	GAS-002-1
Fix&PERM® Reagent A (Fix)	1 x 100 mL	GAS-002A-1
Fix&PERM® Reagent B (Perm)	1 x 100 mL	GAS-002B-1
Fix&PERM® Sample Kit	2 x 5 mL	GAS-002M

The majority of available monoclonal antibody conjugates can be used with FIX&PERM®.

However, in some cases the fixation step may require optimization. Nordic-MUbio offers a number of mouse anti-human conjugated (PE/FITC) monoclonal antibodies pre-optimised for use with FIX&PERM®.

Antigen	Isotype	Size	Cat. Number
CD3	IgG1	0.2 mg 100 tests 100 tests	GM-4011 GM-4012 (FITC) GM-4013 (PE)
CD22	IgG1	0.2 mg 100 tests 100 tests	GM-4051 GM-4052 (FITC) GM-4053 (PE)
MPO-C2	IgG1	0.2 mg 100 tests 100 tests	GM-4191 GM-4192 (FITC) GM-4193 (PE)
Mouse anti-Human Combi Products			
IgG Negative Control (FITC) and IgG Negative Control (PE)			GIC-201
Anti-Lysozyme (FITC) and anti-Lactoferrin (PE)			GIC-206
Anti-Myeloperoxidase-C2 (FITC) and anti-Lactoferrin (PE)			GIC-212
Anti-Myeloperoxidase-C2 (FITC) and anti-CD3 (PE)			GIC-213
Anti-Myeloperoxidase-C2 (FITC) and anti-CD22 (PE)			GIC-214

Spherotech

Let the Possibilities Flow...

SPHERO™ Calibration Particles

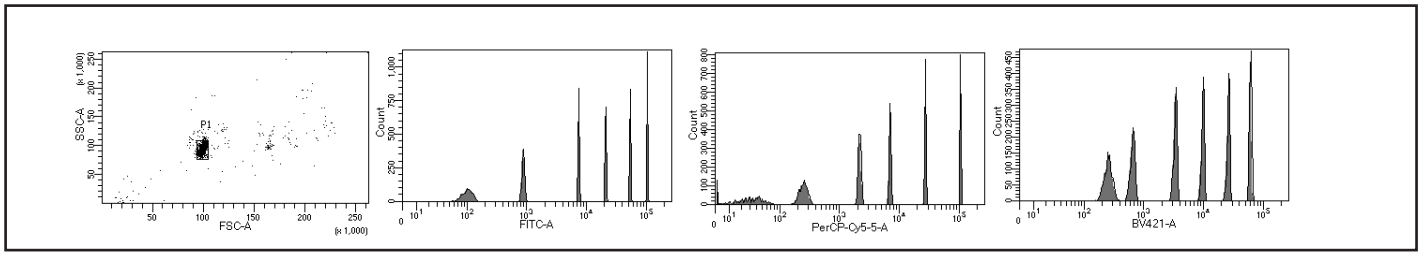
SPHERO™ Calibration Particles are designed for routine calibration of flow cytometers. They are used extensively by many laboratories for QC and long term performance tracking. In addition, they are also used for routine alignment and calibration in fluorescence and confocal fluorescence microscopy.

SPHERO™ Ultra Rainbow Calibration Particle Kits

- Consists of one bead with multiple fluorophores and intensities for calibration in all channels of the flow cytometer
- Designed for routine calibration and long term performance tracking
- Used to optimize the linearity, resolution and sensitivity
- Simplifies the calibration in the UV, Violet, Far Red, and IR channels.

A set of calibration particles, Ultra Rainbow Calibration Particles, are now available for performance tracking of flow cytometers with fluorescent channels in the UV to Far Red. The Ultra Rainbow Calibration Particle Kits are available in either 3.8 µm, 5.1 µm, or 10 µm. The Ultra Rainbow Calibration Particles have improved resolution in the UV, PE-Cy7, APC, and APC-Cy7 channels.

Particle Type and Surface	Size, µm	Catalog No.	Unit
Ultra Rainbow Calibration Kit, 6 peaks, 10^7/mL	3.5-3.9	URCP-38-2K	2 mL
Ultra Rainbow Calibration Kit, 6 peaks, 10^7/mL	3.5-3.9	URCP-38-20K	20 mL
Ultra Rainbow Calibration Kit, 6 peaks, 10^7/mL	5.0-5.4	URCP-50-2K	2 mL
Ultra Rainbow Calibration, 3 peaks, 10^6/mL	3.0-3.4	URCP01-30-10K	10x3mL
Ultra Rainbow Calibration, 6 peaks, 10^7/mL	8.0-12.9	URCP-100-2	2 mL



SPHERO™ Rainbow Fluorescent Particles

The Rainbow Fluorescent Particles are similar to Rainbow Calibration Particles except that these represent uniform size particles with a single intensity. The Rainbow Fluorescent Particles are usually the brightest peak of the corresponding Rainbow Calibration Particles with the exception of RFP-50-5, RFP-70-2, RFP-100-2 and RFP-30-5A. The RFP-30-5A has the fluorescence intensity similar to stained cells in all channels. Since these particles contain a single peak with very small fluorescence and size CV, they are very useful in the alignment of the optical system of the flow cytometer in all channels.

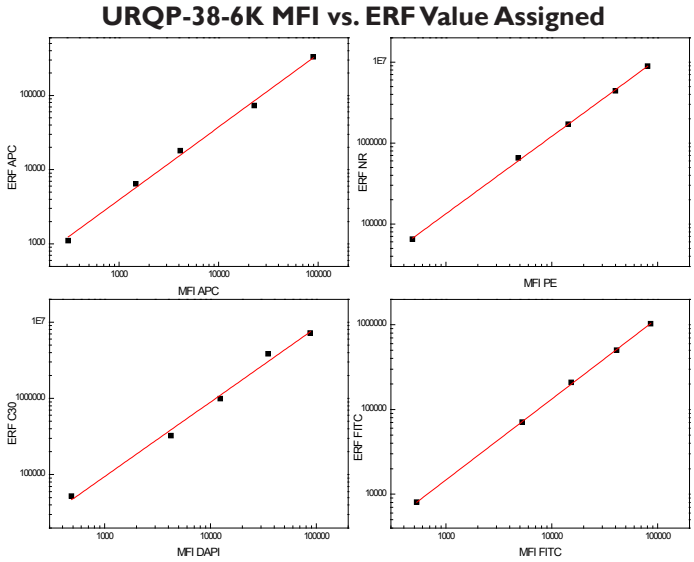
Particle Type and Surface	Size, µm	Catalog No.	Unit
Rainbow Fluorescent, 10^7/mL (Intensity similar to brightest peak in RCP-20-5)	1.8-2.2	RFP-20-5	5 mL
Rainbow Fluorescent, 10^7/mL (Intensity similar to brightest peak in RCP-30-5)	3.0-3.4	RFP-30-5	5 mL
Rainbow Fluorescent, 10^7/mL (Intensity similar to midrange FL1 fluorescence in RCP-30-5)	3.0-3.4	RFP-30-5A	5 mL
Rainbow Fluorescent, 10^7/mL (Intensity similar to brightest peak in RCP-35-5)	3.5-4.0	RFP-35-5	5 mL
Rainbow Fluorescent, 10^7/mL	5.0-5.9	RFP-50-5	5 mL
Rainbow Fluorescent, 10^7/mL (Intensity similar to brightest peak in RCP-60-5)	6.0-6.4	RFP-60-5	5 mL
Rainbow Fluorescent, 10^7/mL	6.5-8.0	RFP-70-5	5 mL
Rainbow Fluorescent, 10^7/mL	8.1-12.0	RFP-100-2	2 mL

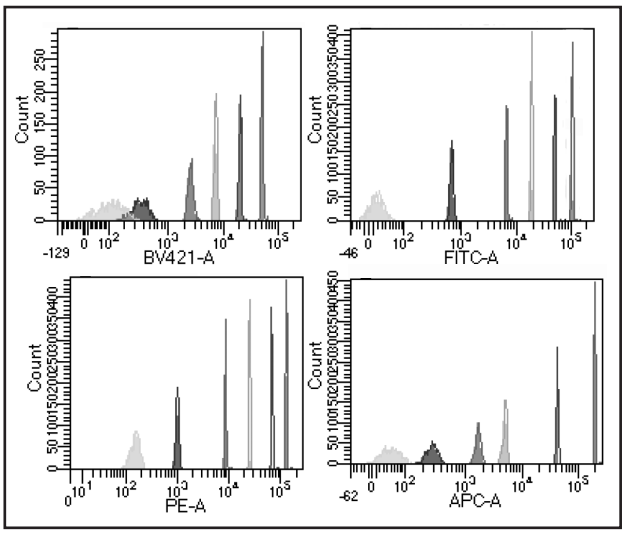
SPHERO™ Ultra Rainbow Quantitative Particle Kit

• Contains 6 intensities of Ultra Rainbow Fluorescent Beads with NIST assigned ERF (Equivalent Number of Reference Fluorophores) values based on a published procedure using NIST SRM 1934 and a calibrated laser-based CCD fluorimeter

• Provides microsphere reference standards for fluorescein isothiocyanate (FITC), phycoerythrin (PE), allophycocyanin (APC) and Pacific Blue (PB) fluorescent channels using four different NIST reference fluorophores; fluorescein, Nile Red, APC and Coumarin 30.

• Used during flow cytometry standardardization and calibration measurements for the further advancement of biological and clinical applications.





Histogram of Cat. No. URQP-38-6K from a BD Bioscience LSRFortessa™ X-20

Particle Type and Surface	Size, µm	Catalog No.	Unit
Ultra Rainbow Quantitative Particle Kit, 6 Intensities, 2E6/mL, (NIST Traceable ERF Flow Cytometry Standard)	3.5-3.9	URQP-38-6K	6x1mL

Designed to determine the accuracy, precision & sensitivity in the Pacific Blue, FITC, PE, & APC channels

Accuracy

- Provides a bead set to accurately measure comparable data from different types of instruments at different locations

Precision

- Determines the linearity of the digital output from the analog-to-digital converter Precision
- Detects laser fluctuations, failed electronics, or obstructions in the flow cell Sensitivity

Sensitivity

- Determines background noise level and instrument efficiency
- Checks instrument's ability to distinguish dim peaks from blank beads
- Detects dye or light contamination

Selected Reference:

- Wang, L. and Gaigalas, A., (2011). "Development of Multicolor Flow Cytometry Calibration Standard: Assignment of Equivalent Reference Fluorophores (ERF) Unit." J. Res. Natl. Inst. Stand. Technol. 116, 671-683

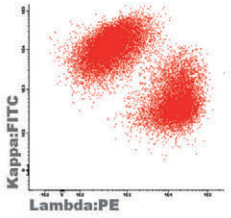
- Wang, L., Gaigalas, A.,and DeRose, P., (2016). "Assignment of the Number of Equivalent Reference Fluorophores to Dyed Microspheres." J. Res. Natl. Inst. Stand. Technol., 121, 264-281

cytognos

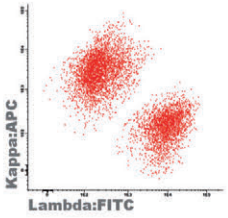
Kappa & Lambda

Multicolour alternatives for clonality studies

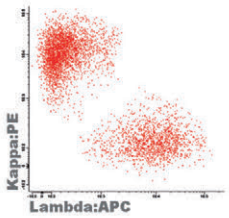
- High performance in extracellular and intracellular stainings
- Comparable results to polyclonal gold standards
- Reagents of choice for EuroFlow™ antibody panels (FITC and PE)
- Conjugated with different fluorochromes: FITC, PE, APC and APC-C750
- Three presentation formats: single-colour antibodies, double-colour and triple-colour combinations



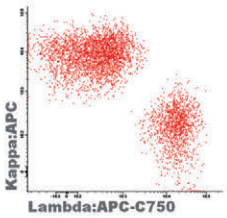
1 Normal peripheral blood sample stained with Kappa-FITC / Lambda-PE.



2 Normal peripheral blood sample stained with Kappa-APC / Lambda-FITC.



3 Normal peripheral blood sample stained with Kappa-PE / Lambda-APC.



4 Normal peripheral blood sample stained with Kappa-APC / Lambda-APC-C750.

	Description	Catalogue #
Single-colour antibodies	Kappa-FITC	CYT-KAPPPF2
	Kappa-PE	CYT-KAPPPE
	Kappa-APC	CYT-KAPPAP
	Lambda-FITC	CYT-LAMBF
	Lambda-PE	CYT-LAMBPE
	Lambda-APC	CYT-LAMBAP
	Lambda-APC-C750	CYT-LAC750
Double-colour combinations	Kappa-FITC/Lambda-PE	CYT-KF2-LPE
	Kappa-FITC/CD19-PE	CYT-KF2-19PE5
	Lambda-FITC/Kappa-PE	CYT-LF-KPE
	Lambda-FITC/CD19-PE	CYT-LF-19PE5
Triple-colour combinations	Kappa-FITC/Lambda-PE/CD19-PECy5	CYT-KF2-LPE-19C2
	Lambda-FITC/Kappa-PE/CD19-PECy5	CYT-LF-KPE-19C2

Expedeon is a UK-based company specializing in development of next-generation tools for biological research, diagnostics, and drug discovery. With an extensive portfolio of innovative, ISO-accredited products, expertly designed to speed up research while delivering consistent high-quality data, the company has a strong focus on facilitating flow cytometry studies.

Included within Expedeon's product range, Lightning-Link® antibody labelling kits have been widely-cited for flow. Complemented by easy-to-use particle conjugation kits, antibody purification kits and kits for confirming successful antibody conjugation, Lightning-Link® is used by researchers worldwide.

Lightning-Link® antibody labelling kits

Lightning-Link® technology enables direct labelling of antibodies, proteins, or any other biomolecule with an available amine group. Kits are supplied in a freeze-dried format, requiring only 30 seconds hands-on time to produce ready-to-use conjugates in under 20 minutes. With no separation steps, 100% of materials are retained during the labelling process.

In addition to kits for labelling antibodies with enzymes, biotin or streptavidin, the Lightning-Link® product range includes a wide variety of kits for conjugating antibodies to fluorescent dyes or proteins. These are ideally suited to flow cytometry.

Fluorescent Dyes and Proteins

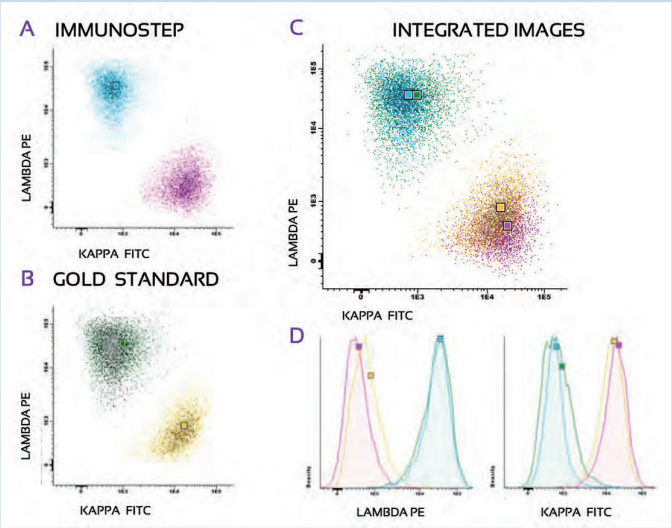
LABEL	Lightning-Link product code	Maximal Absorbance (nm)	Excitation color	Suggested Excitation Laser Line (nm)	Maximal Emission (nm)	Extinction Coefficient ($cm^{-1}M^{-1}$)	Emission Color	Stokes Shift
AMCA	313-0030	352	N/A	355	452	19000		100
DyLight® 350	320-0030	354	N/A	355	432	15000		78
Atto 390	349-0030	388		405	468	24000		80
DyLight® 405	321-0030	402		405	428	30000		26
PerCP	718-0030**	484		488	678	380000		194
PerCP/Cy5.5	763-0030**	484		488	692	N/A		208
DyLight® 488	322-0030	496		488	524	70000		28
Alexa Fluor® 488	332-0030	496		488	524	73000		28
Fluorescein	310-0030 707-0030**	498		488	532	73000		34
R-Phycoerythrin	703-0030**	498, 544, 566†		488, 532, 561	580	2000000		82, 36, 14
PE/Texas Red®	767-0030**	498, 544, 566†		488, 532, 561	618	N/A		120, 74, 52
PE/Atto594	768-0030**	498, 544, 566†		488, 532, 561	632	N/A		134, 88, 66
PE/Cy5	760-0030**	498, 544, 566†		488, 532, 561	672	N/A		174, 128, 106
PE/Cy5.5	761-0030**	498, 544, 566†		488, 532, 561	700	N/A		202, 156, 134
PE/Cy7	762-0030**	498, 544, 566†		488, 532, 561	782	N/A		284, 238, 216
Atto488	350-0030	504		488	530	90000		26
B-Phycoerythrin	716-0005**	546		561	580	2410000		34
Cyanine Dye 3	340-0030	552		561	576	150000		24
Rhodamine	311-0030	555		561	588	94500		33
DyLight® 550	323-0030	556		561	584	150000		28
Atto 565	351-0030	570		561	598	120000		28
DyLight® 594	324-0030	594		561*	629	80000		35
Texas Red®	315-0030	596		561*	616	80000		20
DyLight® 633	325-0030	628		633, 635, 640	660	170000		32
Atto 633	353-0030	634		633, 635, 640	660	130000		26
FluoProbes647H	362-0030	650		633, 635, 640	684	250000		34
Cyanine Dye 5	342-0030	652		633, 635, 640	678	250000		26
Allophycocyanin	705-0005**	652		633, 635, 640	666	700000		14
APC/Cy5.5	764-0030**	652		633, 635, 640	700	N/A		48
APC/Cy7	765-0030**	652		633, 635, 640	790	N/A		138
DyLight® 650	326-0030	656		633, 635, 640	686	250000		30
Cyanine Dye 5.5	343-0030	680		640*	705	250000		25
DyLight® 680	327-0030	686		640*	716	140000		30
Atto700	354-0010	704		640*	724	270000		20
DyLight® 755	328-0030	756		750	794	220000		38
DyLight® 800	329-0030	776		750	798	270000		22

† (R-)PE has three maxima, and all can be used. The optimal will depend on the application.
* This Laser Line is at some distance from the Maximal Absorbance, so performance will be compromised if this dye is used with the suggested Laser Line.
** These kits require a 3 hour incubation time (instead of 15 minutes).

KAPPA & LAMBDA POLYCLONAL F(AB')2 ANTIBODIES

BEST CHOICE IN FLOW CYTOMETRIC ANALYSIS OF KAPPA AND LAMBDA LIGHT CHAIN EXPRESSION

Analysis of healthy donor sample

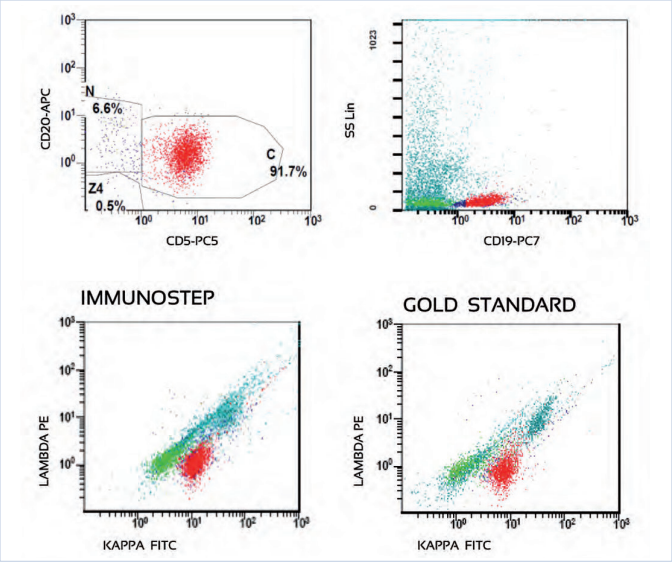


Peripheral blood sample with K/L surface analysis

A: K/L analysis employing Immunostep antibodies* (Dako)
B: K/L analysis employing competence antibodies (Dako)
C: Integrated analysis for comparison of A and B, dot plots
D: Lambda and Kappa antibodies fluoresence signal histograms

*Immunostep Kappa and Lambda antibodies are Polyclonal Rabbit anti-human Kappa and Lambda Light Chains conjugated with FITC and PE respectively; Rabbit F(ab')2.

Analysis of pathological sample



B-CLL sample with dim surface expression (CD5+, CD16+), and K/L intracellular analysis.
Red population correspond to pathological cells (B-CLL), whilst green one is T-lymphocytes.
By George Paterakis; Gennimatas Hospital, Athens (Greece).

- Better results than Gold Standards
- Multicolor alternatives
- Single, double or triple colour combinations
- Use both in extracellular or intracellular staining
- CE and IVD certifications

	Reagent	Article Number	CE-IVD
Single colour	KAPPA-FITC	IMS-KAPPAF2-100T	IMS-KF3-100T
	KAPPA-PE	IMS-KAPPAPE2-100T	IMS-KPE3-100T
	KAPPA-APC	IMS-KAPPAPE3-100T	IMS-KA3-100T
	LAMBDA-PE	IMS-LAMBDAPE-100T	IMS-LPE2-100T
	LAMBDA-FITC	IMS-LAMBDAF-100T	IMS-LF2-100T
Double colour	KAPPA-FITC/ LAMBDA-PE	IMS-KAPPAF2LAMBDAPE-50T	IMS-1KF3LPE2-50T
	KAPPA-PE/ LAMBDA-FITC	IMS-LF2KPE3-50T	
	KAPPA-FITC-CD19-PE	IMS-KAPPAF219PE1-50T	
	LAMBDA-FITC / CDI9-PE	IMS-LAMBDAF19PE1-50T	
Triple colour	KAPPA-FITC / LAMBDA-PE / CD19-PE-CYANINE5	IMS-KF3LPE219PC4-50T	

IQ Products | *bright fluorescence*

For over 30 years IQ Products develops and manufactures antibody-based diagnostic products including immunoassays and flow cytometry kits. This extensive knowledge results in innovative kits in niche areas that currently focuses on Women's Health and pregnancy related disorders in particular.

Fetal Cell Count™ Kit | *For improved diagnosis of Fetomaternal Hemorrhage*

The Fetal Cell Count™ Kit is used for the diagnosis of Fetomaternal Hemorrhage (FMH). FMH is the transplacental passage of fetal red blood cells (RBCs) into the maternal circulation. Accurate detection and quantification of FMH is essential for obstetrical management in cases of placental trauma and in cases of rhesus D incompatibility between mother and child.

Fetal Cell Count™ Kit
- Intracellular detection of HbF and CA
- Improved discrimination between fetal RBCs and maternal F-cells
- Flow cytometry assay
- IVD CE

The Fetal Cell Count™ Kit is based on a patented antibody combination, directed against fetal hemoglobin (HbF) and carbonic anhydrase (CA). This unique combination allows a clear discrimination between fetal RBCs ($HbF^{++}CA^{-}$), maternal F-cells ($HbF^{+}CA^{+}$, adult RBCs expressing HbF), and maternal RBCs ($HbF^{-}CA^{+}$).

Product Data

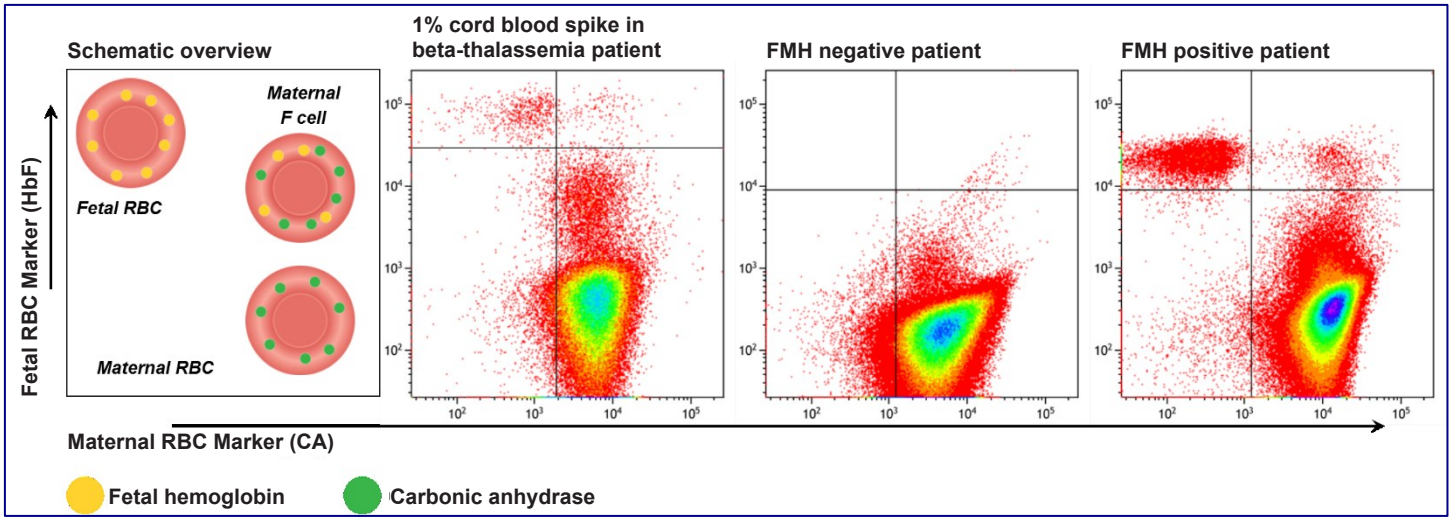


Figure | Flow cytometry results of the Fetal Cell Count™ Kit.
Maternal peripheral erythrocytes were stained intracellularly for HbF and CA using the Fetal Cell Count™ Kit. Results demonstrate a clear discrimination of fetal RBCs ($HbF^{++}CA^{-}$), maternal F-cells ($HbF^{+}CA^{+}$), and maternal RBCs ($HbF^{-}CA^{+}$). Representative dot plots are shown from a FMH negative patient, FMH positive patient, and a 1% cord blood spiked beta-thalassemia patient.

Product details

Item	Size	Product code
Fetal Cell Count™ Kit *	25 tests	IQP-363

Related products

The Fetal Cell Count™ Kit is highly recommended as a first choice for identification of fetal RBCs in the maternal circulation and has been clinically validated for diagnosis of fetomaternal hemorrhage. For your convenience IQ Products also offers additional flow cytometry kits and quality controls to complete the diagnostic assays for suspicion of fetomaternal hemorrhage.

Flow Cytometry Kits

Item	Size	Product code
FMH QuikQuant™ *	100 tests	QQF-100
FMH Kit(1) *	100 tests	9447

Quality Control System

Item	Size	Product code
FETALtrol™(2) *	2 x 2mL per vial	FH101
FETALtrol™(2) *	1 x 2mL per vial	FH102

(1) *Product distributed for IBGRL, UK*
(2) *Product distributed for R&D systems, USA*

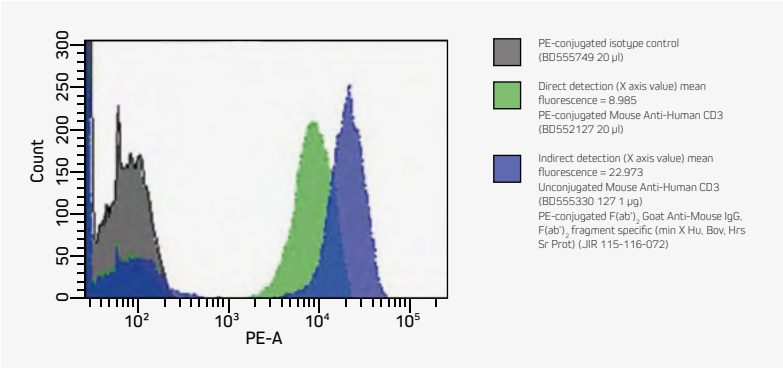
* IVD CE *in vitro* diagnostic medical device. The products are registered as IVD in the countries belonging to the European Union.

Secondary antibody format for flow cytometry

- F(ab')2 fragments
- FabuLight™
- Fluorescent conjugates for flow cytometry

Fluorescent protein conjugates for flow cytometry

Jackson ImmunoResearch offers three large, bright fluorescent proteins (R-PE, APC, and PerCP) conjugated to a selection of highly adsorbed secondary antibodies, streptavidin, and purified immunoglobulin controls. The conjugates are excellent choices for surface labeling, but their size may preclude their use as intracellular probes



Comparison of direct and indirect flow cytometry methods. Human peripheral blood gated lymphocytes after ammonium chloride lysis of erythrocytes were analyzed for CD3 expression using direct and indirect methods. Comparison of mean fluorescence showed that the indirect method produced a brighter signal (22,973) compared to the direct method (8,985). (Experiment performed on BD FACSCelesta).

FLUORESCENT PROTEIN CONJUGATES

	Antibody Description		Phycoerythrin R-PE A=488, E=580		Allophycocyanin APC A=650, E=660		PerCP A=488, E=675	
	ANTI-CHICKEN							
DONKEY	F(ab')2 Fragment Donkey Anti-Chicken IgY (IgG) (H+L) (min X Bov, Gt, GP, Sy Hms, Hrs, Hu, Ms, Rb, Rat, Shp Sr Prot)	(ML)	703-116-155	1.0 ml	703-136-155	0.5 ml	703-126-155	0.5 ml
	ANTI-GOAT							
DONKEY	Whole IgG Donkey Anti-Goat IgG (H+L) (min X Ck, GP, Sy Hms, Hrs, Hu, Ms, Rb, Rat Sr Prot)	(!)	705-115-147	1.0 ml				
DONKEY	F(ab')2 Fragment Donkey Anti-Goat IgG (H+L) (min X Ck, GP, Sy Hms, Hrs, Hu, Ms, Rb, Rat Sr Prot)	(!) (ML)	705-116-147	1.0 ml	705-136-147	0.5 ml	705-126-147	0.5 ml
	ANTI-GUINEA PIG							
DONKEY	F(ab')2 Fragment Donkey Anti-Guinea Pig IgG (H+L) (min X Bov, Ck, Gt, Sy Hms, Hrs, Hu, Ms, Rb, Rat, Shp Sr Prot)	(ML)	706-116-148	1.0 ml	706-136-148	0.5 ml	706-126-148	0.5 ml
	ANTI-ARMENIAN HAMSTER							
GOAT	Whole IgG Goat Anti-Armenian Hamster IgG (H+L) (min X Bov, Hu, **Ms**, Rb, **Rat** Sr Prot)	(SP)	127-115-160	1.0 ml	127-135-160	0.5 ml	127-125-160	0.5 ml
	ANTI-HUMAN							
DONKEY	F(ab')2 Fragment Donkey Anti-Human IgG (H+L) (min X Bov, Ck, Gt, GP, Sy Hms, Hrs, Ms, Rb, Rat, Shp Sr Prot)	(ML)	709-116-149	1.0 ml	709-136-149	0.5 ml	709-126-149	0.5 ml
DONKEY	F(ab')2 Fragment Donkey Anti-Human IgG, Fc_γ fragment specific (min X Bov, Hrs, Ms Sr Prot)		709-116-098	1.0 ml	709-136-098	0.5 ml	709-126-098	0.5 ml
DONKEY	F(ab')2 Fragment Donkey Anti-Human IgM, $Fc_{5\mu}$ fragment specific (min X Bov, Hrs Sr Prot)		709-116-073	1.0 ml	709-136-073	0.5 ml	709-126-073	0.5 ml

(!) Warning: BSA and dry milk may contain IgG which will be recognized by this antibody. Use of BSA or dry milk to block or dilute this antibody may increase background and/or reduce secondary antibody titer.
(ML) Multiple Labeling (see Multiple Labeling on pages 35-36 for an explanation). (SP) Caution: See page 10 (min X ... Sr Prot) before selecting an antibody adsorbed against closely related species.

SouthernBiotech

For over 35 years SouthernBiotech has been dedicated to the development, purification, conjugation, and commercialization of the world's highest quality antibodies for use in flow cytometry. Our broad range of fluorochrome conjugated polyclonal and monoclonal secondary antibodies, isotype controls, and directly conjugated primary antibodies, including a focus on veterinary research, are manufactured in our ISO 9001:2015-certified facilities.

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AF700 (Alexa Fluor® 700)
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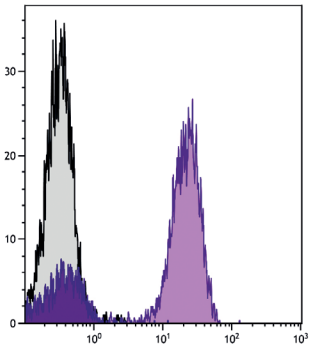
APC (Allophycocyanin)
PE/CY5.5 (R-phycoerythrin/Cyanine 5.5)
APC/CY5.5 (Allophycocyanin/Cyanine 5.5)
PE/CY7 (R-phycoerythrin/Cyanine 7)
APC/CY7 (Allophycocyanin/Cyanine 7)
PE/TXRD (R-phycoerythrin/Texas Red®)
BIOT (Biotin)
SPRD (R-phycoerythrin/Cyanine 5)
CY5 (Cyanine 5)

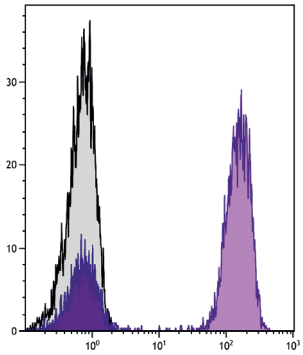
Secondary Antibodies

Goat F(ab')2 Anti-Mouse Ig, Human ads-PE/TXRD



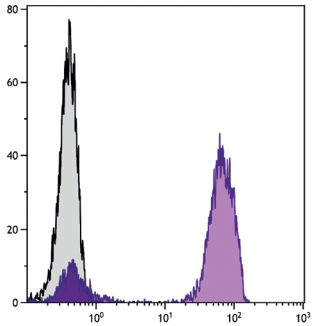
Human peripheral blood lymphocytes were stained with Mouse Anti-Human CD3-UNLB followed by Goat F(ab')2 Anti-Mouse Ig, Human ads-PE/TXRD (Cat. No. 1012-10).

Goat Anti-Mouse IgG, Human ads-AF647



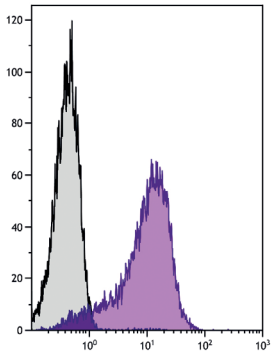
Human peripheral blood lymphocytes were stained with Mouse Anti-Human CD3-UNLB followed by Goat Anti-Mouse IgG, Human ads-AF647 (Cat. No. 1030-31).

Goat Anti-Mouse IgG1, Human ads-FITC



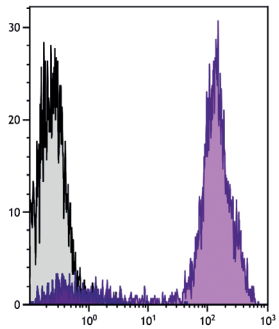
Human peripheral blood lymphocytes were stained with Mouse Anti-Human CD3-UNLB followed by Goat Anti-Mouse IgG1, Human ads-FITC (Cat. No. 1070-02).

Goat Anti-Mouse IgG2b, Human ads-PE



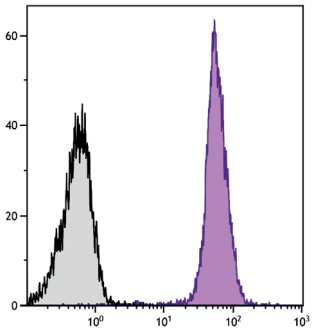
Chicken thymocytes were stained with Mouse Anti-Chicken MCAM-UNLB (Cat. No. 8385-01) followed by Goat Anti-Mouse IgG2b, Human ads-PE (Cat. No. 1090-09).

Goat Anti-Mouse IgG2a, Human ads-SPRD



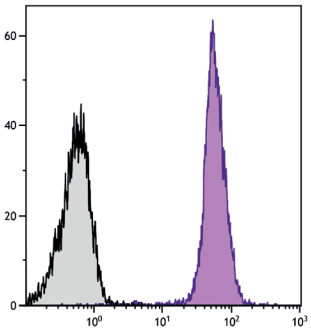
Human peripheral blood lymphocytes were stained with Mouse Anti-Human CD5-UNLB followed by Goat Anti-Mouse IgG2a, Human ads-SPRD (Cat. No. 1080-13).

Goat Anti-Rat Ig, Mouse ads-APC



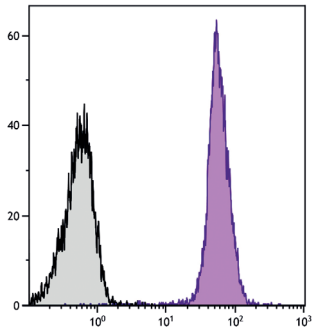
Human peripheral blood lymphocytes were stained with Mouse Anti-Human CD3-UNLB followed by Goat F(ab')2 Anti-Mouse Ig, Human ads-PE/TXRD (Cat. No. 1012-10).

Goat Anti-Rat IgG(H+L), Mouse ads-AF488



BALB/c mouse splenocytes were stained with Rat Anti-Mouse CD45-UNLB (SB Cat. No. 1660-01) followed by Goat Anti-Rat IgG(H+L), Mouse ads-AF488 (Cat. No. 3050-30).

Goat F(ab')2 Anti-Rat IgG(H+L), Mouse ads-PE/CY5.5



BALB/c mouse splenocytes were stained with Rat Anti-Mouse CD45-UNLB (Cat. No. 1660-01) followed by Goat F(ab')2 Anti-Rat IgG(H+L), Mouse ads-PE/CY5.5 (Cat. No. 3052-16).

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