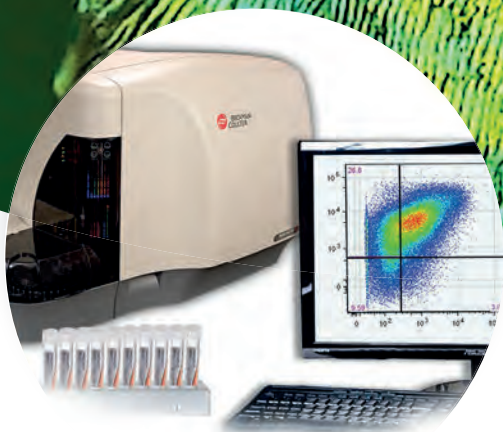
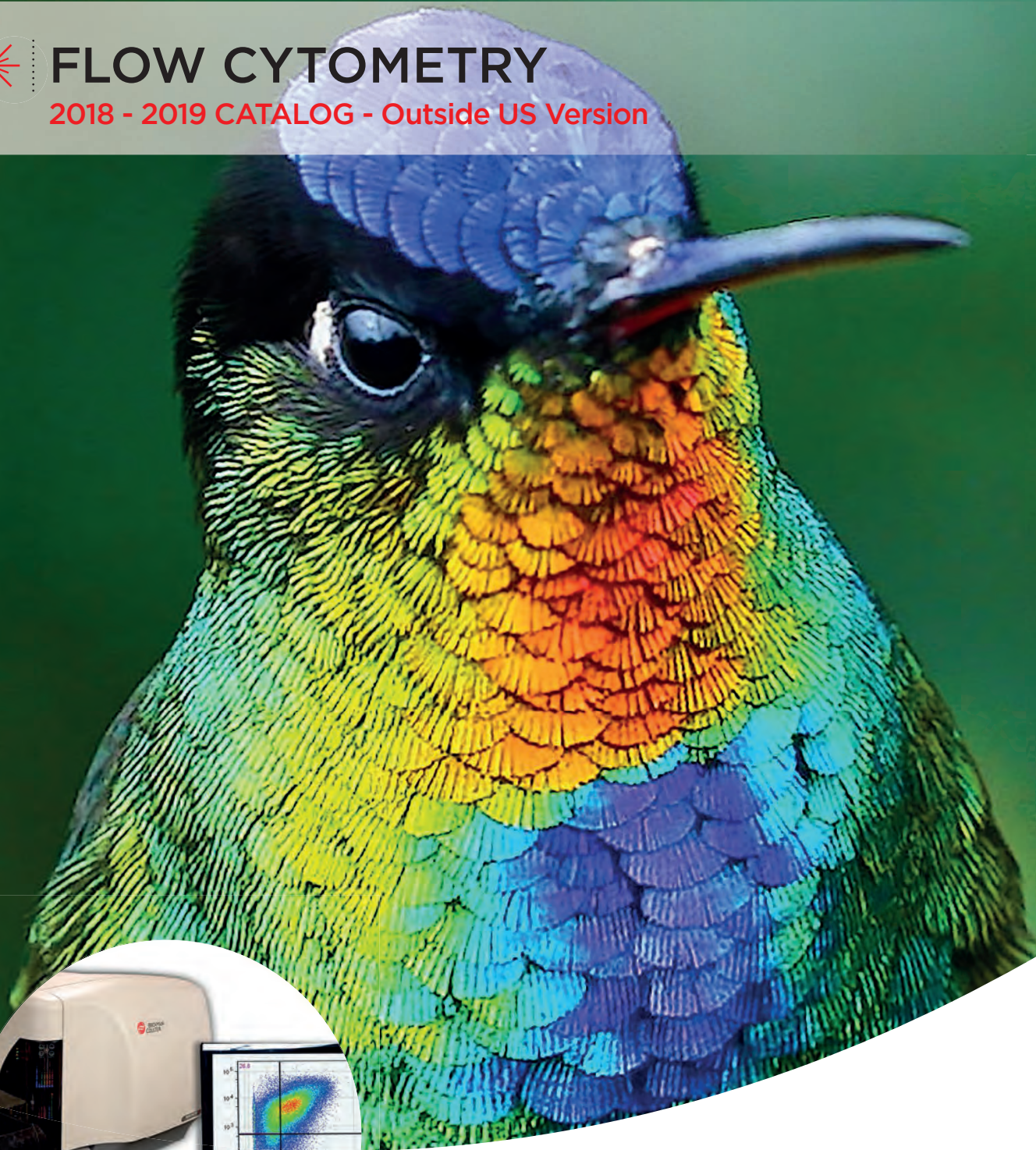




FLOW CYTOMETRY

2018 - 2019 CATALOG - Outside US Version



VISUALIZE
the possibilities.

 **BECKMAN
COULTER**
Life Sciences



Mario Koksch, MD PhD MBA
Vice President and General Manager
Flow Cytometry Business Unit

Welcome!

On behalf of Beckman Coulter Life Sciences, I'd like to thank you for partnering with us for your diagnostic, clinical research, and basic research flow cytometry needs.

Our goal is to help you achieve your goals—by providing the technology you need to get the most accurate, reproducible results, especially for high-complexity flow cytometry applications. You can rely on us to help you meet a variety of challenges, from streamlining workflow and reducing sample preparation time, to eliminating time-consuming manual steps that can result in costly errors.

We value the trust you place in us to deliver the innovation you need—from reagents, software and instruments. Some recent examples of these innovations include:

- *Continuous improvement in our broad range of reagents, such as further extension of ready-to use **DuraClone dry reagents** for clinical research studies.*
- ***ClearLLab reagents**, the first pre-formulated, IVD antibody reagents to streamline and standardize immunophenotyping for leukemia and lymphoma.*
- ***The Navios EX instrument**, for advanced cytometry applications is optimized for the clinical laboratory workflow, delivering sensitivity, resolution, quality and reproducible results.*

*For researchers, the focus has been on minimizing light loss to improve detection of even dim populations. Our solution to that challenge has been the award-winning advanced optics and laser technology behind the **CytoFLEX flow cytometer** series.*

We proudly dedicate to you, our customer, our 30 years of experience and innovation in clinical flow cytometry. And we look forward to continuing to serve you — from application design and training to technical support and service.

*Our commitment to you is simple: **We will continue to provide you with solutions that deliver greater accuracy, while enabling you—and your lab—to work more efficiently.***

Again, we're honored to be your partner. Your challenges are our challenges. And whenever you need to explore solutions to those challenges, we hope you'll start at www.beckman.com/home.

Warmest regards,

Mario Koksch,

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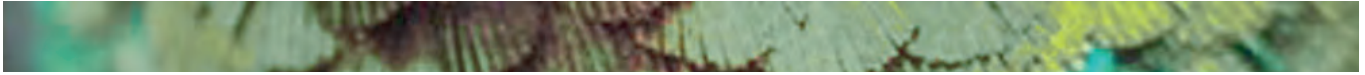
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Product Quality

Manufacturing & Processing

Beckman Coulter is focused on quality, aiming to provide laboratories with the necessary tools to perform tests and assays by flow cytometry under optimal conditions. The same stringent criteria are applied across the complete Beckman Coulter reagents portfolio, including products for research, clinical research as well as clinical diagnostics.



GMP Manufacturing

The entire Beckman Coulter Flow Cytometry Antibody portfolio is manufactured under Good Manufacturing Practices (GMP) in facilities that adhere and are certified to the highest standards in the industry. The facilities and the manufacturing processes are audited at regular intervals by national and international quality assurance bodies. Good Manufacturing practices ensure optimal processes are followed from product design and development to manufacturing and product updates. GMP regulations provide guidance to ensure products are manufactured under controlled conditions so that products meet consistent specifications across lots and over time, by addressing issues such as quality control, complaint handling, or sanitation. More than 30 years of experience in conjugated antibody development and manufacturing, associated with robust internal performance criteria, make Beckman Coulter a market leader in delivering excellent quality and trusted flow reagent products.



CE marking of In Vitro Diagnostic Medical Devices - IVDD

CE-IVD-labeled products manufacturing follows the European Directive (98/79/EC) for in-vitro medical devices which is the European analogue to the “cGMP” regulation applicable for in-vitro medical devices in the United States.



ISO International Standards

The compliance with standards such as ISO 13485:2012/ ISO 9001:2008 demonstrates continuous improvement of Beckman Coulter's quality management systems (QMS) and processes.



Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Beckman Coulter is committed to maintaining a high level of compliance and diligently working towards meeting the GHS requirements. As Beckman Coulter implements the GHS, customers may see changes to Beckman Coulter labeling, Safety Data Sheets (formerly MSDS), and Instructions For Use.

Beckman Coulter products may also be reclassified in respect to the GHS hazard classification.

For each product that is reclassified, labels, Safety Data Sheets, and Instructions For Use will contain the updated hazardous classification information.

Format & Lines

Beckman Coulter provides a variety of cellular analysis reagents to meet the needs of today's flow cytometry laboratories. We offer several complete systems that combine reagents, calibrators, controls, software and hardware.

Flow cytometry reagents are typically provided as directly conjugated products and are available as single color configurations or as two, three, four or five color combinations.

These comprise hundreds of products allowing sample preparation flexibility as well as panel customization.

| Abbreviation | Name | Primary Excitation (nm) | Appropriate Light Source | Emission Maximum (nm) | Suitable Band Pass Filter (nm) |
|-----------------------------------|---|-------------------------|---------------------------|-----------------------|--------------------------------|
| Fluorochromes | | | | | |
| KrO | Krome Orange | 398 | Violet/405 nm Diode Laser | 528 | 550 |
| PB | Pacific Blue [§] | 405 | Violet/405 nm Diode Laser | 455 | 450 |
| PE | Phycoerythrin | 480 | Blue Diode/Argon Laser | 575 | 575 |
| RD1 | Phycoerythrin | 480 | Blue Diode/Argon Laser | 575 | 575 |
| ECD | Phycoerythrin-Texas Red [§] -x | 480 | Blue Diode/Argon Laser | 620 | 620 |
| PC5 | Phycoerythrin-Cyanin 5 | 480 | Blue Diode/Argon Laser | 670 | 675 |
| PC5.5 | Phycoerythrin-Cyanin 5.5 | 480 | Blue Diode/Argon Laser | 694 | 700 |
| PC7 | Phycoerythrin-Cyanin 7 | 480 | Blue Diode/Argon Laser | 767 | 770 |
| Atto [§] 488 | Atto 488 | 488 | Blue Diode/Argon Laser | 523 | 525 |
| PE-Dy649 | PE-Dyomics649 | 488 | Blue Diode/Argon Laser | 676 | 675 |
| PerCP | Peridin-chlorophyll-protein Complex | 488 | Blue Diode/Argon Laser | 682 | 700 |
| FITC | Fluorescein Isothiocyanate | 495 | Blue Diode/Argon Laser | 520 | 525 |
| AF488 | Alexa Fluor [§] 488 | 495 | Blue Diode/Argon Laser | 520 | 525 |
| APC | Allophycocyanin | 650 | Red Diode/HeNe Laser | 660 | 675 |
| AF647 | Alexa Fluor [§] 647 | 650 | Red Diode/HeNe Laser | 668 | 675 |
| APC-A700 | APC-Alexa Fluor [§] 700 | 650 | Red Diode/HeNe Laser | 719 | 720 |
| APC-A750 | APC-Alexa Fluor [§] 750 | 650 | Red Diode/HeNe Laser | 780 | 780 |
| AF700 | Alexa Fluor [§] 700 | 695 | Red Diode/HeNe Laser | 719 | 720 |
| AF750 | Alexa Fluor [§] 750 | 749 | Red Diode/HeNe Laser | 780 | 780 |
| Fluorescent Viability Dyes | | | | | |
| PI ¹ | Propidium Iodide | 540 | Blue Diode/Argon Laser | 620 | 620 |
| 7-AAD ¹ | 7-Aminoactinomycin D | 550 | Blue Diode/Argon Laser | 660 | 675 |

¹ As DNA Complex

BIOT Biotin
UNLB Unlabelled, Unconjugated, purified

[§] Trademarks are the property of their respective owners (see Trademarks page)

Format & Lines



| Line | Ready-to-use | Number of colors | Size | Instrument | Optimal Lysis |
|---------------|--------------|------------------------------|------------------|---|-------------------------------|
| Cyto-Stat | Yes | 1, 2, 3, or 4 | 50 tests, 0.5 mL | FC500, Navios, or Navios EX based on product labeling | IMMUNOPREP |
| COULTER CLONE | Yes | 1 | 100 tests | Not specified | Whole Blood Lysis Reagent Kit |
| IOTest | Yes | 1, 2, or 3 | 100 or 50 tests | Not specified | VersaLyse |
| IOTest 3 | Yes | 3 (FITC/PE/ECD) | 25 tests | Not specified | IOTest 3 Lysing Solution |
| OptiClone | Yes | 2, or 3 | 50 tests | Not specified | OptiLyse Lysing Reagent |
| DuraClone | Yes | 2, 3, 4, 5, 6, 7, 8, 9 or 10 | 25 tests | CytoFLEX, Navios, Navios EX | VersaLyse, PerFix-nc |
| ClearLLab | Yes | 4 or 5 | 25 tests | FC500 | VersaLyse |
| ClearLLab LS | Yes | 9 or 10 | 25 tests | Navios/Navios EX | VersaLyse |

CYTO-STAT Monoclonal Antibodies

CYTO-STAT Monoclonal Antibodies are :

- Ready-to-use monoclonal antibodies for flow cytometric analysis.
- Available in one, two, three and four-color configurations for direct immunofluorescent staining.
- Provided as 50 tests per vial at 10 µL per test (0.5 mL/vial).

Source: Mouse ascitic fluid or conditioned culture media unless otherwise noted.

Purification: Ion-exchange, affinity chromatography or gel filtration.

Components and storage: supplied in liquid, ready-to-use form requiring no dilution. Store at 2-8°C in the dark without freezing. Expiration date and concentration are indicated on the vial label.



IMMUNOPREP Reagent System

- No-wash lyse and fix reagent for whole blood lysis.
- Maintains white blood cell integrity and natural scatter characteristics.
- Maximizes separation between cells of interest versus red blood cell debris and platelets.
- Twenty-four hour processed-sample stability when stored at 2-8°C.

IOTest and IOTest 3 Conjugated Antibodies

IOTest Conjugated Antibodies are :

- Ready-to-use conjugated monoclonal or polyclonal antibodies for flow cytometric analysis.
- Adapted for manual lysing procedures with a wash and for automated lysing procedures on the PrepPlus 2 Workstation and the FP 1000 Cell Preparation System.
- Open to all instrument platforms.
- Available as single or multi color configurations for direct immunofluorescent staining.
- Single color reagents are titrated for easy mixing in user-defined multi-color combinations.
- Provided as 100 or 50 tests per vial at 10 or 20 µL per test.

Purification: affinity chromatography or gel filtration.

Components and storage: supplied in phosphate-buffered saline, containing 0.1% sodium azide and 2 mg/mL of bovine serum albumin, unless otherwise specified. The expiration date is indicated on the vial label. Store at 2-8°C in the dark without freezing.



IOTest 3 Conjugated Antibodies are :

- Preformulated and standardized product line composed of antibodies conjugated to FITC, PE and ECD.
- Cover the most useful markers for peripheral blood or bone marrow characterization exploring intracellular as well as surface antigens.
- Optimized to work with the IOTest 3 Lysing Solution and IOTest 3 Fixative Solution.
- IntraPrep Permeabilization Reagent is recommended for intracellular antigen exploration.
- Provided as 25 tests per vial at 20 µL per test.

Format & Lines



OptiClone Monoclonal Antibodies

OptiClone Monoclonal Antibodies are :

- Ready-to-use monoclonal antibodies for flow cytometric analysis.
Available in two and three color configurations for direct immunofluorescent staining.
- Specially formulated for use in wash or no-wash procedures using OptiLyse B or C Lysing Reagents.
- Provided as 50 tests per vial at 20 μ L per test.
- For individual monoclonal antibody specifications, see the product description.

Purification: affinity chromatography or gel filtration.

Components and storage: supplied in phosphate-buffered saline, containing 0.1% sodium azide and 2 mg/mL of bovine serum albumin, unless otherwise specified. Expiration date and concentration are indicated on the label. Store at 2-8°C in the dark without freezing.

OptiLyse Lysing Reagent

- OptiLyse C is specially formulated for Beckman Coulter flow cytometers.
- OptiLyse B is specially formulated for BD Biosciences flow cytometers.
- Provided as 200 or 250 tests per vial, at 500 μ L per test for OptiLyse C and 100 μ L per test for OptiLyse B.
- Suitable for wash or no-wash applications.

COULTER CLONE Monoclonal Antibodies

COULTER CLONE Monoclonal Antibodies are :

- Suitable for flow cytometric, microscopic or immunohistochemical procedures.
- Available as purified and fluorochrome-conjugated antibodies for direct immunofluorescent staining.
- Provided as 100 tests per vial at 5 μ L per test.
- Purified and most FITC antibodies are lyophilized and require reconstitution in 500 μ L of distilled water.
- RD1 conjugated antibodies are liquid and ready-to-use.

Source: Mouse ascitic fluid or conditioned culture media unless otherwise noted.

Purification: Ion-exchange, affinity chromatography or gel filtration.

Components and storage: supplied in phosphate-buffered saline solution, containing 0.1% sodium azide and 2 mg/mL of bovine serum albumin, unless otherwise specified. The freeze-dried material must be reconstituted with distilled water without preservative as described in the package insert. Expiration date and concentration are indicated on the vial label. Store at 2-8°C in the dark without freezing.

Other Reagents

Purified and biotinylated antibodies are provided in various formats adapted for multiple applications: cell biology, immunohistochemistry, functional studies, pharmacology, Western blot, immunoprecipitation, and immunostaining.

The lyophilized format (0.1 or 0.2 mg) permits quantitative experiments. The liquid format, sold as a number of tests, is specifically adapted to immunostaining experiments. Many of these products are available for bulk purchase.

Source: Polyclonal antibodies from rat, rabbit, goat, and hamster. Monoclonal antibodies from murine ascitic fluid or conditioned culture media.

Purification: Ion-exchange, affinity chromatography or gel filtration.

Components and storage: In the freeze-dried format, most of the antibodies are supplied in phosphate-buffered saline solution, containing 1 mg/mL bovine serum albumin, without preservative. The freeze-dried material must be reconstituted with distilled water as described in the package insert. Aliquots may be stored at -20°C. Avoid repeated freezing and thawing. The addition of sodium azide (0.1%) is recommended for storage up to one month at 2-8°C.

In the liquid format, antibodies are supplied in phosphate-buffered saline solution, containing 0.1% sodium azide and 2 mg/mL of bovine serum albumin, unless otherwise specified. The expiration date is indicated on the vial label. Storage is at 2-8°C in the dark without freezing. Some other formats are available, please refer to the product list for more information.

Format & Lines

DuraClone Antibody Panels

Dry, unitized, pre-formulated antibody panels for rare event detection, immune function and immune system research.

The DuraClone products provide the specified antibody panels as a dried-down layer in each test tube eliminating antibody pipetting. This shortens the turn-around time, minimizes human error sources, and eliminates repetitive workflow steps that are costly to automate. The DuraClone panels can be shipped and stored at room temperature and their standardized format enables the level of experimental rigor that is key to multi-centric and longitudinal clinical research studies.



- Single pre-formulated product
- Developed with leading experts
- Lean workflow, no antibody pipetting
- Minimized inventory management
- Allowing for flexibility where needed

The DuraClone panels are ideally suited for use on the CytoFlex and the Navios Flow Cytometers.



DurActive Stimulation Kits

The DurActive stimulation kits contain optimally dosed physiologically active compounds provided as unitized single tests in 12x75 mm tube format.

- Pre-formulated mixes containing 2-3 active compounds
- Unitized dry Beckman Coulter proprietary format
- Expert-proven dosing
- 25 tests/package

Format & Lines

ClearLLab Reagents

ClearLLab Reagents are the first reagents available in the U.S. for leukemia and lymphoma* flow cytometric immunophenotyping in the clinical lab (via the U.S. Food and Drug Administration (FDA)'s De Novo Process). They are comprised of five pre-formulated antibody cocktails targeted at B-, T-, and Myeloid cell malignancies. For clinical laboratories, adopting the ClearLLab assays means reducing their number of Laboratory Developed Test (LDT) they need to develop and prepare, a technically demanding, time-consuming, and potentially error-prone process. ClearLLab reagents have been specifically designed for the fast and accurate identification of a number of haematolymphoid cell populations on the company's FC500 flow cytometer.



- CE marked
- 25 test size to adapt inventory to actual demand
- 5-combination, 18-marker panel
- Pre-mixed, optimized, comprehensive combinations
- For peripheral blood, bone marrow and lymph node specimens
- Bethesda 2006 international consensus-aligned
- WHO 2008-Revised Classification compatible

ClearLLab LS

ClearLLab LS Lymphoid Screen antibody panel is the first CE-IVD-marked 10-color assay for leukemia and lymphoma* analysis. Compared to Laboratory Developed Tests (LDT), the dry ClearLLab LS delivers greater confidence in results with a faster turnaround time (TAT) due to its innovative workflow. It eliminates 14 manual workflow steps, while streamlining five others; and is available through a dry unitized, ready to use formulation. ClearLLab LS has been specifically designed for the fast and accurate identification of haematolymphoid cell populations on the company's Navios and Navios EX flow cytometers.



- One tube screen for lymphoid neoplasias
- Pre mixed, optimized 12 antibody 10 color assay
- Intended for use on 10 color 3 laser Navios and Navios Ex
- For peripheral blood, bone marrow and lymph node specimens. EDTA, Heparin, and ACD anticoagulants
- Unitized test using proven Beckman Coulter dry reagent technology
- 25 test size to adapt inventory to actual demand
- CE marked
- WHO 2008-Revised Classification compatible



*For Non-Hodgkin's Lymphoma only

Regulatory Status

Status Definitions:

ASR Analyte Specific Reagents (ASR)

An ASR is the active ingredient of an in-house (“home-brew”) test. It is the responsibility of the laboratory using the ASR to develop the test and to take responsibility for establishing and maintaining performance. These reagents are labeled “Analyte Specific Reagents. Analytical and performance characteristics are not established.” ASR are manufactured under GMP to ensure high consistency and are considered as Medical Devices and can be used for Diagnostics only in the USA.

CE CE-marked products (CE)

CE marking on products included in this catalog indicates conformity to the legal requirements of the European Union (EU) Directive 98/79/EC of the European Parliament for in vitro diagnostic medical devices with respect to safety, health, environment, and consumer protection. In this catalog, CE-marked products are labeled for in vitro diagnostic use and can be traded freely throughout the EU.

IVD In Vitro Diagnostic Products (IVD)

Reagents, instruments and systems intended for use in the diagnosis of disease or other conditions, including a determination of the state of health, in order to cure, mitigate, treat or prevent diseases. Such products are intended for use in the collection, preparation and examination of specimens taken from the human body. These products can be used for clinical diagnosis. These products are labeled “For In Vitro Diagnostic Use.”

IVD & CE In Vitro Diagnostic Products & CE-Marked Products (IVD & CE)

These reagents comply with the IVD and CE classifications.

LUO Laboratory Use Only Reagents (LUO)

Generic reagents whose use is generally known by a trained person. Not intended to identify a specific disease or condition. These reagents are labeled “For Laboratory Use Only.”

RUO Research Use Only Reagents (RUO)

A product in the laboratory testing phase of development that does not have a recognized clinical utility and is not represented as an effective in vitro diagnostic product. These products cannot be used for clinical diagnosis, prognosis or therapeutic determinations. These reagents are labeled “For Research Use Only. Not for use in diagnostic procedures.”

nMD Non-Medical Device (nMD)

Equipment not intended to be used in diagnostic procedures.

Geographical Distribution:

CE-marked products are sold in European Union (EU) countries and are registered as clinical products in 30+ countries outside of Europe.

IVD products are sold in countries where they comply with applicable regulation.

Trademarks

Beckman Coulter, the stylized logo, and the Beckman Coulter product and service marks mentioned herein are trademarks or registered trademarks of Beckman Coulter, Inc. in the United States and other countries.

The following are Beckman Coulter trademarks:

| | | |
|-----------------|--------------|-------------|
| 4C | Flow-Check | OptiClone |
| Allegra | Flow-Clean | OptiLyse |
| ARIES | Flow-Count | Optima |
| Astrios | Flow-Set | PrepPlus |
| Avanti | Gallios | Q-PREP |
| Beckman Coulter | IMMUNO-BRITE | Stem-Comp |
| Biomek | IMMUNOPREP | Stem-Count |
| ClearLLab | IMMUNO-TROL | Stem-Kit |
| COULTER | Index | stemONE |
| COULTER CLENZ | IntraPrep | Stem-Trol |
| COULTER CLONE | IOTest | tetraCHROME |
| COULTER COUNTER | IsoClonic | tetraONE |
| CyAn | IsoFlow | ThromboFix |
| CytExpert | ISOTON | TQ-Prep |
| CytoFLEX | J-LITE | triCHROME |
| CYTO-COMP | Kaluza | VersaLyse |
| CYTO-STAT | Krome Orange | Vi-Cell |
| CYTO-TROL | Load & Go | XL |
| DRAQ7 | MoFlo | XL-MCL |
| DuraClone | Navios | Z Series |
| ECD | | |
| EPICS | | |

All other trademarks are the property of their respective owners.

Instrument Manager is a trademark of Data Innovations, Inc. Texas Red and Pacific Blue are trademarks of Molecular Probes, Inc.

AlexaFluor: This product is provided under an agreement between Molecular Probes, Inc. and Beckman Coulter and the manufacture, use, sale or import of this product may be subject to one or more of US Patent Nos. 5,696,157; 6,130,101; 5, 830,912; pending applications and corresponding foreign equivalents, owned by Life Technologies Corp. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer (whether the buyer is an academic or for-profit entity), including use as an Analyte Specific Reagent (ASR), but excluding use in combination with microarrays or for High Content Screening. The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes. Commercial Purposes means any activity by a party for consideration and may include, but is not limited to: (1) use of the product or its components in manufacturing; (2) use of the product or its components to provide a service, information, or data; (3) use of the product or its components for therapeutic, diagnostic or prophylactic purposes; or (4) resale of the product or its components, whether or not such product or its components are resold for use in research.



SERVICES

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Custom Reagent Services



Custom Reagent Services from Beckman Coulter offers multiple options and technologies to choose from, based on labs need and demand.

This services allows you to customise your antibody as well as panel combining from the large number of antibodies in the Beckman portfolio, while spending less time on manual processes.

Dependent on your needs we are offering either Custom Design Services (CDS)* or Contract Manufacturing Services (CMS)**

Under Beckman Coulter’s Contract Manufacturing Services, we manufacture the components of your user defined test reagents under GMP[§] conditions according to your specifications.

Our Custom Design Services* go even one step further, in that our antibody experts assist you in panel design an reagent formulation.

We can be a time- and cost-saving, single-source provider for a customized products and services to support all your flow cytometry needs.



| Description | Can include products not commercially available | Formulation with Beckman Coulter commercially available products |
|----------------------------------|--|--|
| Panel Design | Design, development and optimization of panels with Beckman Coulter | Configuration, formulation and procedure to be provided by the customer |
| Product claims | For Research Use Only. Not for use in diagnostic procedures | No regulatory status |
| Formulation | Ready-to-use cocktails | EU: reagent components Outside EU: Reagent cocktail |
| Delivery Time (Liquid) | Typically 4-6 weeks from the signed contract | Typically 8-10 weeks from the signed contract |
| Delivery Time (Dura Innovations) | Typically 9 weeks from the signed contract | Typically 9 weeks from the signed contract |
| Minimal Volume | 500 tests and 200 tests for Dura Innovations | 2,000 tests |
| Formats | Available in both DURA Innovations-based dry reagents or liquid reagents | Available in both DURA Innovations-based dry reagents or liquid reagents |

* Custom Design Services products are For Research Use Only. Not for use in diagnostic procedures.

** CMS Services for DURA Innovations-based dry reagents are available only in North America

*** CDS and CMS Services for Aquios instrument are only available in liquid reagents

§ GMP as defined under India Drugs and Cosmetics Act, 1940.

Custom Design* and Contract Manufacturing Services reagents for Aquios instrument are provided in barcoded and cap-pierceable vials.

Beckman Coulter recommends that all results be reviewed prior to release.

Custom Design Services (CDS)

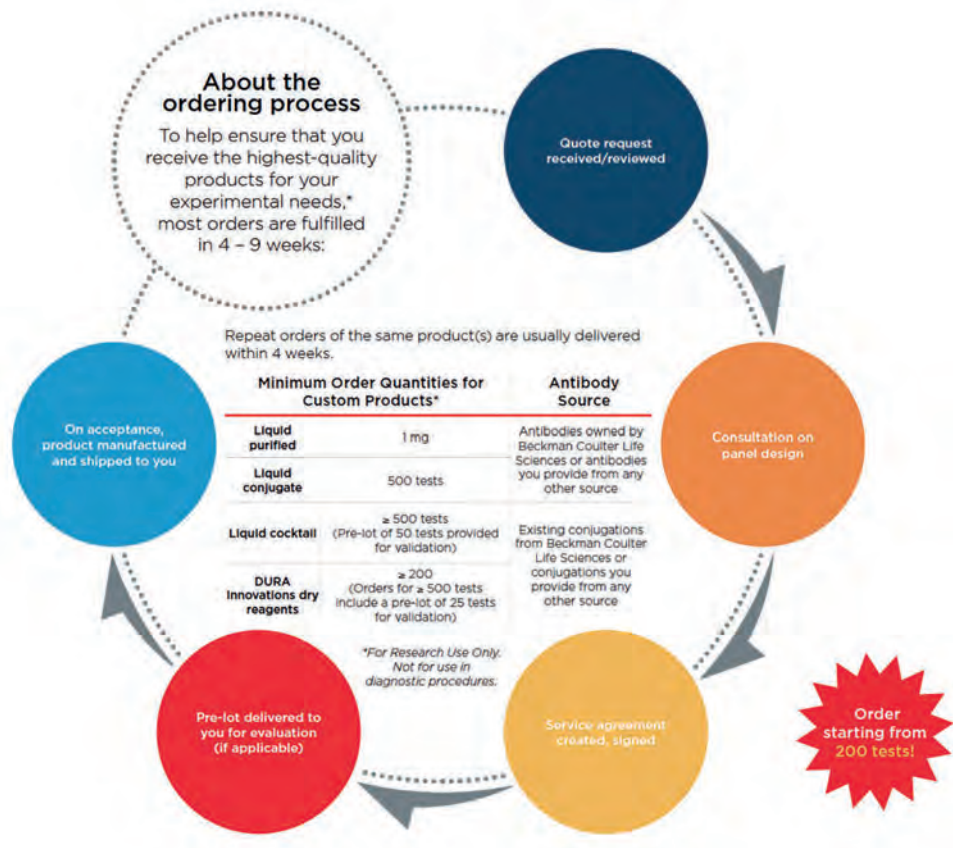


With a spectrum of multicolor options for you to choose from, our panel design experts can create a custom cocktail to clearly deliver the information you seek.

Whatever you want to do more of, we can help. Because we can do more for you. We can be a time- and cost-saving, single-source provider of off-the-shelf and customized products and services to support all your flow cytometry needs. With our flexible, collaborative approach, small lot size requirements, and waste-reducing DURA Innovations-based dry reagents, we can help you do more, save more and achieve more.

If we don't currently offer the product you need, our panel design experts can create an optimized panel that clearly meets your specific criteria. Whether you need a different conjugate of one of our 630+ ASR-labeled human antibodies—or a custom conjugation of one of your own—we can provide affordable options for all your experimental design requirements:

- Single-color conjugations
- Optimized multi-conjugate combinations
- Bulk purified antibodies (you specify concentration and buffer)
- Exclusive DURA Innovations dry (not lyophilized) custom reagents
- Stable at room temperature (18°C - 23°C)
- Warrantied for 1 year
- Include lot-matched compensation kits



Custom Design Service products are for Research Use Only. Not for use in Diagnostic procedures.

Contract Manufacturing Services (CMS)



Why waste precious internal resources when you have a reliable partner for bulk production of the antibody combination you need?

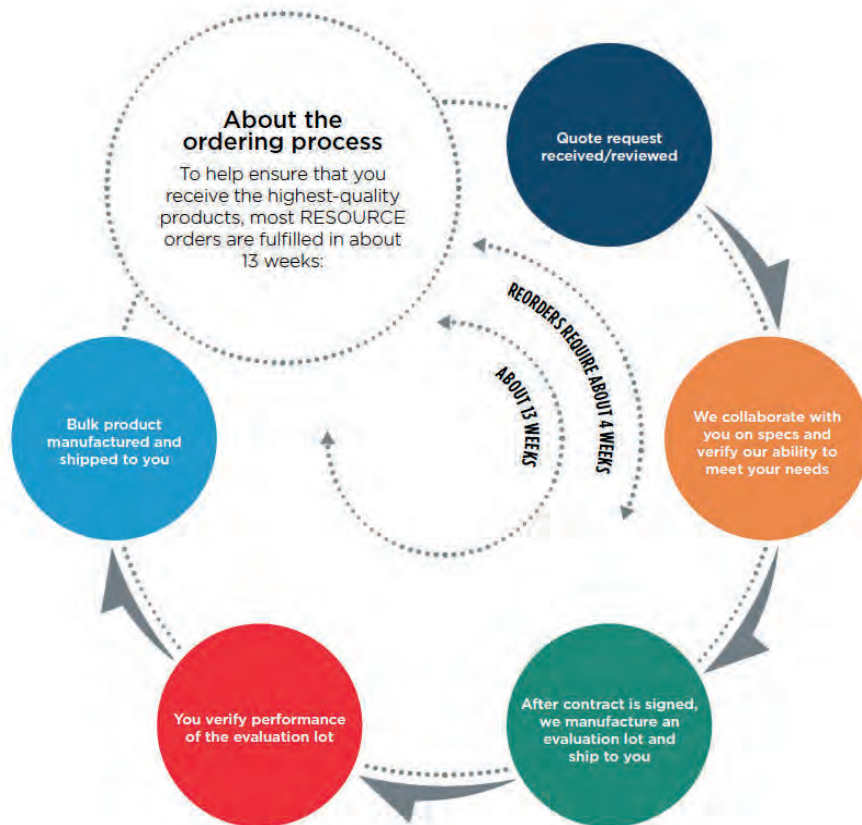
In order to take advantage of the automation features of the AQUIOS CL system, Beckman Coulter provides the reagents for your user-defined assays either through our Contract Manufacturing (GMP) or Custom Design* Services of user defined reagents. Either option provides barcoded and cap-pierceable vials that can be run on the AQUIOS CL instrument with automated tracking of all QC functionalities, including (but not limited to) reagent type, container ID, and lot number.

CMS options include:

- Antibodies from any source (ours, yours, or our competitors)
- Dried or liquid formats
- Exclusive DURA Innovations
- Flexible delivery terms
- QC testing on request (per your validation method and specified acceptance criteria)

Why choose Beckman Coulter Life Sciences as a trusted RESOURCE for bulk antibody cocktails?

- Your cocktails will be manufactured following GMP** in ISO 9001-compliant facilities.
- Your order will include a complimentary evaluation lot for you to validate and approve.
- You can optimize QC by minimizing the potential for errors/variability.
- You can save time by simplifying inventory management and streamlining your workflows.



*These products have no regulatory status. Customer is solely responsible for validating them

** GMP as defined under India Drugs and Cosmetics Act, 1940 for Dura Innovation solutions under RESOURCE - Contract Manufacturing Services

Customer Training



We offer a variety of training options for our customers through the **Beckman Coulter Learning Center**.

| Instrument | Training Title | Format | Location |
|-------------------|--|----------------|----------------------------|
| Aquios CL | AQUIOS DESIGNER SOFTWARE 2.0: COMPENSATION CREATION AND MODIFICATION | Online Class | Online Learning Center |
| Aquios CL | AQUIOS DESIGNER SOFTWARE 2.0: ALIGNMENT VERIFICATION TRAINING | Online Class | Online Learning Center |
| Aquios CL | AQUIOS DESIGNER SOFTWARE 2.0: PROTOCOL CREATION TRAINING | Online Class | Online Learning Center |
| Aquios CL | AQUIOS DESIGNER SOFTWARE 2.0: TEST CREATION TRAINING | Online Class | Online Learning Center |
| Aquios CL | AQUIOS DESIGNER SOFTWARE 2.0: CONTROL CREATION TRAINING | Online Class | Online Learning Center |
| Aquios CL | AQUIOS DESIGNER SOFTWARE 2.0: STARTUP AND REAGENT CREATION TRAINING | Online Class | Online Learning Center |
| Aquios CL | AQUIOS CL BASIC OPERATOR ONLINE TRAINING | Online Class | Online Learning Center |
| Aquios CL | AQUIOS CL TETRA TEST APPLICATION ONLINE TRAINING | Online Class | Online Learning Center |
| Aquios CL | AQUIOS CL ADVANCED OPERATOR ONLINE TRAINING | Online Class | Online Learning Center |
| CytoFLEX | CytoFLEX LX BASIC OPERATOR ONLINE TRAINING - SINGLE TUBE VERSION | Online Class | Online Learning Center |
| CytoFLEX LX | CytoFLEX LX BASIC OPERATOR ONLINE - PLATE LOADER VERSION | Online Class | Online Learning Center |
| FC500 | FC500 CUSTOMER TRAINING | Instructor-Led | Miami, FL USA |
| FC500 MPL | FC500 MPL CUSTOMER TRAINING | Instructor-Led | Miami, FL USA |
| Gallios | KALUZA FOR GALLIOS CUSTOMER TRAINING | Instructor-Led | Miami, FL USA |
| Gallios | GALLIOS CUSTOMER TRAINING | Instructor-Led | Miami, FL USA |
| Kaluza | KALUZA ANALYSIS CUSTOMER TRAINING | Instructor-Led | Miami, FL USA |
| MoFlo Astrios | MoFlo ASTRIOS CUSTOMER TRAINING | Instructor-Led | Fort Collins, CO USA |
| MoFlo Astrios | MoFlo ASTRIOS EQ(s) - SMALL PARTICLE DETECTION MODULE | Instructor-Led | Fort Collins, CO USA |
| MoFlo XDP | MoFlo XDP CUSTOMER TRAINING | Instructor-Led | Fort Collins, CO USA |
| Navios German) | NAVIOS SOFTWARE CUSTOMER TRAINING | Instructor-Led | Krefeld, German (English & |
| Navios | NAVIOS CUSTOMER TRAINING | Instructor-Led | Indianapolis, IN USA |
| Navios EX | NAVIOS EX SOFTWARE KUNDENTRAINING | Instructor-Led | Krefeld, Germany |
| Navios EX | NAVIOS EX CUSTOMER TRAINING | Instructor-Led | Indianapolis, IN USA |
| All Flow | CUSTOMER APPLICATION TRAINING | Instructor-Led | Krefeld, Germany |

For full class descriptions and up-to-date listings of Customer Training opportunities, please visit: www.beckman.com/training

Technical Support and Service



FLOW CYTOMETER SERVICE AGREEMENT



We understand that acquiring a Flow instrument is just the beginning of your relationship with Beckman Coulter. This is why we continually invest in enhancing the critical resources needed to sustain a valuable and collaborative partnership that will **minimize instrument downtime, maximize data integrity and protect your investment to optimize for your success** throughout the entire lifetime of your instrument.

Please review the list of benefits available to our valued customers enrolled in a Service Agreement.

- CERTIFIED SERVICE ENGINEERS:** our Beckman Coulter Engineers (BEC FSE) are **continuously trained on the latest instrument technology** and product improvements and use factory-tested and **certified parts** for all replacements.
- PREVENTATIVE MAINTENANCE:** a Certified BEC FSE will **proactively schedule** and perform all necessary **inspections and part replacements to optimize laser, fluidic and mechanical performance** within the instrument during each year of the Agreement. This ensures you **minimize downtime** and **maintain the integrity of your results**.
- HEALTH CHECK:** a Certified BEC FSE will **proactively schedule** a health check during each year of the Agreement to **confirm instrument operational effectivity** and perform repairs, as needed.
- UNLIMITED SERVICE VISITS:** a Certified BEC FSE will provide unlimited service visits during the duration of the Agreement, with **no need to ship your instrument to a repair center**, reducing inconveniences and downtime.
- TECHNICAL CALL CENTER SUPPORT:** Unlimited support from Beckman Coulter trained product specialists. Note: **70% of issues are resolved over the phone**, minimizing customer and sample waiting time for an in-person visit.
- SOFTWARE MODIFICATIONS:** as our software engineering experts discover **instrument software enhancement** opportunities to increase instrument reliability, a Certified BEC FSE will proactively implement these solutions on your instrument for **no additional charge**.
- ENGINEERING MODIFICATIONS:** when our technical engineering experts discover **hardware design enhancement** opportunities to increase instrument reliability, a Certified BEC FSE will proactively implement these solutions on your instrument for **no additional charge**.
- COORDINATION CENTER:** providing behind-the-scenes logistics support, our Coordination Center leverages **GPS technology** to ensure **efficient allocation and deployment of support resources**, allowing for quicker response times.
- PROSERVICE:** a **BEC dedicated remote management and diagnostics system** that allows for the **confidential remote analysis of instrument performance** to allow for targeted service visits and efficient troubleshooting that maximize your instrument's uptime and minimize workflow interruptions.
- ADMINISTRATIVE EASE:** our Agreements allow you to **avoid back-and-forth P.O. discussions** every time you need BEC support, **reducing unnecessary downtime** and **allowing us to be there for you when you need us**.

*Please contact your local Beckman Coulter Service Rep for Agreement options & features available in your region.

Applications Support

Beckman Coulter's Applications Scientists offer expert support to you and your lab at all stages. From product demonstrations to new platform implementation to troubleshooting, our deep experience with flow cytometry in general and Beckman Coulter products in particular will keep you up and running.



- **Product Demonstrations:** Applications Scientists coordinate with your Sales associate to assure that you have the opportunity to experience the equipment and reagents best suited to your laboratory's needs.
- **Workflow Optimization:** Applications Scientists can offer insights into your current laboratory operations and options for improving your productivity and efficiency.

- **Implementation:** Preparation and communication are the keys to successful implementation of your new platform. Your Applications Scientist can assist you with the key components of implementation, including:
 - o Panel Design
 - o Operator Training, both on-site and at training centers where available
 - o Validation Planning
 - o Proficiency Testing, including Beckman Coulter's worldwide IQAP program

- **Applications Development:** Due to their broad experience in both basic and translational research settings, Beckman Coulter Applications Scientists have the expertise to assist in you developing novel assays.

- **Troubleshooting:** Even expert labs experience occasional issues. Your Applications Scientist is available to assist you both remotely and in person.



PROService - Remote Connectivity

PROService combines a secure, direct data connection to Beckman Coulter's Customer Technical Support centers with a suite of sophisticated support tools and functionalities. This powerful synergy enables our Service and Support teams to view and diagnose the performance of your Beckman Coulter instrument in real time with a greater level of efficiency and accuracy.

Features and Benefits

- Real-time instrument performance Dashboards that facilitate instant review and rapid diagnosis of instrument issues
- Remote Desktop Sharing (RDS) with Service and Support that allows deeper investigation, troubleshooting and repair
- Resolve many instrument issues without the need for a Service visit, minimizing your downtime
- Permit file sharing to-and-from specific folders on the instrument PC that do not contain protected health information
- Serve as a firewall to secure your instrument against network threats
- Minimize instrument down time by enabling issue isolation and preparation of needed parts in advance of service visits

PROService Framework



How it works

PROService is a remote diagnostic system that enhances the technical support of your Beckman Coulter systems. A PROService RAP box placed in the lab coordinates a secure, encrypted communication between your instruments and the secure Beckman Coulter servers. The PROService RAP box transfers information pertinent to instrument health to Beckman Coulter and can create a connection with support personnel to permit remote viewing of the system for troubleshooting.

Secure and confidential

PROService transfers data pertinent to instrument performance and uses a multi-faceted approach to meet rigorous standards for security, privacy, and confidentiality. Industry-standard encryption and connection methods protect the data being transferred. Sophisticated systems, safeguards and controls maintain integrity in data confidentiality. Access is limited to Beckman Coulter Service and Support staff in your geographic location.

Instrument Compatibility

Beckman Coulter Life Science instruments that are PROService compatible include Navios, Navios EX, Gallios and Aquios CL. Beckman Coulter Navios, Navios EX, Gallios and Kaluza for Gallios allow remote adjustments to pressure, flow rate, and alignment allowing issues to be resolved easily over the phone. File transfer and remote viewing are available on all PROService-eligible systems.

Additional benefits of remote access enables application support with real-time data. QC verifications can be readily evaluated for troubleshooting without the need of a traditional hard copy transmittance. Visual engagement to review software and settings allow for a more efficient and faster track to resolution.

Learn more

Please visit www.beckmancoulter.com/proservice to review technical details on PROService features and to obtain the form required for PROService activation at your account.

*Note: PROService is not available in all geographies.



ANTIBODIES & KITS

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| DuraClone Antibody Panels..... | 169-186 |
| ClearLLab Antibody Solutions | 187-190 |
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Table of Single Color Conjugated Antibodies

| Specificity | FITC | AF 700 | AF 488 | PE | ECD | PC5 | PC 5.5 | PC7 | AF 647 | APC | APC A700 | APC A750 | PB | KrO | Page |
|------------------------------|------|--------|--------|----|-----|-----|--------|-----|--------|-----|----------|----------|----|-----|-----------|
| AP027 | | | | • | | | | | | | | | | | 29 |
| CD1a | • | | | • | | • | | | | • | | | | | 30 |
| CD1c | | | | | | | • | | | | | | | | 30 |
| CD2 | • | | | • | • | • | | • | | • | • | • | • | | 31 |
| CD3 | • | | | • | • | • | • | • | | • | • | • | • | • | 32 |
| CD4 | • | | | • | • | • | • | • | | • | • | • | • | • | 33 |
| CD5 | • | | | • | • | • | • | • | | • | • | • | • | | 34 |
| CD6 | • | | | | | | | | | | | | | | 35 |
| CD7 | • | | | • | • | • | | • | | • | • | • | • | | 35 |
| CD8 | • | • | | • | • | • | • | • | | • | • | • | • | • | 36 |
| CD8β | • | | | • | • | | | | | | | | | | 37 |
| CD9 | • | | | | | | | | | | | • | • | | 37 |
| CD10 | • | | | • | • | • | • | • | | • | • | • | | | 38 |
| CD11a | • | | | • | | | | | | | | | | | 39 |
| CD11b | • | | | • | | • | | • | | • | | • | • | | 39 |
| CD11c | | | | • | | • | • | • | | • | • | | | | 40 |
| CD13 | • | | | • | • | • | • | • | | • | | | | | 41 |
| CD14 | • | | | • | • | • | • | • | | • | • | • | • | • | 42 |
| CD15 | • | | | • | | • | | | | | | | • | • | 43 |
| CD16 | • | | | • | • | • | | • | | • | • | • | • | • | 44 |
| CD16b | • | | | | | | | | | | | | | | 45 |
| CD18 | • | | | • | | | | | | | | | | | 45 |
| CD19 | • | • | | • | • | • | • | • | | • | • | • | • | • | 46 |
| CD20 | • | • | | • | • | • | • | • | | • | • | • | • | | 47 |
| CD21 | • | | | • | | | | | | | | | • | | 48 |
| CD22 | • | | | • | • | • | • | • | | • | • | • | • | | 48 |
| CD23 | • | | | • | • | | | • | | • | • | | • | | 49 |
| CD24 | | | | • | • | • | • | | | • | | • | | | 49 |
| CD25 | • | | | • | • | • | • | • | | • | • | • | • | | 50 |
| CD26 | | | | • | | | | | | | | | | | 50 |
| CD27 | | | | • | • | • | • | • | | • | | • | • | | 51 |
| CD28 | • | | | • | • | • | • | • | | • | • | • | | | 51 |
| CD29 | • | | | • | | | | | | | | | | | 52 |
| CD30 | | | | • | | | | | | • | • | | | | 52 |
| CD31 | • | | | • | | | | | | | | | • | | 53 |
| CD32 | | | | • | | | | | | | | | | • | 53 |
| CD33 | • | | | • | | • | • | • | | • | | • | | | 54 |
| CD34 | • | | | • | • | • | | • | | • | • | • | | | 55 |
| CD35 | • | | | | | | | | | | | | | | 56 |
| CD36 | • | | | | | | | | | • | • | | • | | 56 |
| CD37 | • | | | • | | | | | | | | | | | 57 |
| CD38 | • | | | • | • | • | • | • | | • | • | • | • | | 57 |

Other conjugations and purified bulk antibody available through our custom design services see page 14 - For conjugates abbreviation see Information section page 4

Table of Single Color Conjugated Antibodies

| Specificity | FITC | AF 700 | AF 488 | PE | ECD | PC5 | PC 5.5 | PC7 | AF 647 | APC | APC A700 | APC A750 | PB | KrO | Page |
|-------------|------|--------|--------|----|-----|-----|--------|-----|--------|-----|----------|----------|----|-----|------|
| CD39 | | | | • | | | • | | | | | | | | 58 |
| CD40 | | | | • | | | • | | | • | | | | | 58 |
| CD41 | • | | | • | • | • | | • | | • | | | | | 59 |
| CD42a | • | | | | | | | | | | | | | | 60 |
| CD42b | • | | | • | | | | | | • | | | | | 60 |
| CD43 | • | | | • | | | | | | | | • | | | 61 |
| CD44 | • | | | • | | | | | | | | • | • | | 61 |
| CD45 | • | | | • | • | • | • | • | • | • | • | • | • | • | 62 |
| CD45RA | • | • | | • | • | | | • | | • | | • | • | | 63 |
| CD45RO | • | | | • | • | | • | • | | | | | | | 64 |
| CD48 | • | | | | • | | | | | | | | | | 64 |
| CD49b | • | | | | | | | | | | | | | | 65 |
| CD49d | • | | | | | | | | | • | | • | | | 65 |
| CD49e | • | | | | | | | | | | | | | | 66 |
| CD52 | | | | | | | | • | | | | | | | 66 |
| CD54 | • | | | • | | | | | | | | | | | 67 |
| CD55 | • | | | • | | | | | | | | | | | 67 |
| CD56 | | | | • | • | • | • | • | | • | • | • | • | | 68 |
| CD57 | • | | | | | | | | | | | | • | | 69 |
| CD58 | • | | | • | | • | | | | • | | | | | 69 |
| CD59 | • | | | • | | | | | | | | | | | 70 |
| CD61 | • | | | • | | | • | • | | | | | | | 70 |
| CD62L | • | | | • | • | • | | • | | • | | • | • | | 71 |
| CD62P | • | | | • | | | | | | | | | | | 71 |
| CD63 | • | | | • | | | | | | | | | | | 72 |
| CD64 | • | | | • | • | • | | • | | | | • | • | | 72 |
| CD65 | • | | | | | | | | | | | | • | | 73 |
| CD66b | • | | | | | | | | | • | | • | | | 73 |
| CD66c | • | | | • | | | | | | | | | | | 74 |
| CD69 | | | | • | • | • | | • | | • | | | | | 74 |
| CD71 | • | | | • | | | | | | | • | • | | | 75 |
| CD73 | | | | • | | | | | | | | | | | 75 |
| CD79a | | | | • | | • | • | | | • | | | | | 76 |
| CD79b | | | | • | | | • | | | • | | | | | 77 |
| CD80 | • | | | • | | | | • | | • | | • | | | 77 |
| CD81 | • | | | • | | | | | | • | | | • | | 78 |
| CD83 | • | | | • | | • | | | | | | | | | 78 |
| CD85d | | | | • | | | | | | | | | | | 79 |
| CD85j | | | | • | | | | | | • | | | | | 79 |
| CD85k | | | | | | | | • | | | | | | | 80 |
| CD86 | | | | • | | | • | • | | | | • | • | | 80 |
| CD90 | • | | | • | | • | | | | | | • | • | | 81 |

Other conjugations and purified bulk antibody available through our custom design services see page 14 - For conjugates abbreviation see Information section page 4

Table of Single Color Conjugated Antibodies

| Specificity | FITC | AF 700 | AF 488 | PE | ECD | PC5 | PC 5.5 | PC7 | AF 647 | APC | APC A700 | APC A750 | PB | KrO | Page |
|---------------------|------|--------|--------|----|-----|-----|--------|-----|--------|-----|----------|----------|----|-----|------------|
| CD94 | | | | • | | | | | | • | | | • | | 81 |
| CD95 | | | | • | | | | | | | | | | | 82 |
| CD99 | | | | | • | | | | | • | | | | | 82 |
| CD103 | • | | | | | | | | | • | | | | | 83 |
| CD105 | | | | • | | | | • | | | | | | | 83 |
| CD106 | | | | • | | | | | | | | | | | 84 |
| CD107a | | | | | | | | | | • | | | • | | 84 |
| CD109 | | | | • | | | | | | | | | | | 85 |
| CD116 | | | | • | | | | | | | | | | | 85 |
| CD117 | | | | • | • | • | • | • | | • | | • | | | 86 |
| CD120b | | | | • | | | | | | | | | | | 87 |
| CD122 | | | | | | | | • | | | | | | | 87 |
| CD123 | | | | • | • | | • | • | | • | • | | | | 88 |
| CD126 | | | | • | | | | | | | | | | | 88 |
| CD127 | • | | | • | | • | | • | | • | • | • | | | 89 |
| CD133 | | | | | | | | | | • | | | | | 89 |
| CD134 | | | | | | | | | | • | | | | | 90 |
| CD135 | | | | • | | | | | | | | | | | 90 |
| CD137 | | | | | • | | | | | | | | | | 91 |
| CD138 | | | | • | | • | • | | | • | | | • | • | 91 |
| CD141 | • | | | | | | | | | | | | | | 92 |
| CD144 | | | | • | | | | | | | | | | | 92 |
| CD146 | | | | • | | • | | | | | | | | | 93 |
| CD152 | | | | • | | | | | | | | | | | 93 |
| CD154 | | | | • | | | | | | | | | | | 94 |
| CD157 | • | | | • | | | | | | | | | | | 94 |
| CD158a,h | | | | • | | | • | • | | • | | | | | 95 |
| CD158b1/b2,j | | | | • | | | • | • | | • | | | | | 95 |
| CD158e1/e2 | | | | • | | | | | | • | | | | | 96 |
| CD158f | | | | • | | | | | | • | | | | | 96 |
| CD158i | | | | • | | | | | | • | | | | | 97 |
| CD159a | | | | • | | | | • | | • | | | | | 97 |
| CD160 | | | | • | | | | | | | | | | | 98 |
| CD161 | | | | • | | | | • | | | | • | | | 98 |
| CD166 | | | | • | | | | | | | | | | | 99 |
| CD180 | | | | • | | | | | | | | | | | 99 |
| CD183 | | | • | | | | | | | | | | | | 100 |
| CD184 | | | | • | | | | | | | | | | | 100 |
| CD196 | | | | | | | | • | | | | | | | 101 |
| CD197 | | | | • | | | | • | | | | | | | 101 |
| CD200 | | | | • | | | | • | | | | • | | | 102 |
| CD203c | | | | • | | | | • | | | | | | | 102 |

Other conjugations and purified bulk antibody available through our custom design services see page 14 - For conjugates abbreviation see Information section page 4

Table of Single Color Conjugated Antibodies

| Specificity | FITC | AF 700 | AF 488 | PE | ECD | PC5 | PC 5.5 | PC7 | AF 647 | APC | APC A700 | APC A750 | PB | KrO | Page |
|---------------------------|------|--------|--------|----|-----|-----|--------|-----|--------|-----|----------|----------|----|-----|------|
| CD206 | | | | • | | | | • | | | | | • | | 103 |
| CD207 | | | | • | | | | | | | | | | | 103 |
| CD209 | | | | • | | | | | | | | | | | 104 |
| CD235a | • | | | • | | | | • | | | | • | | | 105 |
| CD243 | | | | • | | | | | | | | | | | 105 |
| CD244 | | | | • | | | • | | | | | | | | 106 |
| CD274 | | | | | | | | • | | • | | | | | 106 |
| CD278 | | | | • | | | | | | • | | | | | 107 |
| CD279 | | | | • | | | • | • | | • | | | | | 107 |
| CD294 | • | | | • | | | | | | | | | | | 108 |
| CD300a | | | | • | | | | | | | | | | | 108 |
| CD305 | | | | • | | | | | | | | | | | 109 |
| CD309 | | | | • | | | | • | | | | | | | 109 |
| CD314 | | | | • | | | | | | • | | | | | 110 |
| CD328 | | | | • | | | | | | | | | | | 110 |
| CD335 | | | | • | | • | | • | | | | | | | 111 |
| CD336 | | | | • | | • | | | | | | | | | 111 |
| CD337 | | | | • | | • | | | | | | | | | 112 |
| CD352 | | | | • | | | | | | | | | | | 112 |
| CD370 | | | | | | | | | | • | | | | | 113 |
| CyclinA2 | • | | | • | | | | | | | | | | | 113 |
| Cytokeratin | • | | | | | | | | | | | | | | 114 |
| DAPI2 | | | | • | | | | | | | | | | | 114 |
| FMC7 | • | | | | | | | | | | | | • | | 115 |
| FoxP3 | | | | • | | | | • | • | | | | • | | 115 |
| Grauzyme B | • | | | | | | | | | | | | | | 116 |
| Helios | | | | | | | | | | | | | • | | 116 |
| HIV-1 core antigen | • | | | • | | | | | | | | | | | 116 |
| HLA-ABC | • | | | | | | | | | | | | | | 117 |
| HLA-DR | • | | | • | • | • | • | • | | • | | • | • | • | 118 |
| HLA-DR, DP, DQ | • | | | • | | | | | | | | | | | 118 |
| IFN-γ | • | | | • | | | | | | | | | • | | 119 |
| IgD | • | | | • | | | | | | • | | | | | 119 |
| IgM | • | | | • | | | | | | • | | | • | | 120 |
| IL-2 | | | | • | | | | | | | | | | | 121 |
| IL-4 | | | | • | | | | • | | | | | | | 121 |
| IL-17A | | • | | | | | | | | | | | • | | 122 |
| κ Chain | • | | | | | | | | | • | | | | | 122 |
| Ki-67 | | | • | | | | | | | | | | | | 123 |
| λ Chain | | | | • | | | | • | | | | | | | 123 |
| Lactoferrin | | | | • | | | | | | | | | | | 124 |
| Myeloperoxidase | • | | | • | | • | | | | | | | | | 124 |

Other conjugations and purified bulk antibody available through our custom design services see page 14 - For conjugates abbreviation see Information section page 4

Table of Single Color Conjugated Antibodies

| Specificity | FITC | AF 700 | AF 488 | PE | ECD | PC5 | PC 5.5 | PC7 | AF 647 | APC | APC A700 | APC A750 | PB | KrO | Page |
|--------------------------|------|--------|--------|----|-----|-----|--------|-----|--------|-----|----------|----------|----|-----|------|
| NG2 | | | | • | | | | | | | | | | | 125 |
| NKp80 | | | | • | | | | | | | | | | | 125 |
| OSCAR | | | | • | | | | | | | | | | | 126 |
| Perforin | | | | | | | | | | | | | • | | 126 |
| ROR1 | | | | • | | | | | | | | | | | 127 |
| TCR PAN α/β | | | | • | | • | | | | • | | | | | 127 |
| TCR PAN γ/δ | • | | | • | | • | • | • | | | | | | | 128 |
| TCR Vα7.2 | • | | | | | | | | | | | | | | 128 |
| TCR Vα24 | • | | | • | | | | • | | | | | | | 129 |
| TCR Vβ1 | • | | | • | | | | | | | | | | | 129 |
| TCR Vβ2 | • | | | • | | | | | | | | | | | 130 |
| TCR Vβ3 | • | | | | | | | | | | | | | | 130 |
| TCR Vβ4 | • | | | • | | | | | | | | | | | 131 |
| TCR Vβ5.1 | • | | | • | | | | | | | | | | | 131 |
| TCR Vβ5.2 | • | | | • | | | | | | | | | | | 132 |
| TCR Vβ5.3 | | | | • | | | | | | | | | | | 132 |
| TCR Vβ7.1 | • | | | • | | | | | | | | | | | 133 |
| TCR Vβ7.2 | • | | | • | | | | | | | | | | | 133 |
| TCR Vβ8 | • | | | • | | | | | | | | | | | 134 |
| TCR Vβ9 | | | | • | | | | | | | | | | | 134 |
| TCR Vβ11 | • | | | • | | | | | | • | | | | | 135 |
| TCR Vβ12 | • | | | • | | | | | | | | | | | 135 |
| TCR Vβ13.1 | • | | | • | | | | | | | | | | | 136 |
| TCR Vβ13.2 | | | | • | | | | | | | | | | | 136 |
| TCR Vβ13.6 | • | | | • | | | | | | | | | | | 137 |
| TCR Vβ14 | • | | | • | | | | | | | | | | | 137 |
| TCR Vβ16 | • | | | | | | | | | | | | | | 138 |
| TCR Vβ17 | • | | | • | | | | | | | | | | | 138 |
| TCR Vβ18 | | | | • | | | | | | | | | | | 139 |
| TCR Vβ20 | • | | | • | | | | | | | | | | | 139 |
| TCR Vβ21.3 | • | | | | | | | | | | | | | | 140 |
| TCR Vβ22 | • | | | • | | | | | | | | | | | 140 |
| TCR Vβ23 | | | | • | | | | | | | | | | | 141 |
| TCR Vδ1 | | | | | | | | • | | | | | | | 141 |
| TCR Vδ2 | • | | | | | | | | | | | | • | | 142 |
| TCR Vγ9 | • | | | | | • | | | | | | | | | 142 |
| TCR ζ | | | | • | | | | | | | | | | | 143 |
| TdI | • | | | | | | | | | | | | | | 143 |
| Thrombin receptor | | | | • | | | | | | | | | | | 144 |
| TIA-1 | | | | • | | | | | | | | | | | 144 |
| TNFα | | • | | • | | | | | | | | | | | 145 |
| ZAP-70 | | | | • | | | | | | | | | | | 145 |

Other conjugations and purified bulk antibody available through our custom design services see page 14 - For conjugates abbreviation see Information section page 4

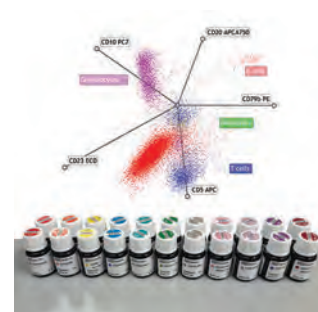
Single-Color Conjugated Antibodies



Beckman Coulter offers the largest portfolio of CE-IVD and ASR conjugated antibodies validated against clinical standards. We develop and manufacture reagents according to current Good Manufacturing Practices (cGMP), the highest quality standards in the industry, ensuring optimal antibody panel performance.

We offer a wide variety of antibodies for surface or intracellular staining, with more than 1,000 products available. Our antibody specificities are available in an extensive variety of clones, selected in collaboration with leading research institutions according to performance and current cellular analysis areas such as hemato-oncology, immune monitoring or stem cell studies.

Our comprehensive conjugated antibody portfolio is designed with proprietary, state-of-the-art chemistry for reduced background and maximum signal. Our proven tandem-dye design ensures stability, minimal spillover, and reproducible results over time. Beckman Coulter's quality control processes and manufacturing capabilities enable long-term lot-to-lot consistency.

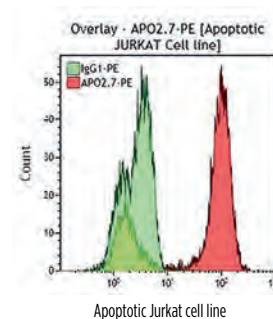


- Largest portfolio of conjugated antibodies validated against the clinical standards CE-IVD and ASR.
- Beckman Coulter's tandem dyes stability and lot-to-lot consistency ensure reproducible and reliable results.
- Broad portfolio of clones and dyes allows for flexible panel design.

Technical applications and cross reactivities of clones are described in the clone index. See page 299-304

APO2.7 (7A6)

The APO2.7 antigen (also named 7A6 antigen) is a 38 kDa protein localized on the membrane of mitochondria whose expression appears to be restricted to cells undergoing apoptosis. The APO2.7 antigen can be detected after apoptosis induction via CD95/Fas ligation, irradiation or drug treatment. Expression of APO2.7 appears as an early event in the apoptosis process. Normal viable cells are negative or weakly positive for APO2.7. Research studies have shown that less than 2% of peripheral T cells from normal donors expressed the APO2.7 antigen. Some level of APO2.7 expression associated with an on-going apoptotic process has been demonstrated in activated T cells.



Clone: 2.7A6A3 (APO2.7)

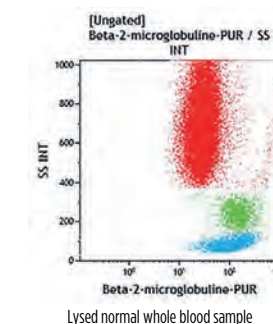
Isotype: IgG1 Mouse

The APO2.7 antibody can be used for the direct quantitation of apoptotic cells by flow cytometry, after permeabilization with digitonin. Use of APO2.7 allows for precise monitoring of the early and late cellular responses during apoptosis.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2088U | ASR | IOTest | GMP |

β2-microglobulin

The β2-microglobulin is the non-polymorphic non-covalently bound light chain (12 kDa) of the class I major histocompatibility complex (MHC-I) constitutively expressed on the surface of almost all nucleated cell. β2-microglobulin structure, stabilized by a disulfide bond, is similar to an immunoglobulin like domain. β2-microglobulin is required in the endoplasmic reticulum (ER) to associate with the MHC class I heavy molecule to form with other proteins (calreticulin, tapasin, etc.) the loading complex that exits the ER and is transported to the cell surface. After peptide presentation, β2-microglobulin is actively released into circulation.



Clone: BIG6

Isotype: IgG2a Mouse

The BIG6 monoclonal antibody is specific for human β2-microglobulin. It does not react with β2-microglobulin from other species. It recognizes the β2-microglobulin, free or associated with human HLA class I molecules.

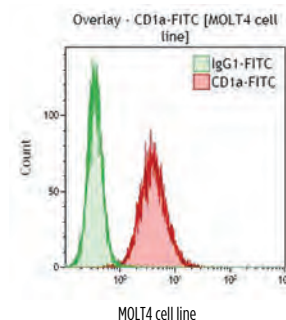
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------------|--------|--------|------|------------------|
| UNLB | 0.2 mg | Freeze-dried | IM0114 | RUO | - | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD1a

CD1a is a member of the lipid antigen presenting molecules family. Like the other CD1 proteins (group 1: CD1a, CD1b, CD1c and group 2: CD1d, CD1e), CD1a is a transmembrane protein of 49 kDa, noncovalently associated with β 2-microglobulin. As other group 1 CD1 antigens, CD1a is found on professional antigen-presenting cells (APC) such as dendritic cells, particularly on Langerhans cells and their direct circulating precursors. It is expressed by those cells related to dermal dendritic cells, derived from monocytes cultured for 6 days in the presence of GM-CSF and IL-4. The CD1a antigen is also present on a B cell subset. It is also strongly expressed by cortical thymocytes. CD1a antibodies are useful in the definition of the thymic stage of T cells.



Clone: SFC19Thy1A8 (T6)

Isotype: IgG1 Mouse

T6 (ref 6T-CD1.7) was used as a CD1a reference monoclonal antibody during HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|-----------|--------|----------------|--------|---------------|------------------|
| RD1 | 100 tests | Liquid | 6603185 | RUO | COULTER CLONE | GMP |

Clone: BL6

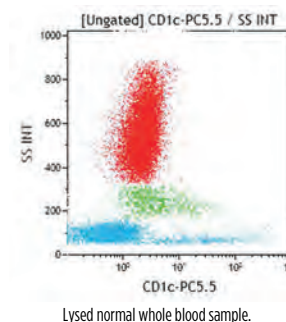
Isotype: IgG1 Mouse

The BL6 antibody recognizes the C epitope of the CD1a molecule.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | B25330 | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07742 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1942U | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM3610 | ASR | IOTest | GMP |
| APC | 1 mL | Liquid | IM3645 | ASR | IOTest | GMP |

CD1c

The CD1c antigen (also called BDCA-1) is a member of the CD1 family of proteins that are structurally related to MHC class I proteins. CD1c is a membrane glycoprotein with a molecular weight of 43 kDa, non-covalently associated with β 2-microglobulin. CD1c antigen is expressed on a major subpopulation of human myeloid dendritic cells. In blood, CD1c is also expressed on a subpopulation of CD19+ small resting B lymphocytes. Its expression has also been detected on cortical thymocytes (weakly), on Langerhans cells and on dendritic cells. CD1c+ myeloid dendritic cells have been designated as type-1 myeloid dendritic cells (MDC1s). It has been reported that CD1c is also expressed on mature T cells in a tightly regulated manner. CD1c is involved in antigen-presentation of glycolipids. It may also act in T cells as an immune regulatory molecule.



Clone: L161

Isotype: IgG1 Mouse

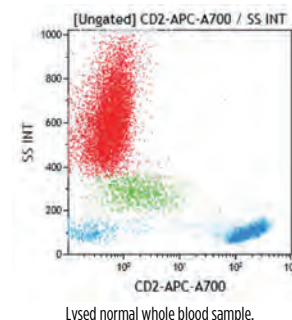
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|--------------|--------|--------|---------------|--------|--------|------------------|
| PC5.5 | 0.5 mL | Liquid | B46036 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD2

The CD2 antigen (also called LFA-2 or T11 antigen) is a 50 kDa single chain type I transmembrane glycoprotein that comprises two external domains belonging to the immunoglobulin superfamily (IgSF). It was formerly described as the sheep red blood cell receptor, causing T-cell rosetting. Signaling molecules, such as Fyn, Lck and the PI3-kinase, have been reported to associate with the intracellular domain of CD2. CD2 has been identified as the ligand for CD58 (LFA-3). It is also a receptor for CD48, CD59 and CD15. The CD58-CD2 interaction is a component of intercellular adhesion and costimulatory signaling in T cells. CD2 is involved in the regulation of human T-cell cytokine production, and in a Fas-independent induced apoptosis of activated human peripheral T cells. CD2 is present on all human non-B peripheral lymphocytes, on the majority of thymic T cells, and on a subset of thymic B cells.



Clone: SFC13Pt2H9 (T11)

Isotype: IgG1 Mouse

SFC13Pt2H9 inhibits sheep erythrocyte rosette formation. It has been used as a CD2 reference monoclonal antibody during HLDA 6 (ref.6T-CD2.6).

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|----------------|----------|---------------|------------------|
| FITC | 100 tests | Freeze-dried | 6602389 | IVD & CE | COULTER CLONE | GMP |
| FITC | 50 tests | Liquid | 6603863 | IVD & CE | CYTO-STAT | GMP |
| RD1 | 100 tests | Liquid | 6602868 | IVD & CE | COULTER CLONE | GMP |
| RD1 | 50 tests | Liquid | 6603849 | IVD & CE | CYTO-STAT | GMP |

Clone: 39C1.5

Isotype: IgG2a Rat

39C1.5 inhibits sheep erythrocyte rosette formation. It has been used as a CD2 reference monoclonal antibody during HLDA 6 (ref.6T-CD2.7).

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B09685 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | A07743 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0442U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07744 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM0443U | ASR | IOTest | GMP |
| ECD | 0.5 mL | Liquid | B46023 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07745 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2634U | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | A21689 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | A51074 | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | B49210 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | A60794 | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | B12111 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B01681 | ASR | IOTest | GMP |

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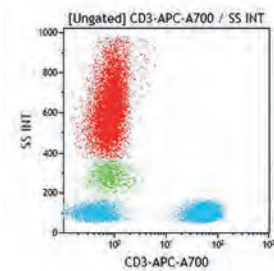
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD3

CD3 ζ see TCR ζ .

The CD3 antigen is a complex of 5 invariable polypeptidic chains: γ , δ , ϵ , ζ and η , whose molecular weights are respectively 25-28, 21, 20, 16 and 22 kDa. The CD3 chains are clustered in a group of two invariant dimers, γ/ϵ and δ/ϵ associated with a variable dimer which consists of ζ homodimers, or ζ/η , or ζ/γ FcR heterodimers (γ FcR being the γ chain of the Fc receptors), or γ FcR homodimers. The CD3 is part of a bigger complex which includes the T Cell Receptor (TCR). CD3 complex associated with the TCR is involved in the recognition of peptides bound to the major histocompatibility complex class I and II during the immune response. T cell activation may be induced when a foreign antigen is presented to the TCR through MHC complex. The CD3 antigen is expressed by mature T lymphocytes and by a subset of thymocytes.



Lysed normal whole blood sample.

Clone: UCHT1

Isotype: IgG1 Mouse

UCHT1 reacts with the ϵ -chain of the CD3 complex. It was used as a CD3 reference mAb (ref.6T-CD3.1) during HLDA 6. After permeabilization with saponin-based permeabilization reagent IntraPrep, it may be used to detect intracytoplasmic CD3 by flow cytometry.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|-----------|--------------|---------|----------|---------------|------------------|
| PB | 50 tests | Liquid | B49204 | CE | IOTest | 98/79/EC |
| PB | 0.5 mL | Liquid | A93687 | ASR | IOTest | GMP |
| KrO | 0.5 mL | Liquid | B00068 | ASR | IOTest | GMP |
| FITC | 50 tests | Liquid | 6604623 | IVD & CE | CYTO-STAT | GMP |
| FITC | 100 tests | Freeze-dried | 6604625 | IVD & CE | COULTER CLONE | GMP |
| FITC | 100 tests | Liquid | A07746 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM1281U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07747 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1282U | ASR | IOTest | GMP |
| RD1 | 50 tests | Liquid | 6604621 | IVD & CE | CYTO-STAT | GMP |
| RD1 | 100 tests | Liquid | 6604627 | IVD & CE | COULTER CLONE | GMP |
| ECD | 100 tests | Liquid | A07748 | CE | IOTest | 98/79/EC |
| ECD | 1 mL | Liquid | IM2705U | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07749 | CE | IOTest | 98/79/EC |
| PC5 | 0.5 mL | Liquid | 6607010 | ASR | CYTO-STAT | GMP |
| PC5 | 1 mL | Liquid | IM2635U | ASR | IOTest | GMP |
| PC5.5 | 50 tests | Liquid | B49203 | CE | IOTest | 98/79/EC |
| PC5.5 | 0.5 mL | Liquid | A66327 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | 6607100 | RUO | IOTest | GMP |
| PC7 | 100 tests | Liquid | 737657 | CE | IOTest | 98/79/EC |
| APC | 100 tests | Liquid | IM2467 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM2467U | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | B10823 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | A94680 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A66329 | ASR | IOTest | GMP |
| UNLB | 2 mL | Liquid | IM1280 | ASR | - | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM1304 | ASR | - | GMP |

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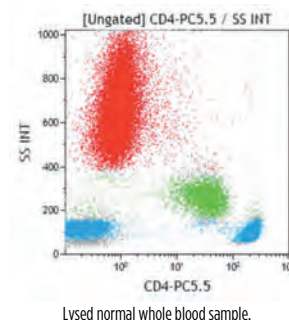
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Single-Color Conjugated Antibodies

CD4

The CD4 antigen is a monomeric transmembrane glycoprotein with a molecular weight of 59 kDa. The intracytoplasmic tail of CD4 is essential for interaction with Lck. The CD4 is expressed on the T "helper" (Th or T4) lymphocytes. It is expressed on most thymocytes, where it is frequently co-expressed with CD8. CD4 is also expressed on eosinophils. All the monocytes carry the CD4 antigen, but at a lower density than T4 lymphocytes. CD4 acts as an accessory molecule to the T cell receptor complex during T-cell activation restricted to the major histocompatibility complex class II. The T4 lymphocytes are involved in T-T, T-B, and B-macrophage cellular interactions. They are active in inducing and helping the synthesis of immunoglobulins by B cells. CD4 functions as the receptor for IL-16 which is a chemoattractant factor for CD4+ T cells, as well as for monocytes and eosinophils. IL-16 seems to be a growth factor for T4 lymphocytes, but is not able to induce cell division. CD4 is a receptor for the Human Immunodeficiency Virus type I (HIV-1) envelope protein gp120.



Clone: 13B8.2

Isotype: IgG1 Mouse

13B8.2 monoclonal antibody antagonizes HIV effects *in vitro*. 13B8.2 recognizes an epitope close to the amino-acid residues 88-89 within the CD4 molecule. 13B8.2 and BL4 recognize different epitopes. 13B8.2 and BL4 are not cross-blocking.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------------|----------------|--------|--------|------------------|
| PB | 50 tests | Liquid | B49197 | CE | IOTest | 98/79/EC |
| PB | 0.5 mL | Liquid | A82789 | ASR | IOTest | GMP |
| KrO | 0.5 mL | Liquid | A96417 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | A07750 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0448U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07751 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM0449U | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07752 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2636U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B16491 | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | IM2468 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM2468U | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | B10824 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | A94682 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A94685 | ASR | IOTest | GMP |
| Biot | 0.2 mg | Freeze-dried | IM0704 | ASR | - | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0398 | ASR | - | GMP |

NEW

Clone: SFC12T4D11 (T4)

Isotype: IgG1 Mouse

SFC12T4D11 monoclonal antibody antagonizes HIV effects *in vitro*.

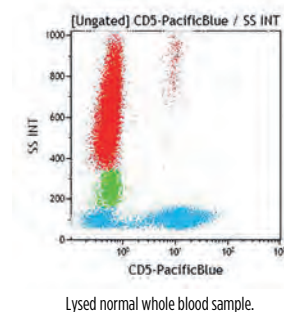
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|----------------|----------|---------------|------------------|
| FITC | 100 tests | Freeze-dried | 6602393 | IVD & CE | COULTER CLONE | GMP |
| FITC | 50 tests | Liquid | 6603862 | IVD & CE | CYTO-STAT | GMP |
| RD1 | 100 tests | Liquid | 6602864 | IVD & CE | COULTER CLONE | GMP |
| RD1 | 50 tests | Liquid | 6603850 | IVD & CE | CYTO-STAT | GMP |
| ECD | 0.5 mL | Liquid | 6604727 | ASR | CYTO-STAT | GMP |
| PC7 | 100 tests | Liquid | 6607101 | RUO | IOTest | GMP |
| PC7 | 100 tests | Liquid | 737660 | CE | IOTest | 98/79/EC |

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Single-Color Conjugated Antibodies

CD5

CD5 is a type I transmembrane glycoprotein with a molecular weight of 67 kDa. The extracellular domain consists of 3 scavenger receptor cysteine-rich (SRCR) domains of nearly 100 amino acids each. The CD5 is expressed at the surface of mature T lymphocytes, by most of thymocytes and by a subpopulation of B lymphocytes (B-1a) expanded in neonatal life, several autoimmune disorders and some B-cell proliferative disorders (B-CLL). It is not found on granulocytes, monocytes and platelets. The CD5 antigen is the ligand for the B-lymphocytes cell-surface protein CD72. The CD5 / CD72 interactions are involved in the regulation of T and B lymphocyte activation and proliferation. B lymphocytes can be divided into B-1 lymphocytes and B-2 (or conventional B) lymphocytes based on different localization, functional characteristics and gene expression. The B-1 lymphocyte subset is divided into B-1a and B-1b subpopulations, which do or do not express the CD5 antigen respectively. The B-1a CD5+ B lymphocyte subset expresses immunoglobulin with inherent low affinities for self-antigens.



Clone: BL1a

Isotype: IgG2a Mouse

BL1a monoclonal antibody (ref. 6T-CD5.5) was used as a CD5 reference monoclonal antibody during HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | A82790 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | A08932 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0468U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07753 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM0469U | ASR | IOTest | GMP |
| ECD | 1 mL | Liquid | A33096 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07754 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2637U | ASR | IOTest | GMP |
| PC5.5 | 50 tests | Liquid | B49191 | CE | IOTest | 98/79/EC |
| PC5.5 | 0.5 mL | Liquid | A70203 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | A21690 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | A51075 | ASR | IOTest | GMP |
| APC | 1 mL | Liquid | A60790 | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | A78835 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | B92413 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A78836 | ASR | IOTest | GMP |

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Clone: CLB-T1/1

Isotype: IgG1 Mouse

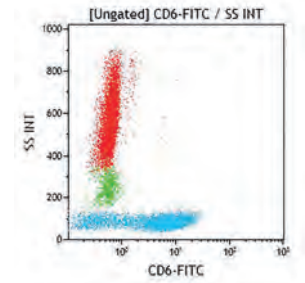
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|--------|--------|---------------|--------|--------|------------------|
| ECD | 0.5 mL | Liquid | B55387 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B55386 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD6

The CD6 antigen is a single-chain type I transmembrane glycoprotein with three extracellular SRCR domains. It exists predominantly in two isoforms as 100 kDa and 130 kDa. CD6 is an extensively glycosylated molecule and differences in glycosylation patterns may occur. The CD6 molecule is modified by phosphorylation of serine, threonine and tyrosine residues during T-cell activation. CD6 have a role as a costimulatory molecule for T-cell activation and in cell adhesion. CD166 was identified as an adhesion receptor for CD6. The CD6 antigen is expressed on the surface of most mature human T cells and a subset of resting B cells and medullary thymocytes. It is found on NK cells not it is reported to be on any other cells.



Lysed normal whole blood sample.

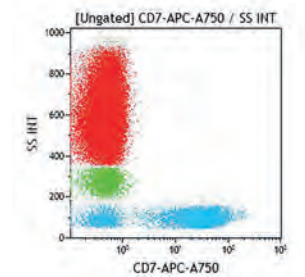
Clone: 2H46D3B

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | B16492 | ASR | IOTest | GMP |

CD7

The CD7 antigen is a membrane-embedded glycoprotein with a molecular weight of 40 kDa. It is expressed at an early stage of T lineage ontogeny, during the extrathymic prothymocytic formation. CD7 expression persists throughout T lymphocytes differentiation defining CD7 as a pan-T marker. It is also expressed on thymocytes, on the majority of resting T lymphocytes, and Natural Killer cells (NK), and on a subset of pre-B lymphocytes and B lymphocytes from foetal bone marrow. CD7 expression is also detected on pluripotent hematopoietic stem cells. Mature B-lymphocytes, cells from erythroid, myeloid and megacaryocytic lineage do not express the CD7 molecule. The CD7 molecule is involved in T lymphocytes activation. Its expression may be quantitatively up-regulated on stimulated T lymphocytes.



Lysed normal whole blood sample.

Clone: 3A1E-12H7

Isotype: IgG2b Mouse

3A1E-12H7 (ref. 6T-CD7.4) was used as a CD7 reference monoclonal antibody during HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------------|----------------|--------|---------------|------------------|
| FITC | 0.5 mL | Liquid | 6603824 | ASR | CYTO-STAT | GMP |
| FITC | 0.1 mg | Freeze-dried | 6603825 | ASR | COULTER CLONE | GMP |
| RD1 | 0.5 mL | Liquid | 6603822 | ASR | CYTO-STAT | GMP |
| RD1 | 0.5 mL | Liquid | 6603827 | ASR | COULTER CLONE | GMP |

Clone: 8H8.1

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B06499 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | A07755 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0585U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1429U | ASR | IOTest | GMP |
| ECD | 1 mL | Liquid | A70202 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | IM3613 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM3613U | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | B49183 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | A46526 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A97050 | ASR | IOTest | GMP |
| APC-A700 | 50 tests | Liquid | B36290 | CE | IOTest | 98/79/EC |
| APC-A700 | 0.5 mL | Liquid | A70201 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B16892 | ASR | IOTest | GMP |

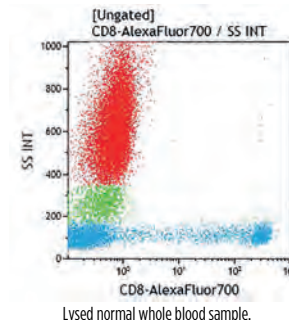
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Single-Color Conjugated Antibodies

CD8

The CD8 antigen is a disulfide-linked dimer, which exists either as a CD8 α homodimer or as a CD8 α/β heterodimer. CD8 α is required for surface expression of CD8 β . The molecular weight of each monomer of α or β is approximately 32-34 kDa. CD8 binds to a non-polymorphic domain ($\alpha 3$ domain) of MHC Class I molecules. CD8 is expressed on a subset of human peripheral blood T lymphocytes. A subset of NK cells possess the CD8 antigen but show low to medium density of expression. CD8 α homodimer is expressed by NK cells and $\gamma/\delta+$ T cells. CD8 is also present on most thymocytes where it is frequently co-expressed with CD4, and on a subpopulation of bone marrow cells. The CD8 molecule acts with the T Cell Receptor (TCR) as a coreceptor for MHC class I restricted antigen recognition. CD8 is widely used as a marker of cytotoxic T lymphocytes.



Clone: B9.11

Isotype: IgG1 Mouse

The B9.11 monoclonal antibody recognizes the α chain of the CD8 molecule. It was used as a CD8 reference monoclonal antibody during HLDA 6 (ref. 6T-CD8.5).

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| PB | 50 tests | Liquid | B49182 | CE | IOTest | 98/79/EC |
| PB | 0.5 mL | Liquid | A82791 | ASR | IOTest | GMP |
| KrO | 0.5 mL | Liquid | B00067 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | A07756 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0451U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07757 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM0452U | ASR | IOTest | GMP |
| ECD | 0.5 mL | Liquid | B08467 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07758 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2638U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B21205 | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | IM2469 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM2469U | ASR | IOTest | GMP |
| AF700 | 0.5 mL | Liquid | B76279 | ASR | IOTest | GMP |
| APC-A700 | 50 tests | Liquid | B49181 | CE | IOTest | 98/79/EC |
| APC-A700 | 0.5 mL | Liquid | A66332 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | A94683 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A94686 | ASR | IOTest | GMP |

NEW

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NEW

Clone: SFC121Thy2D3 (T8)

Isotype: IgG1 Mouse

SFC121Thy2D3 monoclonal antibody recognizes the α chain of the CD8 molecule.

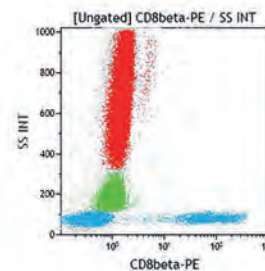
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|--------------|-----------|--------------|----------------|----------|---------------|------------------|
| FITC | 100 tests | Freeze-dried | 6602385 | IVD & CE | COULTER CLONE | GMP |
| FITC | 50 tests | Liquid | 6603861 | IVD & CE | CYTO-STAT | GMP |
| RD1 | 100 tests | Liquid | 6603274 | IVD & CE | COULTER CLONE | GMP |
| RD1 | 50 tests | Liquid | 6603848 | IVD & CE | CYTO-STAT | GMP |
| ECD | 50 tests | Liquid | 737659 | CE | CYTO-STAT | 98/79/EC |
| ECD | 0.5 mL | Liquid | 6604728 | ASR | CYTO-STAT | GMP |
| PC5 | 0.5 mL | Liquid | 6607011 | ASR | CYTO-STAT | GMP |
| PC5.5 | 0.5 mL | Liquid | A99019 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | 6607102 | RUO | IOTest | GMP |
| PC7 | 100 tests | Liquid | 737661 | CE | IOTest | 98/79/EC |
| APC | 0.5 mL | Liquid | A99023 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD8 β

Along with CD8 α , the CD8 β polypeptide molecule is one of the two chains which can be expressed within the CD8 dimer. CD8 α is required for surface expression of CD8 β . The α and β glycoproteins have similar molecular weights of 32-34 kDa each. They form homodimeric (CD8 α/α) or heterodimeric (CD8 α/β) cell surface complexes. Most of human peripheral T cells express CD8 as an α/β heterodimer. NK cells and a proportion of TCR γ/δ T cells express CD8 as an α/α homodimer. CD8 β surface expression requires the surface expression of CD8 α . Consequently, CD8 α can form homodimer but CD8 β cannot.



Lysed normal whole blood sample.

Clone: 2ST8.5H7

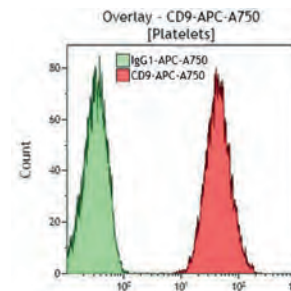
Isotype: IgG2a Mouse

The 2ST8.5H7 monoclonal antibody reacts with an epitope formed by the combination of the α and β polypeptides.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|----------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | B42025 | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM2217U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | 6607123 | RUO | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM2014 | RUO | - | GMP |

CD9

CD9 (p24 antigen) is a single transmembrane polypeptide of 24 kDa related to the tetraspanin (TM4) family. Like other tetraspanins (e.g. CD63, CD81, CD82, CD37, CD53, among the 20 known members), CD9 structure is composed of 4 transmembrane domains, with intracellular N and C termini. First discovered on a lymphoblastic cell line of pre-B phenotype, CD9 was then found on platelets and within their α -granules, on monocytes, pre-B cells, eosinophils, basophils and activated T cells. The CD9 molecule associates with other surface proteins such as the $\alpha 6/\beta 4$ integrin (CD49f/CD104 molecule) and HLA-DR, suggesting a role in adhesion, signal transduction and cell motility.



Platelet-rich plasma (PRP) from normal whole blood.

Clone: ALB6

Isotype: IgG1 Mouse

The ALB6 monoclonal antibody (mAb) was first reported as specific for CD9 (p24) on platelets, capable of modulating aggregation of platelets activated with various agonists.

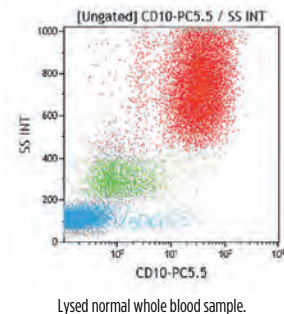
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|--------|--------------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B09979 | ASR | IOTest | GMP |
| FITC | 2 mL | Liquid | IM1755U | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B13649 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0117 | RUO | - | GMP |

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Single-Color Conjugated Antibodies

CD10

The CD10 antigen is referred to as the Common Acute Lymphoblastic Leukemia Antigen (CALLA). It is a type II integral membrane protein of 100 kDa, identified as the human membrane-associated neutral endopeptidase (EC3.4.24.11). It is expressed on uncommitted lymphoid precursors. CD10 expression is lost as cells enter the T lineage. In the B lineage, CD10 expression is lost later in ontogeny, as cells acquire surface Ig expression. It is also expressed on activated and proliferating B cells in the germinal center, and on neutrophils as well as on bone marrow stromal cells. It is also expressed on a number of other cells of epithelial origin.



Clone: J5

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------------|----------------|--------|---------------|------------------|
| FITC | 0.5 mg | Freeze-dried | 6602463 | ASR | COULTER CLONE | GMP |
| FITC | 0.5 mL | Liquid | 6604107 | ASR | CYTO-STAT | GMP |
| RD1 | 0.5 mL | Liquid | 6603475 | ASR | COULTER CLONE | GMP |
| RD1 | 0.5 mL | Liquid | 6604120 | ASR | CYTO-STAT | GMP |

Clone: ALB1

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | A07759 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM2720U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07760 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1915U | ASR | IOTest | GMP |
| ECD | 1 mL | Liquid | IM3608U | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07761 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2721U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B16490 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | B96750 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | A46527 | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | B92400 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM3633 | ASR | IOTest | GMP |
| APC-A700 | 50 tests | Liquid | B49223 | CE | IOTest | 98/79/EC |
| APC-A700 | 0.5 mL | Liquid | A86353 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | A89310 | ASR | IOTest | GMP |

Clone: ALB2

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0471U | ASR | IOTest | GMP |

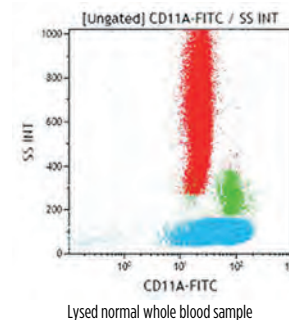
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Single-Color Conjugated Antibodies



CD11a

CD11a (α L integrin, LFA-1 α chain) is a member of the integrin family. Like some other leucocyte integrins (CD11b, CD11c, CD11d), CD11a is non-covalently associated with the β 2 integrin subunit CD18. CD11a is a transmembrane glycoprotein of 170 kDa, mainly expressed by leucocytes including monocytes, macrophages, neutrophils, eosinophils, basophils, B and T lymphocytes. Activated platelets also express CD11a and CD18. LFA-1 (CD11a/CD18) promotes homotypic adhesion between lymphoid cells and heterotypic adhesion of leucocytes to the vascular endothelium. LFA-1's known ligands are Intercellular Adhesion Molecules (ICAM): ICAM-1 (CD54), ICAM-2 (CD102) and ICAM-3 (CD50).



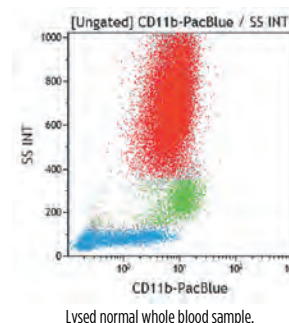
Clone: 25.3

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0860U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1433U | ASR | IOTest | GMP |

CD11b

The CD11b antigen is also known as the integrin α M subunit. It combines with the CD18 antigen (integrin β 2 subunit) to build the integrin Mac-1 (CD11b/CD18, α M β 2, CR3, iC3bR, Mo-1). CD11b is a type I transmembrane glycoprotein of 170 or 165 kDa under reducing or non-reducing conditions, respectively. CD11b shows 19 potential N-glycosylation sites. Expression of the CD11b chain on the cell surface requires the presence of the CD18 antigen (also known as β 2 integrin chain). Together, these two subunits create the CD11b/CD18 integrin, one of the four integrin heterodimers that can be built by the association of CD18 β chain with four distinctive CD11 α chains. CD11b/CD18 is highly expressed on NK Cells, neutrophils, monocytes and macrophages.



Clone: 94 (Mo1)

Isotype: IgM Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------------|----------------|--------|---------------|------------------|
| FITC | 0.5 mg | Freeze-dried | 6602573 | ASR | COULTER CLONE | GMP |

Clone: Bear1

Isotype: IgG1 Mouse

Bear1 is a non blocking monoclonal antibody.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------------|----------------|--------|--------|------------------|
| PB | 50 tests | Liquid | B36296 | CE | IOTest | 98/79/EC |
| PB | 0.5 mL | Liquid | B16891 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | IM0530 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0530U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM2581U | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM3611 | ASR | IOTest | GMP |
| PC7 | 1 mL | Liquid | A54822 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A87782 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | B36295 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A97052 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0190 | ASR | - | GMP |

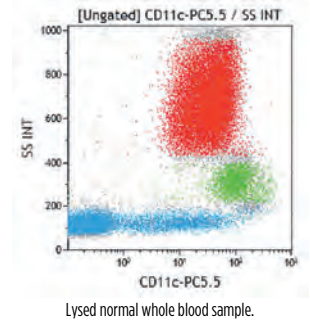
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Single-Color Conjugated Antibodies



CD11c

CD11c (integrin α X subunit, also known as leucocyte surface antigen p150, Axb2 and CR4) is a member of the integrin family. Like other leucocyte integrins (CD11a, CD11b, CD11d), CD11c is non-covalently associated with the β 2 integrin subunit (CD18). CD11c is a transmembrane glycoprotein of 145-150 kDa, mainly expressed by monocytes, macrophages and NK cells, and to a lesser extent by granulocytes, dendritic cells and some subsets of T and B cells. CD11c / CD18 has an important role in cytotoxic T cell killing, in the adhesion of monocytes and neutrophils to the endothelium and induces cellular activation. The CD11c is ~87% homologous in sequence to CD11b, and recognizes similar ligands including complement factor fragment iC3b, fibrinogen, CD54 and bacterial lipopolysaccharide.



Clone: BU15

Isotype: IgG1 Mouse

The BU15 antibody was used as a CD11c reference mAb (ref.6) during HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|-----------|--------|---------|--------|--------|------------------|
| PE | 100 tests | Liquid | IM1760 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1760U | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM3707 | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B19719 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | B96763 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | A80249 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B01680 | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | B43304 | ASR | IOTest | GMP |

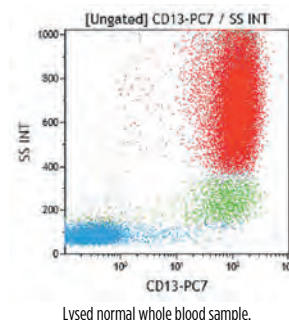
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Single-Color Conjugated Antibodies

CD13

The CD13 antigen is a transmembrane glycoprotein with a large extracellular region and a small intracellular NH₂-terminal tail. It has a molecular weight of 150 kDa and is expressed on the cell surface as a non-covalently linked homodimer. It is found on most cells of myeloid origin including neutrophils, eosinophils, basophils and monocytes from normal peripheral blood. It is absent from B and T lymphocytes as well as from red blood cells and platelets. This molecule is found on the surface of committed progenitor cells defined as the Granulocyte-Monocyte Colony Forming Units (CFU-GM) in normal bone marrow. There are up to five subpopulations of CD13 molecules possessing different levels of glycosylation, which may explain the different binding patterns of various CD13 antibodies.



Clone: 366 (MY7) Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|--------|--------|----------------|--------|---------------|------------------|
| RD1 | 0.5 mL | Liquid | 6602989 | ASR | COULTER CLONE | GMP |
| PC7 | 0.5 mL | Liquid | B19714 | ASR | IOTest | GMP |

Clone: SJID1 Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0778U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07762 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1427U | ASR | IOTest | GMP |
| ECD | 0.5 mL | Liquid | B24026 | ASR | IOTest | GMP |

Clone: Immu103.44 Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|--------------|-----------|--------|----------------|--------|--------|------------------|
| ECD | 100 tests | Liquid | B36286 | CE | IOTest | 98/79/EC |
| ECD | 1 mL | Liquid | A33097 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07763 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2639U | ASR | IOTest | GMP |
| PC5.5 | 50 tests | Liquid | B49196 | CE | IOTest | 98/79/EC |
| PC5.5 | 0.5 mL | Liquid | A79389 | ASR | IOTest | GMP |
| PC7 | 1 mL | Liquid | A46528 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A87783 | ASR | IOTest | GMP |

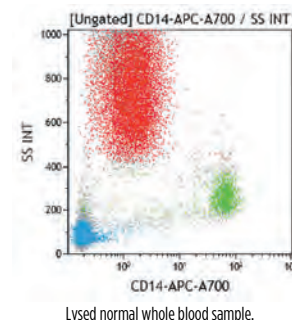
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Single-Color Conjugated Antibodies

CD14

The CD14 antigen is a glycosyl-phosphatidylinositol-linked single-chain surface membrane glycoprotein with a molecular weight of 53-55 kDa. It functions as a high affinity receptor for the complex of LipoPolySaccharide (LPS) and the LPS-Binding Protein (LBP). It is found on cells of myelomonocytic lineage. CD14 antigen is strongly expressed on monocytes, macrophages, and weakly on neutrophils. It is also weakly expressed on B lymphocytes, but is absent from T lymphocytes, NK cells, red blood cells and platelets. It is found on Langerhans cells, follicular dendritic cells and histiocytes.



Clone: 116 (Mo2)

Isotype: IgM Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|----------------|----------|---------------|------------------|
| FITC | 50 tests | Liquid | 6604114 | IVD & CE | CYTO-STAT | GMP |
| FITC | 100 tests | Freeze-dried | 6602507 | IVD | COULTER CLONE | GMP |
| RD1 | 50 tests | Liquid | 6604500 | IVD & CE | CYTO-STAT | GMP |
| RD1 | 100 tests | Liquid | 6603266 | IVD | COULTER CLONE | GMP |

Clone: 322A-1 (MY4)

Isotype: IgG2b Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|----------------|----------|---------------|------------------|
| FITC | 100 tests | Freeze-dried | 6603511 | IVD & CE | COULTER CLONE | GMP |
| FITC | 50 tests | Liquid | 6604110 | IVD & CE | CYTO-STAT | GMP |
| RD1 | 100 tests | Liquid | 6603262 | IVD & CE | COULTER CLONE | GMP |

Clone: RMO52

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B00846 | ASR | IOTest | GMP |
| KrO | 0.5 mL | Liquid | B01175 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | B36297 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0645U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07764 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM0650U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | B92391 | CE | IOTest | 98/79/EC |
| ECD | 1 mL | Liquid | IM2707U | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07765 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2640U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | A70204 | ASR | IOTest | GMP |
| PC7 | 1 mL | Liquid | A22331 | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | IM2580 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM2580U | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | A99020 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | B92421 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A86052 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0643 | ASR | - | GMP |

NEW

NEW

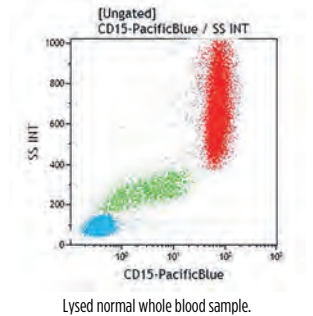
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Single-Color Conjugated Antibodies



CD15

The CD15 antigen (Lewis x or Lex) is the lacto-N-(neo) fucopentaose III molecule. This carbohydrate epitope is carried by both glycolipids and glycoproteins expressed on the cell membrane. CD15 antigen is strongly expressed by neutrophils, eosinophils, monocytes, macrophages, mast cells and normal myeloid precursor cells. It is not expressed on normal erythrocytes, platelets or lymphocytes. CD15 may function as an important signaling molecule capable of initiating proinflammatory events in monocytes that come into contact with activated endothelium.



Clone: 80H5

Isotype: IgM Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard | |
|-------------|-----------|--------|----------------|--------|--------|------------------|------------|
| PB | 50 tests | Liquid | B49218 | CE | IOTest | 98/79/EC | NEW |
| PB | 0.5 mL | Liquid | A74775 | ASR | IOTest | GMP | |
| KrO | 0.5 mL | Liquid | B01176 | ASR | IOTest | GMP | |
| FITC | 100 tests | Liquid | B36298 | CE | IOTest | 98/79/EC | |
| FITC | 2 mL | Liquid | IM1423U | ASR | IOTest | GMP | |
| PE | 2 mL | Liquid | IM1954U | ASR | IOTest | GMP | |
| PC5 | 100 tests | Liquid | B49217 | CE | IOTest | 98/79/EC | NEW |
| PC5 | 1 mL | Liquid | IM2641U | ASR | IOTest | GMP | |

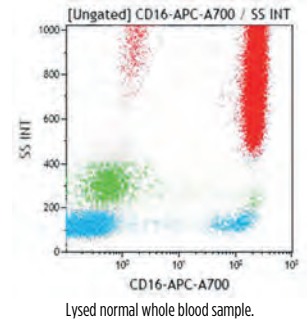
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Single-Color Conjugated Antibodies



CD16

The CD16 antigen is the low-affinity receptor for IgG (FcγRIII). The CD16 antigen exists in two different forms encoded by two different genes: FcγRIIIA (or III-2) and FcγRIIIB (or III-1). The genetic heterogeneity of CD16 generates alternative membrane-anchored molecules. One is a transmembrane form (FcγRIIIA, 50-65 kDa) expressed on NK cells, monocytes and macrophages. The other is a glycosylphosphatidylinositol (GPI)-anchored form (FcγRIIIB, 48 kDa) only expressed on neutrophils. It has been shown that the CD16 antigen can be non-covalently associated within the membrane of NK cells, to a disulfide-linked homo or heterodimer made from the 16 kDa CD3ζ chain and the FcεRIγ chain.



Clone: 3G8

Isotype: IgG1 Mouse

The 3G8 monoclonal antibody is inappropriate for western blot use. 3G8 binds to both isoforms of the CD16 molecule.

| Form | Size | Format | Part# | Status | Line | Quality Standard | |
|----------|-----------|--------------|---------|--------|-----------|------------------|-----|
| PB | 50 tests | Liquid | B36292 | CE | IOTest | 98/79/EC | |
| PB | 0.5 mL | Liquid | A82792 | ASR | IOTest | GMP | |
| KrO | 0.5 mL | Liquid | B00069 | ASR | IOTest | GMP | |
| FITC | 100 tests | Liquid | B49215 | CE | IOTest | 98/79/EC | NEW |
| FITC | 0.5 mL | Liquid | 6604894 | ASR | CYTO-STAT | GMP | |
| FITC | 2 mL | Liquid | IM0814U | ASR | IOTest | GMP | |
| PE | 100 tests | Liquid | A07766 | CE | IOTest | 98/79/EC | |
| PE | 2 mL | Liquid | IM1238U | ASR | IOTest | GMP | |
| ECD | 100 tests | Liquid | B49216 | CE | IOTest | 98/79/EC | NEW |
| ECD | 1 mL | Liquid | A33098 | ASR | IOTest | GMP | |
| PC5 | 100 tests | Liquid | A07767 | CE | IOTest | 98/79/EC | |
| PC5 | 1 mL | Liquid | IM2642U | ASR | IOTest | GMP | |
| PC7 | 100 tests | Liquid | 6607118 | RUO | IOTest | GMP | |
| APC | 0.5 mL | Liquid | B00845 | ASR | IOTest | GMP | |
| APC-A700 | 0.5 mL | Liquid | B20023 | ASR | IOTest | GMP | |
| APC-A750 | 50 tests | Liquid | B49184 | CE | IOTest | 98/79/EC | NEW |
| APC-A750 | 0.5 mL | Liquid | A66330 | ASR | IOTest | GMP | |
| UNLB | 0.2 mg | Freeze-dried | IM0813 | ASR | - | GMP | |

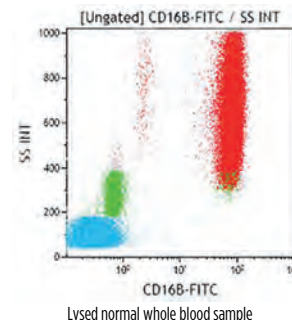
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Single-Color Conjugated Antibodies



CD16b

Fc- γ RIII (CD16) is a low affinity receptor involved in interactions with immune complexes. It is a 50 – 80 kDa protein with two distinct forms encoded by two different genes: IIIA and IIIB. The transmembrane form (Fc- γ RIIIA) is expressed on NK cells, monocytes and macrophages. The IIIB mRNA encodes Fc γ RIIIB, a glycoprotein anchored to the outer leaflet of the membrane by a glycosylphosphatidylinositol (GPI) moiety and is transcribed only in human neutrophils. Fc γ RIIIB (CD16b) may act with Fc γ RIIA (CD32) expressed on neutrophils to mediate antibody-dependent cytotoxicity (ADCC) and phagocytosis. The GPI-linked receptor exists in a soluble form (sCD16) revealing an immunoregulatory function through interaction with complement receptors.



Clone: 1D3

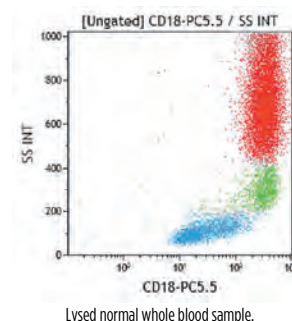
Isotype: IgM Mouse

The monoclonal antibody 1D3 was shown to be non-reactive with NK cells or monocytes but to be specific to polymorphonuclear leucocytes (PMNs). It recognizes an epitope specific to the Fc γ RIIIB molecule and was characterized as the sole antibody belonging to the CD16b cluster of differentiation. This antibody reacts with PMNs, irrespective of the neutrophil antigen (NA) phenotype, although it shows lower reactivity with NA2-homozygote PMNs as compared to NA1-homozygotes or NA1/NA2 heterozygotes.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM2353U | ASR | IOTest | GMP |

CD18

The beta2 integrins (CD11/CD18) are the major adhesion molecule family of leukocytes. Most leukocytes express one or more members of this family. CD18 is the 95 kDa integrin β 2-chain which forms non-covalently-bound heterodimers with one of four α subunits. The four alpha subunits are: CD11a (α L) (all leukocytes), CD11b (α M) (granulocytes, monocytes, some macrophages), CD11c (α X) (granulocytes, monocytes, dendritic antigen presenting cells), CD11d (α D) (CD8 T-cell subpopulation including large granular lymphocytes, macrophages and gamma-delta T cells in splenic red pulp). CD18 is expressed by all leukocytes (including histiocytes - macrophages, Langerhan's cells and dendritic cells) but no platelets. Macrophages and granulocytes express 10-fold more CD18 than do lymphocytes.



Clone: 7E4

Isotype: IgG1 Mouse

7E4 is a blocking monoclonal antibody in cell adhesion assays.

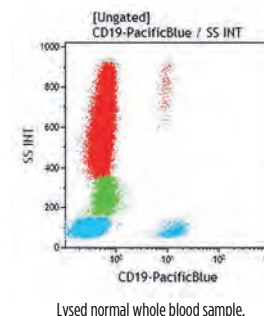
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1568U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1570U | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD19

The CD19 antigen (also called B4) is a type I membrane glycoprotein with a molecular weight of 95 kDa. It is a signal transduction molecule that regulates lymphocyte development, activation, and differentiation. The molecule is expressed on all normal B lymphocytes including pro-B lymphocytes, but it is lost in maturation to plasma cells. It is also found on the surface of follicular dendritic cells, on the early cells of myelomonocytic lineage and on most stabilized B cell lines. It is not present on normal T lymphocytes, NK cells, monocytes, and granulocytes. CD19 can be associated with other surface molecules including CD21 and CD81. Co-ligation of the CD19-CD21-CD81 complex with the surface IgM-B-cell antigen receptor (BCR) leads to the phosphorylation of CD19 by Syk, followed by the recruitment of positive signal transduction effectors such as phosphatidylinositol 3 kinase (PI3 kinase), Lyn, and Fyn.



Clone: 89B (B4)

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|----------------|----------|---------------|------------------|
| FITC | 100 tests | Freeze-dried | 6603012 | IVD & CE | COULTER CLONE | GMP |
| FITC | 50 tests | Liquid | 6603859 | IVD & CE | CYTO-STAT | GMP |
| RD1 | 100 tests | Liquid | 6603024 | IVD & CE | COULTER CLONE | GMP |
| RD1 | 50 tests | Liquid | 6603846 | IVD & CE | CYTO-STAT | GMP |

Clone: J3-119

Isotype: IgG1 Mouse

In vitro studies show that the CD19 antibodies have an inhibitory effect on the activation and proliferation of B lymphocytes. They also inhibit the B cell response after co-stimulation by anti-immunoglobulin and interleukin 4.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------------|----------------|--------|--------|------------------|
| PB | 50 tests | Liquid | B49213 | CE | IOTest | 98/79/EC |
| PB | 0.5 mL | Liquid | A86355 | ASR | IOTest | GMP |
| KrO | 0.5 mL | Liquid | A96418 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | A07768 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM1284U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07769 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1285U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | A07770 | CE | IOTest | 98/79/EC |
| ECD | 1 mL | Liquid | IM2708U | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07771 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2643U | ASR | IOTest | GMP |
| PC5.5 | 50 tests | Liquid | B49211 | CE | IOTest | 98/79/EC |
| PC5.5 | 0.5 mL | Liquid | A66328 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | IM3628 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | IM3628U | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | IM2470 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM2470U | ASR | IOTest | GMP |
| AF700 | 0.5 mL | Liquid | B76283 | ASR | IOTest | GMP |
| APC-A700 | 50 tests | Liquid | B49212 | CE | IOTest | 98/79/EC |
| APC-A700 | 0.5 mL | Liquid | A78837 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | A94681 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A78838 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM1313 | ASR | - | GMP |

Clone: HD237 (B4 lytic)

Isotype: IgG2b Mouse

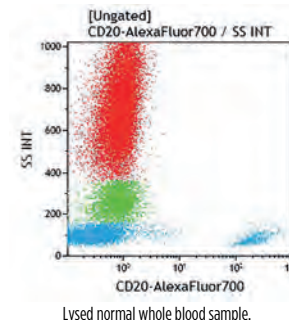
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|--------|--------|----------------|--------|-----------|------------------|
| ECD | 0.5 mL | Liquid | 6604551 | ASR | CYTO-STAT | GMP |

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Single-Color Conjugated Antibodies

CD20

The CD20 antigen (Bp35) is an integral non-glycosylated membrane protein with four transmembrane domains. Three isoforms (33, 35 and 37 kDa) result from differential phosphorylation within the cytoplasmic domain. CD20 may also exist on the cell surface as a homo-oligomeric complex forming with other molecules a multimeric receptor complex. The expression of CD20 is restricted to B-lineage cells. Its expression occurs early in pre-B lymphocyte development, persists in B-lymphocyte ontogeny and is lost upon ultimate plasma cell differentiation. The CD20 molecule is present on all B lymphocytes whatever the hematopoietic tissue where they are found (peripheral blood, lymph nodes, spleen, tonsil, or bone marrow). The CD20 antigen may be weakly expressed on a subset of resting T lymphocytes. However, CD20 is not expressed on other leucocyte subsets including NK cells, monocytes and granulocytes.



Lysed normal whole blood sample.

Clone: B9E9 (HRC20)

Isotype: IgG2a Mouse

All monoclonal antibodies directed to the extracellular domain of the CD20 molecule are likely to bind closely related epitopes.

| Form | Size | Format | Part# | Status | Line | Quality Standard | |
|-----------------|-----------|--------|----------------|--------|--------|------------------|------------|
| PB | 50 tests | Liquid | B49208 | CE | IOTest | 98/79/EC | NEW |
| PB | 0.5 mL | Liquid | A74777 | ASR | IOTest | GMP | |
| FITC | 100 tests | Liquid | A07772 | CE | IOTest | 98/79/EC | |
| FITC | 2 mL | Liquid | IM1455U | ASR | IOTest | GMP | |
| PE | 100 tests | Liquid | IM1451 | CE | IOTest | 98/79/EC | |
| PE | 2 mL | Liquid | IM1451U | ASR | IOTest | GMP | |
| ECD | 100 tests | Liquid | B92433 | CE | IOTest | 98/79/EC | NEW |
| ECD | 1 mL | Liquid | IM3607U | ASR | IOTest | GMP | |
| PC5 | 100 tests | Liquid | A07773 | CE | IOTest | 98/79/EC | |
| PC5 | 1 mL | Liquid | IM2644U | ASR | IOTest | GMP | |
| PC5.5 | 0.5 mL | Liquid | B23134 | ASR | IOTest | GMP | |
| PC7 | 100 tests | Liquid | IM3629 | CE | IOTest | 98/79/EC | |
| PC7 | 1 mL | Liquid | IM3629U | ASR | IOTest | GMP | |
| APC | 100 tests | Liquid | A21693 | CE | IOTest | 98/79/EC | |
| APC | 1 mL | Liquid | A51076 | ASR | IOTest | GMP | |
| AF700 | 0.5 mL | Liquid | B76287 | ASR | IOTest | GMP | NEW |
| APC-A700 | 0.5 mL | Liquid | B12112 | ASR | IOTest | GMP | |
| APC-A750 | 50 tests | Liquid | B49209 | CE | IOTest | 98/79/EC | NEW |
| APC-A750 | 0.5 mL | Liquid | A66331 | ASR | IOTest | GMP | |

Clone: H299 (B1)

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|----------------|----------|---------------|------------------|
| FITC | 100 tests | Freeze-dried | 6602381 | IVD & CE | COULTER CLONE | GMP |
| FITC | 50 tests | Liquid | 6604106 | IVD & CE | CYTO-STAT | GMP |
| RD1 | 100 tests | Liquid | 6603446 | IVD & CE | COULTER CLONE | GMP |
| RD1 | 50 tests | Liquid | 6603858 | IVD & CE | CYTO-STAT | GMP |
| UNLB | 0.25 mg | Freeze-dried | A83477 | ASR | COULTER CLONE | GMP |

Clone: FMC7

Isotype: IgM Mouse

The FMC7 antibody reacts with a subpopulation of peripheral blood B lymphocytes and tonsil B cells, but it does not react with granulocytes, monocytes, platelets, erythrocytes, T lymphocytes or null cells.

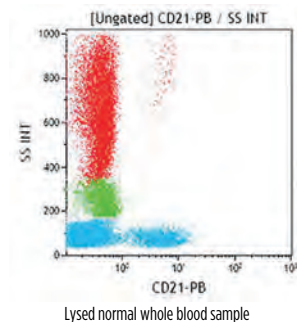
| Form | Size | Format | Part# | Status | Line | Quality Standard | |
|-------------|-----------|--------|----------------|--------|--------|------------------|------------|
| PB | 50 tests | Liquid | B96782 | CE | IOTest | 98/79/EC | NEW |
| PB | 0.5 mL | Liquid | B08466 | ASR | IOTest | GMP | |
| FITC | 100 tests | Liquid | A07791 | CE | IOTest | 98/79/EC | |
| FITC | 1 mL | Liquid | IM1364U | ASR | IOTest | GMP | |

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Single-Color Conjugated Antibodies

CD21

The CD21 molecule is a 145 kDa type I transmembrane glycoprotein, which belongs to the family of complement regulatory proteins. CD21 is expressed by mature B lymphocytes and is rapidly lost following cellular activation. It is not expressed on early (pre-B) and late (B blast or plasma cell) B ontogeny. On follicular dendritic cells the CD21 antigen is strongly expressed. Expression of CD21 in a subset of T lymphocytes has been reported. Four types of CD21 ligands have been identified: They are products following proteolytic cleavage of the complement protein C3 (i. e. iC3b, C3dg and C3d), the Epstein-Barr (EBV) virus envelope, Interferon α (IFN α) and CD23. CD21 was found to be part of a large complex containing also CD19, and CD81 (also named TAPA-1) suggesting a key-role of CD21 during the immune response.



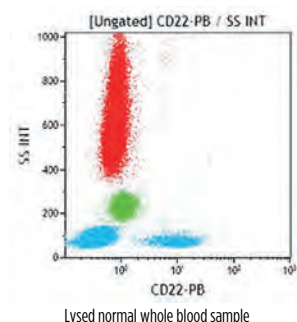
Clone: BL13

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B09982 | ASR | IOTest | GMP |
| FITC | 2 mL | Liquid | IM0473U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | A32536 | ASR | IOTest | GMP |

CD22

The CD22 antigen (BL-CAM) is a transmembrane glycoprotein of the immunoglobulin superfamily. It may be expressed as two different isoforms: the α form (130 kDa) and the β form (140 kDa). It is a B lineage restricted antigen that occurs in the cytoplasm of early B cell precursors and pre-B cells and on the cell surface of resting and activated B cells. The CD22 antigen is absent from peripheral blood T lymphocytes, granulocytes, monocytes. It is expressed on less than 1% of bone marrow mononuclear cell and 50% of Epstein Barr virus transformed lymphoblastoid B cell lines. CD22 demonstrates heterogeneous expression on resting peripheral blood B lymphocytes. The antigen is lost following activation of B cells with a variety of mitogens. The CD22 molecule regulates signal transduction through the B cell receptor. It is a receptor for certain sialic acid containing glycoproteins.



Clone: HD239 (B3)

Isotype: IgG2b Mouse

The B3 antibody binds to an epitope located within the first Ig-like domain of CD22 antigen. It can be used to detect intracytoplasmic CD22 in flow cytometry after permeabilization.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|--------|--------|----------------|--------|-----------|------------------|
| RD1 | 0.5 mL | Liquid | 6604428 | ASR | CYTO-STAT | GMP |

Clone: SJ10.1H11

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B06498 | ASR | IOTest | GMP |
| FITC | 2 mL | Liquid | IM0779U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | IM1835 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1835U | ASR | IOTest | GMP |
| ECD | 0.5 mL | Liquid | B10245 | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM3704 | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | A80712 | ASR | IOTest | GMP |
| PC7 | 1 mL | Liquid | A74788 | ASR | IOTest | GMP |
| APC | 50 tests | Liquid | B96777 | CE | IOTest | 98/79/EC |
| APC | 0.5 mL | Liquid | A60791 | ASR | IOTest | GMP |
| APC-A700 | 50 tests | Liquid | B36293 | CE | IOTest | 98/79/EC |
| APC-A700 | 0.5 mL | Liquid | A89311 | ASR | IOTest | GMP |

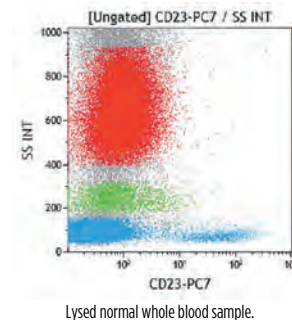
NEW

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Single-Color Conjugated Antibodies

CD23

The CD23 antigen (also called B6) is a transmembrane glycoprotein with a molecular weight of 45 kDa, spatially associated with the major histocompatibility complex (MHC) Class II antigen. The CD23 molecule, also named FcεRII is the low affinity receptor for IgE. CD23 antigen is primarily expressed on B lymphocytes and monocytes. It is also present on a large variety of other cells such as T lymphocytes, eosinophils, platelets, Langerhans cells, follicular dendritic cells (FDC), a subset of thymic epithelial cells and neutrophils. On B lymphocytes, CD23 expression is up-regulated upon activation and ultimately lost upon differentiation towards secreting-plasmocytes. A soluble form of CD23 (sCD23) exists and may be involved (like CD23) in the regulation of IgE synthesis and inflammatory phenomenon.



Clone: HD50 (B6)

Isotype: IgG2b Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|--------|--------|----------------|--------|-----------|------------------|
| RD1 | 0.5 mL | Liquid | 6604426 | ASR | CYTO-STAT | GMP |

Clone: 9P25

Isotype: IgG1 Mouse

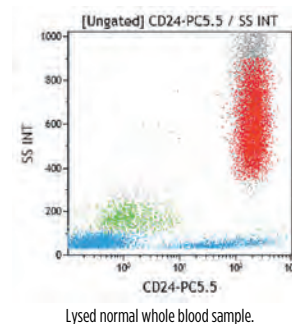
9P25 blocks the binding of IgE.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | A93689 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | IM0529 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0529U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | B49207 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | A33099 | ASR | IOTest | GMP |
| ECD | 1 mL | Liquid | IM3609U | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B12935 | ASR | IOTest | GMP |
| APC | 1 mL | Liquid | A69964 | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | A70207 | ASR | IOTest | GMP |

NEW

CD24

The CD24 antigen is a glycosyl-phosphatidylinositol-linked membrane sialoglycoprotein, with a molecular weight of 35-45 kDa. CD24 is present on B cells, from the pre-B to the mature B cell stage, but not on plasma cells. It is expressed on mature granulocytes and on a variety of epithelial cell types. CD24 was discovered in mice as a heat-stable antigen and was used as a marker to differentiate hematopoietic cells and neuronal cells. It is currently known that CD24 serves as a costimulatory factor of T cells that regulate their homeostasis and proliferation, while in B cells, CD24 is functionally involved in cell activation and differentiation. In hematopoietic cells, CD24 is known to bind to molecules exhibiting danger-associated molecular patterns (DAMPs). CD24 mediates signal transduction and activates the mitogen-activated protein kinase pathway, which involves B- and T-cell development and apoptosis, cell binding and granulocyte oxidative burst.



Clone: ALB9

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------------|----------------|--------|--------|------------------|
| PE | 100 tests | Liquid | B92425 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1428U | ASR | IOTest | GMP |
| ECD | 0.5 mL | Liquid | B12699 | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM2645 | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B23133 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A87785 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B10738 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0118 | RUO | - | GMP |

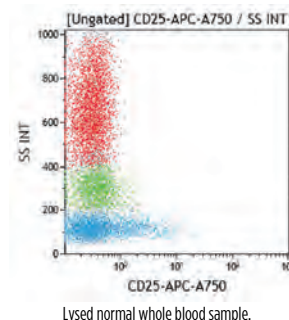
NEW

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Single-Color Conjugated Antibodies

CD25

The CD25 antigen (IL-2R α chain, Tac or p55) is a single-chain glycoprotein with a molecular weight of 55 kDa which is the low affinity receptor for IL-2 (IL-2R α or IL-2R1). In conjunction with CD122 (IL-2R β , p75) and CD132 (IL-2R γ , p64), CD25 antigen forms the high-affinity IL-2R complex. CD25 is highly expressed on regulatory CD4-positive T lymphocytes and undetected on resting CD8 positive lymphocytes. However, all activated T lymphocytes express the CD25 protein. CD25 is also found on a subset of B cells (CD20 positive), on activated monocytes and macrophages, and on T cell clones. It is also expressed on NK cells enriched from peripheral blood lymphocytes by culturing in the presence of IL-2. It is absent from thymocytes, granulocytes, monocytes, resting NK cells, platelets and erythrocytes.



Clone: 1HT44H3 (IL-2R1)

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|---------|--------|-----------|------------------|
| RD1 | 0.5 mL | Liquid | 6604422 | ASR | CYTO-STAT | GMP |

Clone: B1.49.9

Isotype: IgG2a Mouse

The B1.49.9 monoclonal antibody does not block the binding of IL-2 to its receptor.

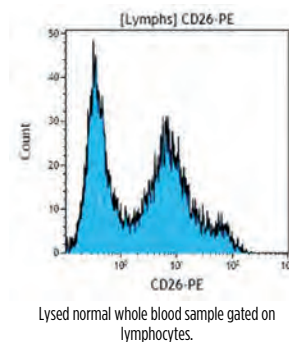
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|-----------|--------|---------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | A82944 | ASR | IOTest | GMP |
| FITC | 2 mL | Liquid | IM0478U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07774 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM0479U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | 6607112 | RUO | IOTest | GMP |
| PC5 | 100 tests | Liquid | IM2646 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2646U | ASR | IOTest | GMP |
| PC5.5 | 50 tests | Liquid | B92458 | CE | IOTest | 98/79/EC |
| PC5.5 | 0.5 mL | Liquid | A79386 | ASR | IOTest | GMP |
| PC7 | 1 mL | Liquid | A52882 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B09684 | ASR | IOTest | GMP |
| APC-A700 | 50 tests | Liquid | B92454 | CE | IOTest | 98/79/EC |
| APC-A700 | 0.5 mL | Liquid | A86356 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B13979 | ASR | IOTest | GMP |

NEW

NEW

CD26

The CD26 antigen is the dipeptidylpeptidase IV ectoenzyme (DPPIV). It is a single-chain glycoprotein with a molecular weight of 110 kDa. It binds to adenosine deaminase protein (ADA). CD26 is a functional collagen receptor. CD26 provides an alternative activation pathway for T lymphocytes in which the CD3 ζ (TCR ζ chain) is required for CD26-mediated signaling. The expression of CD26 is found on resting T cells and is increased on activated T lymphocytes, B lymphocytes, macrophages and NK cells. In a study using this antibody, it has been suggested that CD26 is involved as a cofactor of CD4 in the mechanism of triggering apoptosis. Another study showed the expression of CD26 in human kidney and on lymphocytes and macrophages of specific skin biopsies.



Clone: 4EL-1C7 (Ta1)

Isotype: IgG1 Mouse

The 4EL-1C7 monoclonal antibody does not inhibit T cell activation and cytotoxicity.

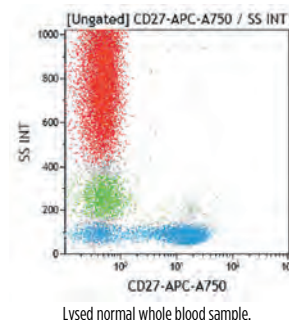
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2724 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD27

The CD27 molecule is a transmembrane disulfide-linked homodimer which belongs to tumor necrosis factor receptor (TNFR) / nerve growth factor receptor (NGFR) family. The molecular weight of the recognized antigen is 55 kDa / 120 kDa under reducing / non reducing conditions respectively. The CD27 glycoprotein is found on medullary thymocytes, peripheral T cells, subset of mature B cells and NK cells. On T cells, CD27 is preferentially expressed on the CD45RA+ CD45RO- naive subset of CD4+ T lymphocytes whereas most memory T cells (CD45RA- CD45RO+) lack CD27. Activation of T cells, when involving CD27 molecule, results in the upregulation of CD27 expression as cell surface embedded, and also in the release of a soluble form of CD27 (sCD27). CD70 antigen, which is a member of the TNF ligand superfamily, interacts with CD27 molecule and is known to be the CD27-ligand.



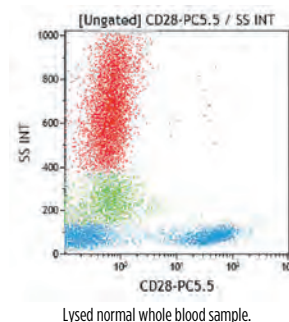
Clone: 1A4CD27

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|---------------------|
| PB | 0.5 mL | Liquid | B30635 | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | B96790 | CE | IOTest | 98/79/EC NEW |
| PE | 2 mL | Liquid | IM2578 | ASR | IOTest | GMP |
| ECD | 0.5 mL | Liquid | B26603 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | 6607107 | RUO | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B21444 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | B49205 | CE | IOTest | 98/79/EC NEW |
| PC7 | 1 mL | Liquid | A54823 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B09983 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B12701 | ASR | IOTest | GMP |

CD28

The CD28 antigen (Tp44) is a homodimer of disulfide-linked chains, with a molecular weight of 44 kDa each. It is involved in the interaction of T lymphocytes with antigen-presenting cells (APCs), through its counter-receptors, B7-1/BB-1 (CD80) and B7-2/B70 (CD86). It provides a major co-stimulatory signal for T cell activation, proliferation and lymphokine production. The CD28 family of receptors (CD28, CTLA-4, ICOS, PD-1 and BTLA) plays a critical role in controlling the adaptive immune response. The CD28 receptor can enhance T cell antigen receptor (TCR) signals, as well as deliver independent signals. Although the signals through CD28 are crucial for the initial co-stimulation of interleukin-2 (IL-2) production, a TCR-independent CD28 signal leads to the selective transcription of survival, but not proliferative genes. CD28 is expressed by a majority of CD3+ T lymphocytes. CD4+ T lymphocytes express the CD28 antigen more frequently than do CD8+ T lymphocytes. CD28 antigen is also present on plasma cells and thymocytes.



Clone: CD28.2

Isotype: IgG1 Mouse

The CD28.2 monoclonal antibody costimulates T cell proliferation and cytokine production in the presence of T cell activators (αCD3, PMA, SEB). It inhibits proliferation of CD4+ T lymphocytes. It cross-reacts with Rhesus monkey peripheral blood lymphocytes.

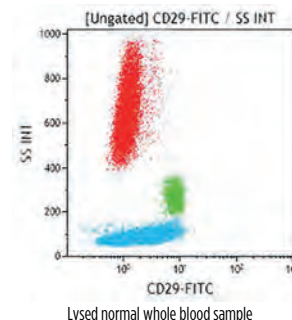
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1236U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM2071U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | 6607111 | RUO | IOTest | GMP |
| PC5 | 100 tests | Liquid | 6607108 | RUO | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B24027 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B23313 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B10244 | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | B12696 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B08757 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM1376 | ASR | - | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD29

The CD29 antigen is the 130 kDa integrin $\beta 1$ chain which is expressed as a heterodimer, non-covalently associated with the integrin α subunits 1 to 6 (CD49a to CD49f) also known as Very Late Antigens (VLA). CD29 complexes are involved in cell-cell and cell-matrix adhesion, depending on the α subunit associated to CD29. CD29 is also known as platelet GPIIa. The antigen mediates cellular adhesion and has broad cellular reactivity, but is not expressed by erythrocytes. In normal peripheral blood it is found on a subset of CD4+ and CD8+ T lymphocytes, on a minority of B lymphocytes and on monocytes. The "inducer" subpopulation of CD4+ lymphocytes co-expresses CD4 and CD29.



Clone: 4B4LDC9LDH8 (4B4)

Isotype: IgG1 Mouse

4B4LDC9LDH8 is a blocking monoclonal antibody in CD29 mediated adhesion. This antibody was used as CD29 reference monoclonal antibody during HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------------|---------|--------|---------------|------------------|
| RD1 | 100 tests | Liquid | 6603177 | RUO | COULTER CLONE | GMP |
| RD1 | 50 tests | Liquid | 6604159 | RUO | CYTO-STAT | GMP |
| UNLB | 100 tests | Freeze-dried | 6603113 | RUO | COULTER CLONE | GMP |

Clone: K20

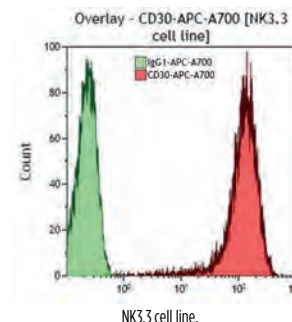
Isotype: IgG2a Mouse

K20 is a non blocking monoclonal antibody in CD29 mediated adhesion.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0791U | ASR | IOTest | GMP |

CD30

The CD30 antigen (also known as Ki-1 antigen) is a single-chain glycoprotein with a molecular weight of 105 kDa. It is a member of the TNFR (Tumor Necrosis Factor Receptor) / NGFR (Nerve Growth Factor Receptor) superfamily and binds to CD153 (CD30 ligand). The CD30 antigen is found on activated T and B lymphocytes and on Reed Sternberg cells. In lymphoid tissues, CD30 is expressed on a few extrafollicular activated T and B blasts and B blasts located at the rim of germinal center. CD30 expression is induced in vitro on lectin-stimulated T-cell, B-cell blast and on mixed lymphocyte culture (MCL) suggesting an activated lymphoid cell expression feature.



Clone: HRS4

Isotype: IgG1 Mouse

HRS4 recognizes a formaldehyde-resistant epitope.

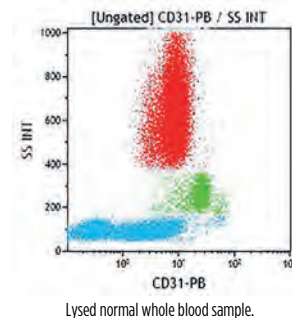
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|--------|--------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2033U | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A87939 | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | B42017 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD31

The CD31 antigen, also known as Platelet Endothelial Cell Adhesion Molecule 1 (PECAM-1), is a transmembrane glycoprotein of 130 kDa related to the immunoglobulin superfamily. It is expressed on stem cells of the myeloid lineage, on platelets and on endothelial cell junctions. CD31 is involved in the migration of leucocytes through the endothelial cell wall, via adhesion to $\alpha\nu\beta 3$ integrin and to CD38. In addition, CD31 participates in outside-in signaling in leucocytes likely through phosphorylation of its intracytoplasmic tyrosine residues 663 and 686 and subsequent association with tyrosine phosphatases SHP-1 and SHP-2. Studies suggest a comparable mechanism of action for CD31 in activation and aggregation of platelets.



Clone: 1F11

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | IM2409 | RUO | IOTest | GMP |

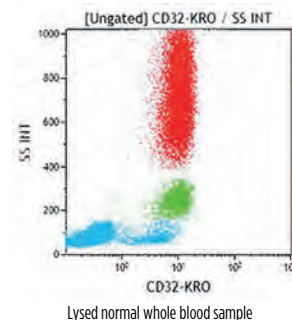
Clone: 5.6E

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|---------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B13035 | ASR | IOTest | GMP |
| FITC | 2 mL | Liquid | IM1431U | ASR | IOTest | GMP |

CD32

Fc γ RII proteins exist as six potential isoforms encoded by three genes, designated as A, B, and C. The reported molecular weight of these isoforms are variable between 37 and 43 kDa. All isoforms are similar but not identical in their extracellular regions. The cytoplasmic portion of Fc γ RIIA and Fc γ RIIC contains an activatory ITAM motif whereas Fc γ RIIB contains an inhibitory ITIM motif. Differential splicing of Fc γ RIIB gene yields to 2 isoforms Fc γ RIIBb1 and Fc γ RIIBb2. Monocytes carry all forms of Fc γ RII, neutrophils carry Fc γ RIIA and C. Fc γ RIIB is expressed by B lymphocytes and mast cells.



Clone: 2E1

Isotype: IgG2a Mouse

The 2E1 antibody recognizes the antigen isoforms expressed on basophils, neutrophils, eosinophils, platelets and B cells.

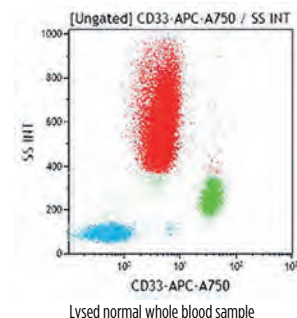
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| KrO | 0.5 mL | Liquid | B01177 | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1935 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD33

The CD33 antigen is a 67 kDa single-chain transmembrane glycoprotein reported to be a sialic acid dependent adhesion molecule. The extracellular portion of the molecule belongs to the Ig superfamily, involving one V-like and one C2-like domains. This antigen shows some homologies to myelin-associated glycoprotein and to the CD22 molecule. CD33 antigen is expressed on monocytes in peripheral blood. In the bone marrow, it is found on granulocyte and macrophage precursors, and is absent from pluripotent stem cells.



Clone: 906 (MY9)

Isotype: IgG2b Mouse

Approximately 30% of normal bone marrow cells express My9, including myeloblasts, promyelocytes and myelocytes. The myeloid colony forming cells express My9, as do a subset of erythroid burst forming cells. Erythroid colony forming cells do not express My9.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|---------|--------|---------------|------------------|
| RD1 | 0.5 mL | Liquid | 6603042 | ASR | COULTER CLONE | GMP |
| RD1 | 0.5 mL | Liquid | 6604121 | ASR | CYTO-STAT | GMP |

Clone: D3HL60.251

Isotype: IgG1 Mouse

The D3HL60.251 monoclonal antibody reacts with cells of myeloid origin. It reacts strongly with monocytes, and weakly with granulocytes of the peripheral blood but does not react with mature lymphoid cells or lymphoid precursors.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|-----------|--------|---------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1135U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07775 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1179U | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | IM2647 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2647U | ASR | IOTest | GMP |
| PC5.5 | 50 tests | Liquid | B36289 | CE | IOTest | 98/79/EC |
| PC5.5 | 0.5 mL | Liquid | A70198 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | B92408 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | A54824 | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | IM2471 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM2471U | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | A70200 | ASR | IOTest | GMP |

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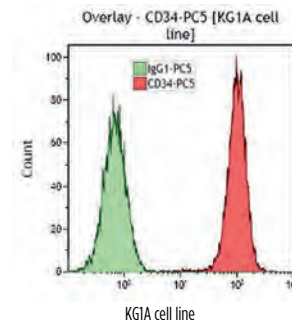
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



CD34

The CD34 antigen is a monomeric transmembrane phosphoglycoprotein of about 110 kDa with two distinct extracellular domains. The membrane proximal domain, of about 110 amino acids, probably adopts a globular conformation. The NH₂-terminal domain, of about 140 amino acids, is heavily glycosylated with both N-linked glycans and sialylated O-linked carbohydrates and probably exhibits an extended rod-like structure typical of mucin-like glycoproteins. The CD34 antigen is expressed on hematopoietic progenitor cells of all lineages as well as the most primitive pluripotential stem cells. CD34 antigen expression is highest on the most primitive stem cells and is gradually lost as lineage committed progenitors differentiate. The CD34 antigen is also present on capillary endothelial cells and on bone marrow stromal cells. Variations of glycosylation are thought to occur during normal hematopoiesis depending on lineage commitment and the level of cellular maturation.



Clone: Immu133

Isotype: IgG1 Mouse

Epitope Class I: Immu133 monoclonal antibody detects sialic acid-dependent class I epitope.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | IM1420 | RUO | IOTest | GMP |

Clone: QBEnd10

Isotype: IgG1 Mouse

Epitope Class II: QBEnd10 reacts with early normal hematopoietic progenitor cells, and with vascular endothelial cells.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM1250U | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM2650U | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0786 | RUO | - | GMP |

Clone: 581

Isotype: IgG1 Mouse

Epitope Class III: Clone 581 recognizes a sialidase / glycoprotease / chymopapain insensitive class III epitope.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|-----------|--------|---------|--------|--------|------------------|
| FITC | 100 tests | Liquid | IM1870 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM1870U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07776 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1871U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | B49202 | CE | IOTest | 98/79/EC |
| ECD | 1 mL | Liquid | IM2709U | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07777 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2648U | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | A21691 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | A51077 | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | IM2472 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM2472U | ASR | IOTest | GMP |
| APC-A700 | 50 tests | Liquid | B92417 | CE | IOTest | 98/79/EC |
| APC-A700 | 0.5 mL | Liquid | A86354 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | B92463 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A89309 | ASR | IOTest | GMP |

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Clone: QBEnd10 + Immu133 + Immu409

Isotype: IgG Mouse

The CD34 Pool Kit includes two vials. The one labeled CD34 Pool-PE contains a mixture of QBEnd10, Immu133 and Immu409. The one labeled Isotypic Control IgG(1+2a)-PE is its matching negative control. As QBEnd10 and Immu133 are of the mouse IgG1 isotype and Immu409 of the IgG2a isotype, this control is a mixture of two R-phycoerythrin-conjugated irrelevant mouse monoclonal immunoglobulins of these isotypes. Each isotype concentration in the control matches the total concentration of each isotype in the CD34 Pool.

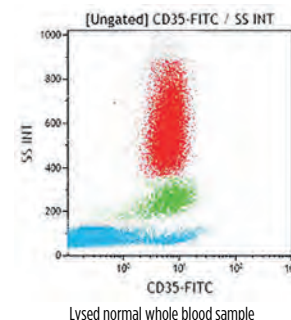
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM1459U | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD35

The CD35 antigen is a polymorphic molecule. Different molecular weights: 160, 190, 220, 250 and 285 kDa were reported for the various allotypes. It is known as the complement receptor type I (CRI) with affinity for C3b, C4b and iC3b. The CD35 antigen is expressed by granulocytes (except basophils), B lymphocytes, a subset of T-cells, monocytes, some NK cells, erythrocytes macrophages cultured in vitro, glomerular podocytes and follicular dendritic cells. The CD35 antigen mediates phagocytosis by neutrophils and monocytes of complement coated particles.



Clone: J3D3

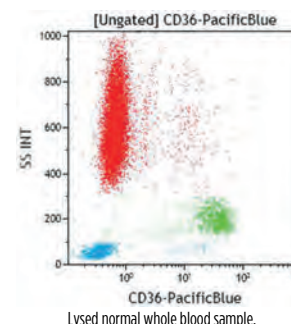
Isotype: IgG1 Mouse

The J3D3 monoclonal antibody inhibits CRI-mediated decay of cells bound to the alternative and classical pathways to C3-convertase sites. It also inhibits C3b dependent rosette formation with lymphocytes.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|---------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | IM1836 | RUO | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0195 | RUO | - | GMP |

CD36

The CD36 antigen (platelet GPIV, or GPIIb) is a generic term for a family of glycoproteins with molecular weights ranging from 78 to 88 kDa. CD36 expression occurs in different types of cells, including mammary epithelial cells, endothelial cells monocytes, macrophages, platelets, megakaryocytes and early erythroid cells. This molecule is also found on some human tumor cell lines. It is a very early marker of erythroid differentiation and mediates the adherence of platelets to thrombospondin and collagen. CD36 is a scavenger receptor that functions in high affinity tissue uptake of long chain fatty acids (FA). As a result of its multiple ligands and signal transduction capabilities, CD36 has also a number of functions related to immune responses, inflammation and blood disorders.



Clone: FA6.152

Isotype: IgG1 Mouse

The FA6-152 monoclonal antibody, raised against fetal erythrocytes, recognizes the CD36 family of antigens on platelets and certain hematopoietic cells. It does not react with lymphocytes or granulocytes. It reacts with both fetal and adult monocytes, megakaryocytes, platelets, and with reticulocytes.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B43302 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | B49201 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0766U | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A87786 | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | B46022 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0765 | RUO | - | GMP |

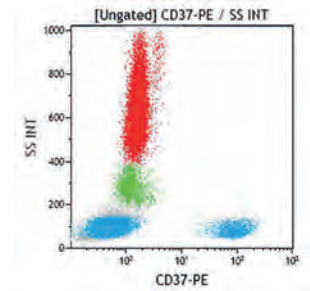
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Single-Color Conjugated Antibodies

CD37

The CD37 antigen is a 40-52 kDa single chain transmembrane protein with 4 transmembrane domains (Tetraspan/TM4SF). It has both its NH₂- and COOH-termini inside the cells, and is heavily glycosylated on one extracellular loop. Its main feature is its high content of hydrophobic residues (45%). CD37 is strongly expressed on the surface of human peripheral blood B lymphocytes and on B cells from germinal centers. In the ontogeny of B cells, this antigen appears late, after the pre-B stage, and is not expressed on plasma cells. CD37 has a low expression on T lymphocytes, granulocytes, and monocytes. It is weakly expressed by other cellular types such as Langerhans cells, macrophages, normal medullar granulous cells and peripheral blood polymorphonuclear cells. CD37 is involved in signal transduction.



Lysed normal whole blood sample.

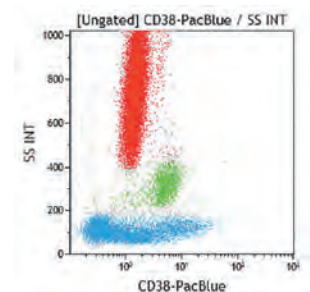
Clone: BL14

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0457 | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM0458 | ASR | IOTest | GMP |

CD38

The CD38 antigen is a 45 kDa single chain type II integral membrane glycoprotein, with the NH₂-terminus inside the cytoplasm. CD38 is an enzyme with several activities such as NAD glycohydrolase, ADP ribosylcyclase and cyclic ADP ribose hydrolase. CD38 is expressed on activated T and B lymphocytes, NK cells, monocytes, plasma cells and medullary thymocytes. CD38 depends on the differentiation and activation of the cell. In the B cell lineage, CD38 is expressed in early stages of B-cell ontogeny, lost during maturation and re-expressed upon terminal differentiation to plasma cells. CD38 is expressed on thymocytes and at a high level on activated T cells. Most mature resting lymphocytes of both B and T lineages do not express the CD38 antigen. CD38 is widely used as a marker to study T and B lymphocyte activation.



Lysed normal whole blood sample.

Clone: T16

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | A07778 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0775U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1832U | ASR | IOTest | GMP |

Clone: LS198-4-3

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|-----------|------------------|
| PB | 50 tests | Liquid | B92396 | CE | IOTest | 98/79/EC |
| PB | 0.5 mL | Liquid | B09683 | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07779 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM2371U | ASR | IOTest | GMP |
| RD1 | 0.5 mL | Liquid | 6604928 | ASR | CYTO-STAT | GMP |
| ECD | 0.5 mL | Liquid | A99022 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07780 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2651U | ASR | IOTest | GMP |
| PC5.5 | 50 tests | Liquid | B49199 | CE | IOTest | 98/79/EC |
| PC5.5 | 0.5 mL | Liquid | A70205 | ASR | IOTest | GMP |
| PC7 | 50 tests | Liquid | A9198 | CE | IOTest | 98/79/EC |
| PC7 | 0.5 mL | Liquid | A54189 | ASR | IOTest | GMP |
| APC | 1 mL | Liquid | A60792 | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | B23489 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | B49200 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A86049 | ASR | IOTest | GMP |

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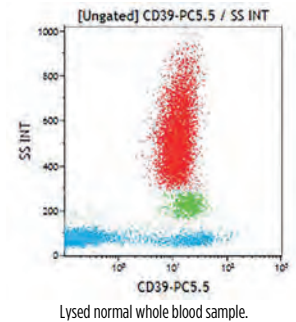
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Single-Color Conjugated Antibodies

CD39

The CD39 molecule, known as ectonucleoside triphosphate diphosphohydrolase-1 (ENTPD1), is a 70-100 kDa integral membrane glycoprotein with two transmembrane domains. It belongs to the family of the primary enzymes responsible for cell surface nucleotide hydrolysis, with ATPase and ADPase activity. CD39 antigen is expressed on activated lymphocytes, regulatory T cells, B cells, and dendritic cells. It is involved in control of the extracellular nucleoside triphosphate pool (NTP), suppression of inflammation and control of platelet activation. The coordinated expression of CD39/CD73 on Tregs and the adenosine A2A receptor on activated T effector cells generates immunosuppressive loops. In human studies, it has been reported that CD4+CD25-CD39+ T cells are T inducers.



Clone: BA54

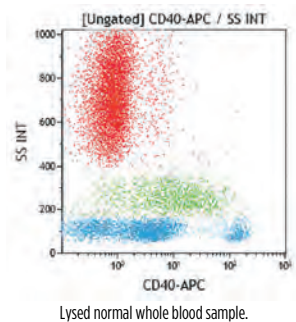
Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | B55384 | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B55385 | ASR | IOTest | GMP |

NEW
NEW

CD40

The CD40 antigen is a 44-48 kDa type I integral membrane protein of the tumor necrosis factor receptor (TNFR) superfamily. This antigen is found on B cell lines, is strongly expressed by interdigitating cells (IDC), basal epithelial cells, and is also present on macrophages, some endothelial cells, and follicular dendritic cells. It is a pan-B marker, absent only from terminally differentiated plasma cells. CD40 is implicated in the process of B cell selection in the germinal centre. Studies demonstrated that CD40 monoclonal antibodies (mAbs) induce strong homotypic adhesions in resting B cells and, together with interleukin-4 (IL-4) maintain the cell cycle of blasts of the B lineage. They also can promote the switch to IgE secretion. Activated B cells via CD40 antigen in the presence of IL-10 differentiate into plasma cells and secrete large amounts of immunoglobulins. The CD154, (CD40 ligand) is a membrane glycoprotein on activated T cells that induces B cell proliferation and immunoglobulin secretion. CD154 is also expressed on activated platelets and triggers an inflammatory reaction of endothelial cells.



Clone: MAB89

Isotype: IgG1 Mouse

Co-culture with MAB89 and IL-4 leads to long term B cell proliferation.

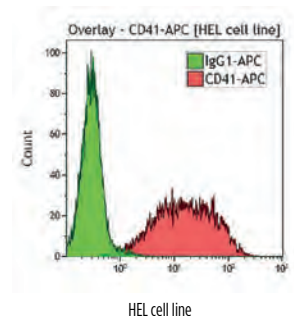
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|--------|--------------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM1936U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B20025 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B30636 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM1374 | ASR | - | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD41

The CD41 antigen (platelet GPIIb; IIb integrin) is a transmembrane glycoprotein composed of two chains GPIIb α (120 kDa) and GPIIb β (23 kDa) linked by one disulfide bond. CD41 is always non-covalently associated with CD61 (platelet GPIIIa, β 3 integrin), to form the GPIIb-IIIa (CD41/CD61) complex. CD41 is expressed by platelets, megakaryocytes and a small subset of CD34+ cells, suggesting that CD41/CD61 is one of the earliest markers of the megakaryocytic lineage. The resting form of the CD41/CD61 complex binds to immobilized fibrinogen and upon platelet activation, the complex becomes a receptor for soluble fibrinogen, fibronectin, vWF, vitronectin and thrombospondin. It is involved in platelet aggregation.



Clone: P2

Isotype: IgG1 Mouse

The P2 antibody reacts with the α chain of CD41a (GPIIb α) in the intact complex with GPIIIa but not with the GPIIb or GPIIIa separately. This antibody blocks binding to fibrinogen and inhibits platelet aggregation induced by thrombin, collagen and ADP. The P2 antibody was used as a CD41 reference mAb during HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0649U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07781 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1416U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | 6607117 | RUO | IOTest | GMP |
| PC5 | 100 tests | Liquid | 6607116 | RUO | IOTest | GMP |
| PC7 | 100 tests | Liquid | 6607115 | RUO | IOTest | GMP |
| APC | 0.5 mL | Liquid | B16894 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0145 | RUO | - | GMP |

Clone: SZ22

Isotype: IgG1 Mouse

The SZ22 monoclonal antibody reacts with the α chain of CD41 (GPIIb α) on platelets and megakaryocytes. This monoclonal does not inhibit platelet aggregation and secretion induced by collagen, arachidonic acid, and thrombin. It does not inhibit fibrinogen binding to human platelets induced by ADP, arachidonic acid and PAF.

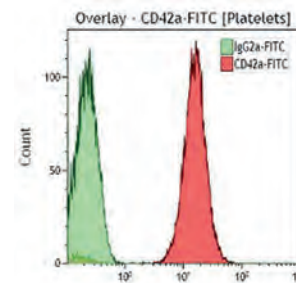
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1756U | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD42a

The CD42a antigen (GPIX) is a single-chain transmembrane glycoprotein of 22 kDa that forms a noncovalent complex with CD42b, CD42c and CD42d (GPIb α , GPIb β , and GPV). The CD42a expression is restricted to platelets and megakaryocytes. The GPIb-IX-V complex is the platelet receptor for von Willebrand factor and is known as von Willebrand's factor-dependent adhesion receptor. Although GPIb-IX-V primarily functions as a platelet receptor for von Willebrand factor (VWF), it can also bind to other ligands present in circulation such as thrombin, P-selectin, integrin α M β 2, factor XI, factor XII, high-molecular-weight kininogen, as well as a number of snake venom proteins.



Platelet rich plasma from a normal whole blood sample.

Clone: SZ1

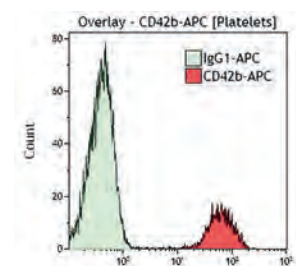
Isotype: IgG2a Mouse

The SZ1 monoclonal antibody reacts with the CD42a-d complex but does not recognize GPIb or GPIX individually.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1757U | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0538 | RUO | - | GMP |

CD42b

The CD42b antigen (GPIb α) is a membrane glycoprotein of 135 kDa, that forms a disulfide linked 160 kDa membrane protein with the CD42c (GPIb β) known as GPIb. GPIb forms a noncovalent complex with GPIX (CD42a) and GPV (CD42d). This antigen is found on platelets and megakaryocytes. It has also been reported on vascular and tonsillar endothelial cells. The CD42 complex serves as the von Willebrand Factor (vWF) surface receptor involved in the adhesion of platelets to the subendothelium of damaged vascular walls.



Platelet rich plasma (PRP) from a normal whole blood sample.

Clone: SZ2

Isotype: IgG1 Mouse

The SZ2 monoclonal antibody prevents the ristocetin-dependent binding of von Willebrand's factor to platelets and inhibits ristocetin-induced platelet agglutination. Platelet aggregation induced by type I collagen and Platelet Activating Factor (PAF) is also inhibited. The SZ2 antibody immunoprecipitates the components of the GPIb complex. It may also be used in Western blot.

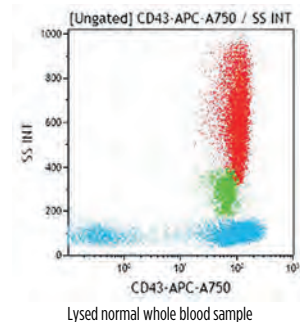
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0648U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1417U | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B13980 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0409 | RUO | - | GMP |

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Single-Color Conjugated Antibodies

CD43

The CD43 antigen is a 95-135 kDa heavily O-glycosylated and sialylated single chain membrane glycoprotein. This cell surface mucin-type glycoprotein is also called leukosialin or sialophorin. CD43 antigen is expressed by T lymphocytes, plasma cells, neutrophils, weakly on resting B lymphocytes but highly after activation, and on platelets. A soluble form of CD43 (galactoglycoprotein) can be detected in plasma. This form is produced by proteolytic shedding of the extracellular portion of the membrane molecule after cell activation. Studies, coupled with recent evidence that CD43 influences cellular adhesion, indicate that differential expression of CD43 may play a role in monocyte/macrophage trafficking.



Clone: DFT1

Isotype: IgG1 Mouse

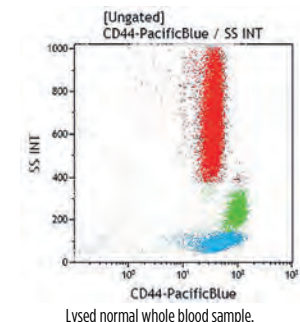
The DFT1 antibody reacts with an extracellular epitope of the CD43 antigen. It is useful for detecting leucocytes by flow cytometry and immunohistochemistry on routinely-fixed and paraffin-embedded tissue sections. The DFT1 antibody is also able to induce homotypic adhesion of leucocytes.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|----------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM3264U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | A3256O | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | B49195 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A89307 | ASR | IOTest | GMP |

NEW

CD44

The CD44 is a transmembrane glycoprotein of 85-200 KDa. Multiple CD44 isoforms have been described. CD44 is present on most cells or tissues, but not on platelets, hepatocytes, cardiac muscle, kidney tubular epithelium, testis and skin portions. CD44 is a signaling platform that integrates cellular microenvironmental cues with growth factor and cytokine signals. It transduces signals to membrane-associated cytoskeletal proteins or to the nucleus to regulate a variety of gene expression levels related to cell-matrix adhesion, cell migration, proliferation, differentiation, and survival. This cell adhesion molecule plays an important role in tumor progression and metastasis. Its role in tumorigenesis is due to its binding to extracellular matrix components, including hyaluronan (HA) and osteopontin (OPN), and to messenger molecules, such as growth factors present in the tumor microenvironment. The human Indian (In) blood group antigens a/b reside on CD44.



Clone: J.173

Isotype: IgG1 Mouse

J.173 antibody does not inhibit the binding of hyaluronate to its receptor. It can trigger IL-2-dependent proliferation and cytotoxicity of human T cell clones *in vitro*.

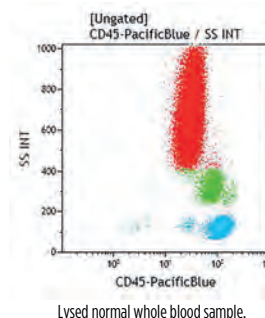
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|--------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B37789 | ASR | IOTest | GMP |
| FITC | 2 mL | Liquid | IM1219U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | A32537 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B30637 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD45

CD45 is a protein tyrosine phosphatase regulating src-family kinases which is expressed on all hematopoietic cells. CD45 can be expressed as one of at least five isoforms (from 180 to 220 kDa) by alternative splicing of exons that comprise the extracellular domain. The non-restricted CD45, Leucocyte Common Antigen (LCA) consists of an extracellular sequence, proximal to the membrane, which is common to all CD45 isoforms. All the monoclonal antibodies that belong to the CD45 cluster react with this part of the antigen and are able to recognize all CD45 isoforms. The non-restricted CD45 epitope is present on the surface of all human leucocytes, lymphocytes, eosinophils monocytes, basophils and neutrophils by order of decreasing level of expression. It is absent from erythrocytes and platelets. It is lost during maturation of erythroid cells in the bone marrow. CD45 antibodies react with leucocyte progenitors in bone marrow.



Clone: KC56 (T-200)

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------------|----------------|--------|---------------|------------------|
| FITC | 0.5 mL | Liquid | 6604104 | ASR | CYTO-STAT | GMP |
| FITC | 1 mg | Freeze-dried | 6603838 | ASR | COULTER CLONE | GMP |
| RD1 | 0.5 mL | Liquid | 6603839 | ASR | COULTER CLONE | GMP |

Clone: ALB12

Isotype: IgG1 Mouse

The ALB12 antibody recognizes a carbohydrate epitope and should not be used for side scatter versus CD45 gating strategy in flow cytometry.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0647 | ASR | IOTest | GMP |

Clone: Immu19.2

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|-----------|--------|----------------|--------|--------|------------------|
| PE | 100 tests | Liquid | IM1833 | RUO | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM2652U | ASR | IOTest | GMP |

Clone: J33

Isotype: IgG1 Mouse

J33 was assigned to CD45 cluster in HLDA 3 under the name I-33 (antibody # 818).

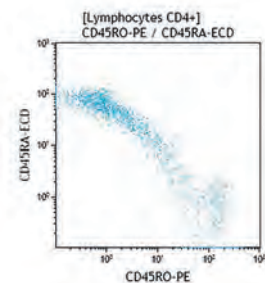
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| PB | 100 tests | Liquid | A74763 | CE | IOTest | 98/79/EC |
| PB | 1 mL | Liquid | A74765 | ASR | IOTest | GMP |
| KrO | 100 tests | Liquid | B36294 | CE | IOTest | 98/79/EC |
| KrO | 1 mL | Liquid | A96416 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | A07782 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0782U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07783 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM2078U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | A07784 | CE | IOTest | 98/79/EC |
| ECD | 1 mL | Liquid | IM2710U | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07785 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2653U | ASR | IOTest | GMP |
| PC5.5 | 100 tests | Liquid | A62835 | CE | IOTest | 98/79/EC |
| PC5.5 | 1 mL | Liquid | A54139 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | IM3548 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | IM3548U | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | IM2473 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM2473U | ASR | IOTest | GMP |
| AF647 | 1 mL | Liquid | A94246 | ASR | IOTest | GMP |
| APC-A700 | 100 tests | Liquid | A79390 | CE | IOTest | 98/79/EC |
| APC-A700 | 1 mL | Liquid | A71117 | ASR | IOTest | GMP |
| APC-A750 | 100 tests | Liquid | A79392 | CE | IOTest | 98/79/EC |
| APC-A750 | 1 mL | Liquid | A71119 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD45RA

CD45RA epitopes are present on all the CD45 restricted molecules in which the exon A is expressed (ABC and AB containing isoforms). Most B lymphocytes express CD45RA isoforms. The differential expression of CD45 isoforms is associated with different functional properties of T lymphocytes. Peripheral T lymphocytes can be divided into two largely distinct populations of CD45RA- CD45RO+ and CD45RA+ CD45RO - cells. CD45RA is expressed by medullar thymocytes and naïve/resting peripheral CD4+ T lymphocytes.



Lysed normal whole blood sample gated on CD4 positive lymphocytes. CD45RA-ECD in dual staining with CD45RO-PE.

Clone: 2H4LDH11LDB9 (2H4)

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------------|----------------|--------|---------------|------------------|
| PB | 0.5 mL | Liquid | A82946 | ASR | IOTest | GMP |
| FITC | 50 tests | Liquid | 6603904 | RUO | CYTO-STAT | GMP |
| FITC | 100 tests | Freeze-dried | 6603117 | RUO | COULTER CLONE | GMP |
| RD1 | 50 tests | Liquid | 6603866 | RUO | CYTO-STAT | GMP |
| RD1 | 100 tests | Liquid | 6603181 | RUO | COULTER CLONE | GMP |
| ECD | 100 tests | Liquid | B49193 | CE | IOTest | 98/79/EC |
| ECD | 1 mL | Liquid | IM2711U | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B10821 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B14807 | ASR | IOTest | GMP |
| AF700 | 0.5 mL | Liquid | B90396 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | B49194 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A86050 | ASR | IOTest | GMP |

NEW

NEW

NEW

Clone: ALB11

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | A07786 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0584U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1834U | ASR | IOTest | GMP |

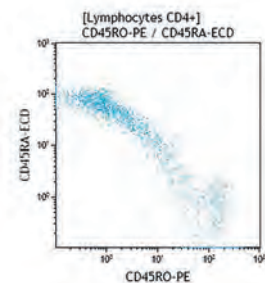
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



CD45RO

The CD45RO molecule is the 180 kDa isoform of CD45 Leucocyte Common Antigen (LCA). The expression of the CD45RA/CD45RO isoforms of CD45 is associated with functional differentiation of T lymphocytes. CD45RO is expressed by cortical thymocytes, CD4+ memory T lymphocyte subset and activated T lymphocytes. CD45RO is weakly expressed on monocytes and granulocytes.



Lysed normal whole blood sample gated on CD4 positive lymphocytes. CD45RO-PE in dual staining with CD45RA-ECD.

Clone: UCHL1

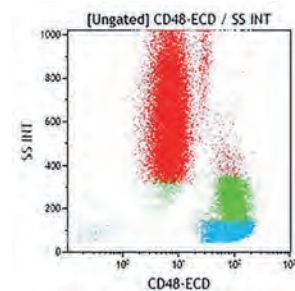
Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|--------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1247U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07787 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1307U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | B49192 | CE | IOTest | 98/79/EC |
| ECD | 1 mL | Liquid | IM2712U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B30638 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B13648 | ASR | IOTest | GMP |

NEW

CD48

The CD48 antigen is a glycosyl phosphatidylinositol- (GPI)-anchored membrane glycoprotein of 40-47 kDa with 2 extracellular immunoglobulin (Ig)-like domains. CD48 belongs to the Ig superfamily. CD48, expressed on all lymphocytes and monocytes, has been shown to be a low affinity ligand for CD2, suggesting a role in leucocyte adhesion. CD48 may participate in CD40-mediated activation of B cells.



Lysed normal whole blood sample.

Clone: J4.57

Isotype: IgG1 Mouse

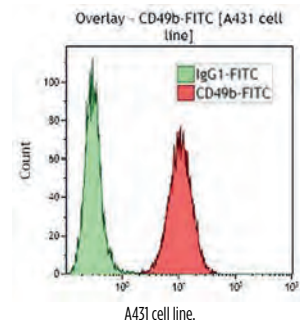
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1837U | ASR | IOTest | GMP |
| ECD | 0.5 mL | Liquid | B06026 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD49b

The CD49b antigen is a transmembrane glycoprotein of 150 kDa also known as the α -2 integrin and as platelet GPIa. CD49b non-covalently pairs with the β -1 integrin (CD29, GPIIa) to form the VLA-2 (very late activation antigen) complex. CD49b, was first identified as an extracellular matrix receptor for collagens and/or laminins. It is now recognized that the α 2 β 1 integrin serves as a receptor for many matrix and nonmatrix molecules. Extensive analyses have defined distinct conformations that lead to inactive, partially active or highly active ligand binding. The mechanisms by which the α 2 β 1 integrin plays a critical role in platelet function and homeostasis have been carefully defined. Studies have confirmed human physiology and disease states mediated by this receptor in immunity, cancer, and development. CD49b is expressed by platelets, activated T lymphocytes and thymocytes.



Clone: Gi9

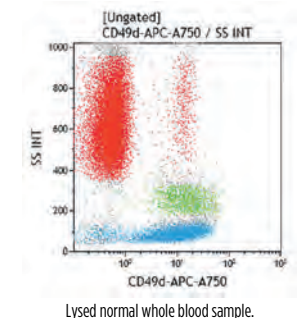
Isotype: IgG1 Mouse

The Gi9 antibody reacts with the molecule carrying the Br(a) as well as the Br(b) alloantigen. This antibody inhibits the adhesion of platelets to collagen. It detects human alloantibodies (anti-Br a,b) against VLA-2 by MAIPA assay. Gi9 was used as a CD49b reference monoclonal antibody during the HLDA 6. Gi9 reacts with platelets and weakly with monocytes. It also stains most adherent cell lines and T lymphocytes in culture.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|---------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | IM1425 | RUO | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0717 | RUO | - | GMP |

CD49d

CD49d is the integrin α 4 chain that non-covalently pairs with CD29 (β 1 chain) to form the very late activation antigen 4 (VLA-4), or with the integrin β 7 chain. CD49d is a transmembrane glycoprotein of 145 kDa devoid of disulfide bond. Complexed to β 1 or β 7 integrins, CD49d is not only involved in cell adhesion to fibronectin and vascular cell adhesion molecule 1 (VCAM-1), but also in intercellular leucocyte interactions. It is expressed by monocytes, lymphocytes, eosinophils, thymocytes and Langerhans cells.



Clone: HP2/1

Isotype: IgG1 Mouse

The HP2/1 antibody blocks the interaction of VLA-4 with VCAM-1. HP2/1 was used as a CD49d reference monoclonal antibody during the HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|--------|--------------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1404U | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B01682 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B16893 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0764 | ASR | - | GMP |

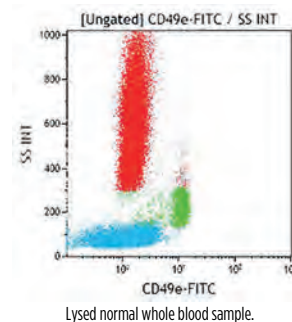
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



CD49e

The CD49e antigen is the 160 kDa integrin $\alpha 5$ -chain, which is composed of a heavy chain (135 kDa) and a light chain (25 kDa), linked by a disulfide bond. CD49e is non-covalently associated with the 130 kDa integrin $\beta 1$ -chain (CD29 molecule), forming the VLA-5 complex. CD49e is expressed by monocytes, platelets and two myeloid cell lines (U937, K562). It is known as the fibronectin and invasin receptor. It is useful for basic studies of fibronectin-mediated adhesion.



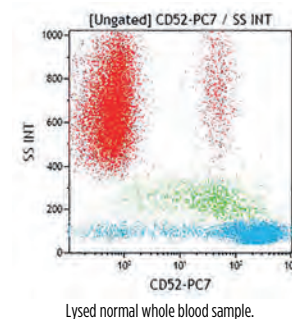
Clone: SAM1

Isotype: IgG2b Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1854U | ASR | IOTest | GMP |

CD52

CD52, also called CAMPATH-1, is a 21-28 kDa glycopeptide anchored to the membrane by a glycosylphosphatidylinositol (GPI) structure. The mature CD52 antigen is a very small protein (12 aminoacids) of 8-9 kDa. CD52 is expressed on lymphocytes, monocytes, macrophages and on epithelial cells of male reproductive tract, shed into seminal plasma and acquired by spermatozoa. Physiological role of CD52 on lymphocytes is unclear, although CAMPATH-1 antibody is capable of complement activation and it has been used in lympho proliferative disorders. Monoclonal antibodies directed against sperm may cause sperm immobilization and agglutination.



Clone: HI186

Isotype: IgG2b Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PC7 | 0.5 mL | Liquid | B68152 | ASR | IOTest | GMP |

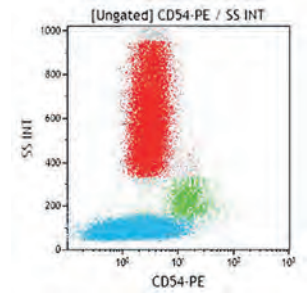
NEW

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD54

The CD54 antigen, previously known as ICAM-1 (InterCellular Adhesion Molecule-1), is a 90 kDa transmembrane glycoprotein. With seven potential N-linked glycosylation sites, its structure, as that of CD50 (ICAM-3) and CD102 (ICAM-2), is related to the Immunoglobulin family. The CD54 antigen mediates the adhesion of T lymphocytes with Antigen-Presenting Cells (APC) and is involved in T cell to T cell and T cell to B cell interactions. It is also involved in the adhesion of monocytes, lymphocytes and neutrophils to activated endothelium. It binds to the integrins LFA-1 (CD11a/CD18) and Mac-1 (CD11b/CD18). It is a receptor for the rhinovirus. It is expressed by endothelial cells and by many other cell types upon activation.



Lysed normal whole blood sample.

Clone: 84H10

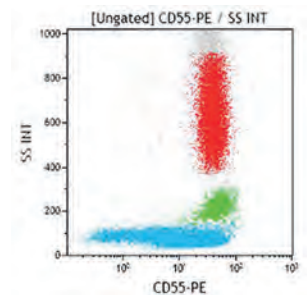
Isotype: IgG1 Mouse

84H10 antibody inhibits ICAM-1 mediated adhesion to LFA-1.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0726U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1239U | ASR | IOTest | GMP |

CD55

The CD55 antigen is a single chain glycosyl-phosphatidyl-inositol (GPI)-anchored, cell surface protein. This molecule undergoes post-transcriptional and post-translational modification resulting in a heterogeneous molecular weight ranging from 55 to 80 kDa. The CD55 antigen, also named Decay Accelerating Factor (DAF) is involved in the regulation of both alternative and classical complement pathways. C3b/C3Bb and C4b/C4b2a convertases, as well as echovirus, coxsackie B virus and CD97 are reported to interact with CD55. Like other GPI-anchored proteins, CD55 is associated in the cytoplasmic compartment with tyrosine kinases allowing signal transduction. The CD55 molecule is widely expressed on human cells including leucocytes, erythrocytes and platelets. CD55 is weakly expressed on NK cells.



Lysed normal whole blood sample.

Clone: JS11KSC2.3

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|---------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM2725 | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | B49190 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM2726 | ASR | IOTest | GMP |

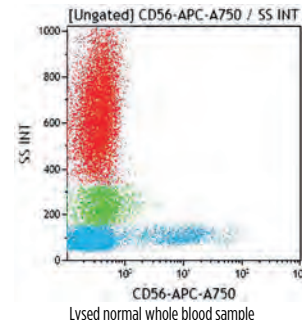
NEW

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Single-Color Conjugated Antibodies

CD56

The CD56 antigen is a 140 kDa isoform of the Neural Cell Adhesion Molecule (N-CAM). Post-translational modifications to the polypeptide include N- and O- glycosylations, acylation, sulphation and phosphorylation. The different N-CAM isoforms have molecular weights ranging from 135 to 220 kDa. The CD56 antigen is moderately expressed on a subpopulation of peripheral blood large granular lymphocytes and on all cells with NK activity. It is also expressed by subsets of T lymphocytes. CD56 antibodies do not react with granulocytes, monocytes or B cells.



Clone: N901 (NKH-1)

Isotype: IgG1 Mouse

The N901 (NKH-1) antibody was used as a CD56 reference mAb during HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|-----------|--------|----------------|--------|---------------|---------------------|
| PE | 100 tests | Liquid | A07788 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM2073U | ASR | IOTest | GMP |
| RD1 | 0.5 mL | Liquid | 6603067 | ASR | COULTER CLONE | GMP |
| RD1 | 0.5 mL | Liquid | 6603857 | ASR | CYTO-STAT | GMP |
| ECD | 100 tests | Liquid | B49214 | CE | IOTest | 98/79/EC NEW |
| ECD | 1 mL | Liquid | A82943 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07789 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2654U | ASR | IOTest | GMP |
| PC5.5 | 50 tests | Liquid | B49189 | CE | IOTest | 98/79/EC NEW |
| PC5.5 | 0.5 mL | Liquid | A79388 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | A21692 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | A51078 | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | IM2474 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM2474U | ASR | IOTest | GMP |
| APC-A700 | 50 tests | Liquid | B92446 | CE | IOTest | 98/79/EC NEW |
| APC-A700 | 0.5 mL | Liquid | B10822 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B46024 | ASR | IOTest | GMP |

Clone: C218

Isotype: IgG1 Mouse

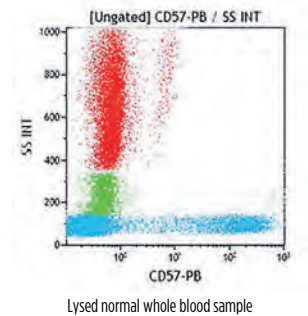
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------------|---------------|--------|------|------------------|
| UNLB | 0.2 mg | Freeze-dried | IM1844 | RUO | - | GMP |

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Single-Color Conjugated Antibodies

CD57

The CD57 antigen (HNK-1 antigen carbohydrate moiety) is an oligosaccharide with sulfated glucuronic acid residues that may be linked to a variety of polypeptides or lipids. In peripheral blood, it is found on a subset of cells with natural killer activity. It is confined to mononuclear cells, primarily large granular lymphocytes. Many of these CD57+ cells co-express the CD8 antigen and are a subset of the suppressor / cytotoxic T lymphocytes. Cord blood T cells or NK cells lack the CD57 antigen. It is not expressed on red blood cells or on platelets but is present on some neuroectodermal tissues.



Clone: NC1

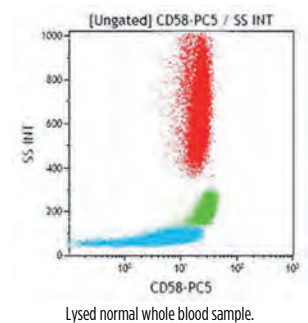
Isotype: IgM Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | A74779 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | B49188 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IMO466U | ASR | IOTest | GMP |

NEW

CD58

CD58 is a glycoprotein of 65-70 kDa, either transmembrane or glycosylphosphatidylinositol (GPI)-anchored. CD58 was first described as the lymphocyte-function associated antigen 3 (LFA-3). LFA-3 was further shown to interact with CD2 suggesting an important role in various immunological responses via T-cell adhesion and activation. CD58 activate the costimulation pathways of T lymphocytes and natural killer (NK) cells, maximizing the cytotoxicity of target cells by cytotoxic T lymphocytes (CTL) and NK cells. This antigen is widely expressed on leucocytes, erythrocytes and endothelial cells.



Clone: AICD58

Isotype: IgG2a Mouse

The AICD58 antibody is a blocking antibody in LFA-3 mediated adhesion. This antibody was used as a CD58 reference mAb during HLDA 6.

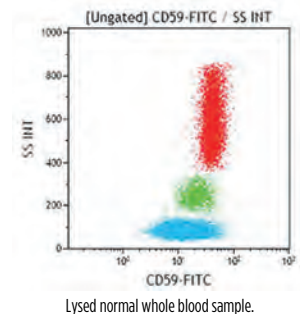
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1218U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1430 | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM3702 | ASR | IOTest | GMP |
| APC | 1 mL | Liquid | IM3701 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD59

The CD59 antigen, also known as Protectin or Membrane Inhibitor of Reactive Lysis (MIRL) is a 18-20 kDa, single-chain, glycosylphosphatidylinositol (GPI)-anchored cell surface protein. CD59 inhibits complement lysis by binding to the C5b-8 and C5b-9 complexes and thus preventing formation of the polymeric C9 complex during the final steps of membrane attack complex (MAC). CD59 is expressed on all haematopoietic cells and is widely expressed on cells in all tissues. Studies of the susceptibility of HIV-1, HTLV-1 and HCMV to complement (C)-mediated lysis suggest that viruses incorporate host cell-derived C regulatory proteins such as CD59 and CD55, a mechanism by which a variety of enveloped viruses may acquire resistance to C-mediated lysis.



Clone: P282E

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | B49187 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM3457U | ASR | IOTest | GMP |

NEW

Clone: MEM-43

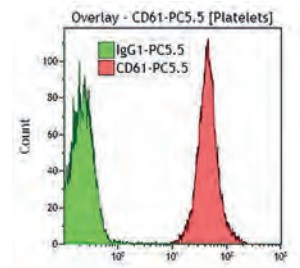
Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------|------|--------|---------------|--------|--------|------------------|
| PE | 1 mL | Liquid | B68140 | ASR | IOTest | GMP |

NEW

CD61

The CD61 antigen (platelet glycoprotein GPIIb) is the 110 kDa integrin $\beta 3$ subunit, covalently associated with the integrin αIIb chain (CD41, platelet GPIIb) to form the GPIIb-IIIa complex ($\alpha IIb-\beta 3$ integrin). Independently of CD41, CD61 is also associated with the integrin αV (CD51) to form the vitronectin receptor. CD41/CD61 is expressed only by platelets and megakaryocytes, whereas CD51/CD61 is found on osteoclasts, endothelial cells, macrophages, fibroblasts, smooth muscle, synovial lining cells and renal glomeruli.



Clone: SZ21

Isotype: IgG1 Mouse

The SZ21 antibody is specific for the PIA1, not the PIA2 form of GPIIb. It inhibits platelet aggregation and secretion induced by collagen, arachidonic acid, and thrombin. This antibody also inhibits fibrinogen binding to human platelets induced by ADP, arachidonic acid and PAF.

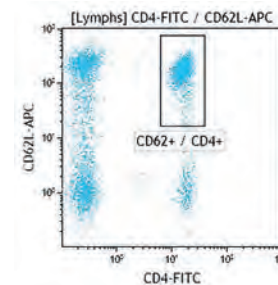
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|--------------|-----------|--------------|----------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | IM1758 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM1758U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM3605 | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B21172 | ASR | IOTest | GMP |
| PC7 | 1 mL | Liquid | IM3716 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0540 | RUO | - | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD62L

The CD62L antigen, also called LECAM-1, L-selectin or leucocyte adhesion molecule 1 [LAM-1], is a 75 kDa molecule, member of the selectin family. As other selectins (CD62E, CD62P), CD62L is a membrane-anchored Ca²⁺-dependent C-type lectin that binds to cell-surface carbohydrate ligands. CD62L acts as the peripheral lymph node homing receptor. It is also involved in lymphocyte binding to High Endothelial Venules (HEV) and in lymphocyte rolling on activated endothelium. CD62L is expressed by B and T lymphocytes, monocytes, neutrophils, eosinophils, and approximately half of the peripheral NK lymphocytes. It is also expressed by some spleen and bone marrow lymphocytes, as well as by some thymocytes and bone marrow myeloid cells. The expression level of CD62L on lymphocytes may be subject to control mechanisms such as downregulation and/or upregulation. On neutrophils, monocytes and their bone marrow precursors, CD62L is also downregulated by stimulation with granulocyte-macrophage colony stimulating factor (GM-CSF).



Lysed normal whole blood sample. Gated on lymphocytes.

Clone: DREG56

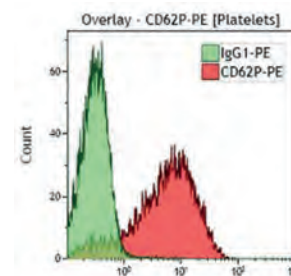
Isotype: IgG1 Mouse

In contrast to other antibodies recognizing this molecule, DREG56 is particularly effective in blocking CD62L mediated lymphocyte binding to lymph node HEV. DREG56 (ref.33) was used as a CD62L reference monoclonal antibody during the HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|--------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B30640 | ASR | IOTest | GMP |
| FITC | 2 mL | Liquid | IM1231U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM2214U | ASR | IOTest | GMP |
| ECD | 1 mL | Liquid | IM2713U | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM2655U | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B30641 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B30639 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B26604 | ASR | IOTest | GMP |

CD62P

The CD62P antigen (P-selectin/GMP-140/PADGEM) is a member of the selectin family. Like other selectins (CD62E and CD62L), CD62P contains an amino terminal lectin-like domain, followed by an EGF domain, nine short consensus repeats (SCR), a transmembrane domain and a short cytoplasmic domain. CD62P (140 kDa) is present in megakaryocytes, in Weibel-Palade bodies of endothelial cells and in α -granules of platelets. CD62P is translocated to the surface membrane upon in vitro and in vivo activation. CD62P is involved in the interaction between activated platelets and with monocytes and neutrophils.



Platelet rich plasma (PRP) from a normal whole blood sample.

Clone: CLB-Thromb/6

Isotype: IgG1 Mouse

The CLB-Thromb/6 antibody recognizes the boundary region between the lectin and EGF-like domains, which is preserved after platelet fixation. It inhibits platelet adhesion to eosinophils in cell adhesion assays.

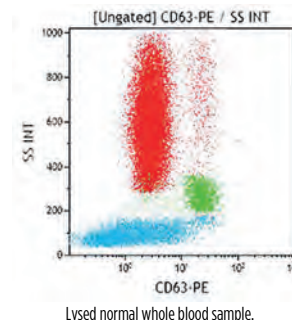
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | A07790 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1759U | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD63

The CD63 antigen, also known as lysosomal membrane associated glycoprotein 3 (LAMP3), is a member of the tetraspanin (TM4SF) family. Nearly 20 genes encode tetraspanins whose main structural characteristics is their four transmembrane domains. CD63, as other tetraspanins (CD9, CD81, CD82), has recently been reported as forming complexes with VLA-3 and phosphatidylinositol 4-kinase, with VLA-6, CD11/CD18 and tyrosine kinase. CD63 was first described in granules of resting platelets and on the surface membrane on activated platelets. CD63 was later identified as granulophysin, a platelet dense granule glycoprotein. The molecular weight of the platelet form of CD63 ranges from 40 to 55 kDa. CD63 has been found to be identical to the ME491 antigen expressed by melanoma cells. It is also found on monocytes / macrophages and is weakly expressed by resting granulocytes, T lymphocytes and B lymphocytes. CD63 antigen, present in azurophilic granules of non-stimulated neutrophils, is strongly expressed on the surface of neutrophils after activation. Studies have shown that CD63 may be a marker for granule release. This phenomenon is also reported for basophils.



Clone: CLB-Gran/12

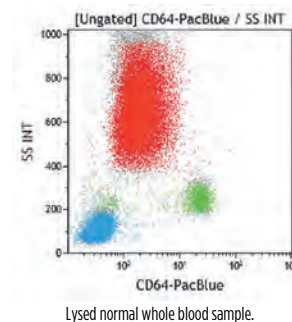
Isotype: IgG1 Mouse

The CD63 antibodies inhibit adhesion of neutrophils to activated endothelium. CLBGran/12 was used as a CD63 reference monoclonal antibody during HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard | |
|-------------|-----------|--------|----------------|--------|--------|------------------|------------|
| FITC | 100 tests | Liquid | B92467 | CE | IOTest | 98/79/EC | NEW |
| FITC | 2 mL | Liquid | IM1165U | ASR | IOTest | GMP | |
| PE | 2 mL | Liquid | IM1914U | ASR | IOTest | GMP | |

CD64

CD64 is an integral membrane glycoprotein known as an Fc receptor that binds monomeric IgG-type antibodies with high affinity. It is also known as Fc-gamma receptor 1 (FcγRI) or FCRI. After binding IgG, CD64 interacts with an accessory chain known as the common γ chain, triggering cellular activation. Structurally, CD64 is composed of a signal peptide that allows its transport to the surface of a cell, three extracellular immunoglobulin domains of the C2-type used to bind antibody, a hydrophobic transmembrane domain, and a short cytoplasmic tail. CD64 is constitutively found on macrophages and monocytes. CD64 is expressed on early myeloid cells and in IFNγ and G-CSF activated polymorphonuclear neutrophils (PMNs).



Clone: 22

Isotype: IgG1 Mouse

The 22 antibody shows especially high affinity binding to human mononuclear phagocytes. The epitope recognized by this antibody is distinct from the IgG binding site.

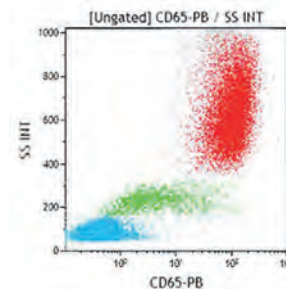
| Form | Size | Format | Part# | Status | Line | Quality Standard | |
|-----------------|-----------|--------|----------------|--------|--------|------------------|------------|
| PB | 0.5 mL | Liquid | B19718 | ASR | IOTest | GMP | |
| FITC | 100 tests | Liquid | B49185 | CE | IOTest | 98/79/EC | NEW |
| FITC | 2 mL | Liquid | IM1604U | ASR | IOTest | GMP | |
| PE | 2 mL | Liquid | IM3601U | ASR | IOTest | GMP | |
| ECD | 0.5 mL | Liquid | A98434 | ASR | IOTest | GMP | |
| PC5 | 100 tests | Liquid | B49186 | CE | IOTest | 98/79/EC | NEW |
| PC5 | 1 mL | Liquid | IM3606U | ASR | IOTest | GMP | |
| PC7 | 0.5 mL | Liquid | B06025 | ASR | IOTest | GMP | |
| APC-A750 | 50 tests | Liquid | B96769 | CE | IOTest | 98/79/EC | NEW |
| APC-A750 | 0.5 mL | Liquid | A89308 | ASR | IOTest | GMP | |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD65

The CD65 antigen is analogous to the carbohydrate structure(s) recognized by CD15 antibodies. CD65 is a type II chain fucoganglioside involving the oligosaccharide sequence: Gal β 1-4GlcNac β 1-3Gal β 1-4GlcNac(Fuc α 1-3) β 1-R. CD65 has been suggested as the CD62L ligand, and it has been hypothesized to be involved in the extra vascular infiltration. CD65 is normally expressed on neutrophils, eosinophils, and basophils, on a monocyte subset and on a fraction of CD56bright NK cells. It is not expressed on lymphocytes. CD65 is also found on the membrane of adipocytes and on thymic epithelium but it is not expressed by mastocytes. In myeloid ontogenesis, CD65 seems to be expressed later than myeloperoxidase (MPO).



Lysed normal whole blood sample.

Clone: 88H7

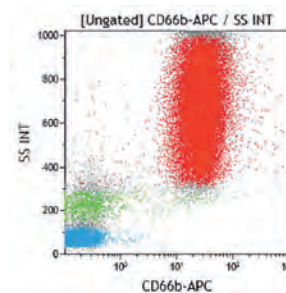
Isotype: IgM Mouse

88H7 antibody was re-assigned from the CD65s to the CD65 cluster during HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B08164 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | B36299 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM1654U | ASR | IOTest | GMP |

CD66b

The CD66 antigens were originally described as granulocyte-specific activation antigens, related to the carcino-embryonic antigen (CEA) previously described on colon cancer cells. The CEA/CD66 gene group belongs to the immunoglobulin (Ig) gene superfamily. Among the CD66 cluster, CD66b (also known as CGM6) is a glycosyl-phosphatidylinositol (GPI)-anchored glycoprotein of 95-100 kDa. CD66b is thought to play a role in the regulation of the adhesive activity of CD11/CD18 via signal transduction in neutrophils. It is strongly expressed by myelocytes, metamyelocytes, neutrophils and polymorphonuclear neutrophils. CD66b is weakly expressed by promyelocytes.



Lysed normal whole blood sample.

Clone: 80H3

Isotype: IgG1 Mouse

The 80H3 antibody does not react with peripheral lymphocytes and monocytes.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|--------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0531U | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B15091 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B08756 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD66c (KOR-SA3544)

The CD66c antigen, also known as non-specific cross-reacting antigen (NCA90), is a granulocyte cell surface GPI-linked protein of 80-100 kDa. It is also called KOR-SA3544. Along with CD66a, CD66b and CD66d, it is a member of the carcinoembryonic (CEA) antigen family which are involved in neutrophil activation and signaling and intercellular adhesion. It is also called CEACAM6. CD66c is a surface (and intracellular) molecule bound to the membrane by a glycosyl-phosphatidylinositol anchor. While its expression on peripheral granulocytes is well recognized, less is known about its distribution in early steps of normal and neoplastic hematopoiesis. It is not expressed by lymphocytes, monocytes, platelets or red blood cells. This antigen is never expressed by normal B cells.

Clone: KOR-SA3544

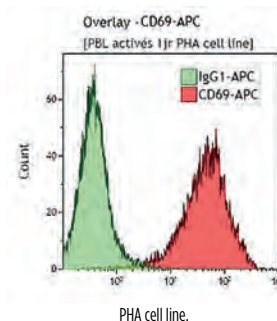
Isotype: IgG1 Mouse

In peripheral blood, the KOR-SA3544 antibody reacts with the majority of granulocytes but not with lymphocytes, monocytes, platelets or red blood cells. In normal bone marrow, only the myeloid cells are positive.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|------|------------------|
| FITC | 1 mL | Liquid | IM2039U | ASR | - | GMP |
| PE | 1 mL | Liquid | IM2357U | ASR | - | GMP |

CD69

The CD69 antigen is a 60 kDa disulfide-linked dimeric structure, known as activation inducer molecule (AIM). This structure contains two differentially glycosylated forms (33 and 27 kDa) of a single core protein, that are covalently associated. This activation antigen is one of the earliest appearing cell surface glycoproteins (before other activation antigens such as IL2-R) after T or B-lymphocyte activation but is absent in resting lymphocytes. It is also expressed by activated macrophages, NK cells and other cell types including neutrophils, eosinophils and platelets. Its expression in vitro can be induced by different factors such as PMA, PHA or CD3 monoclonal antibodies.



Clone: TP1.55.3

Isotype: IgG2b Mouse

The CD69 antibody is useful in combination with CD4, CD8 and CD3 antibodies for T cell activation studies. The TP1.55.3 antibody immunoprecipitates the 60 kDa homodimer and both 27 kDa and 33 kDa subunits from activated peripheral blood lymphocytes under reduced and non-reduced conditions.

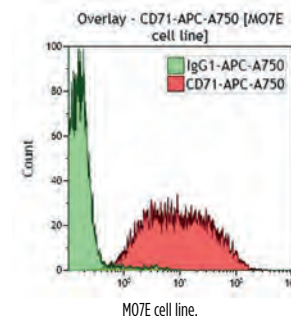
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|-----------|--------|----------------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM1943U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | 6607110 | RUO | IOTest | GMP |
| PC5 | 100 tests | Liquid | IM2656 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | A80710 | ASR | IOTest | GMP |
| APC | 1 mL | Liquid | A80711 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD71

The CD71 antigen is known as the transferrin receptor. It mediates cellular iron uptake via internalization and recycling. It is a type II membrane glycoprotein, characterized as a disulfide-bound dimer of two identical subunits of 95 kDa each. CD71 is expressed on activated T and B lymphocytes, macrophages and erythroblasts. The N-Terminal, intracytoplasmic domain of CD71 mediates rapid endocytosis and self recycling. CD71 is absent from resting blood leucocytes. Its expression is upregulated on proliferating cells. CD71 is present on reticulocytes and erythroid progenitors in fetal liver, cord blood, and peripheral blood, yet it is lost as these differentiate to mature erythrocytes. CD71 is expressed on marrow stromal cells (MSCs) from bone marrow.



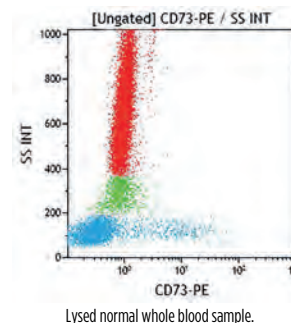
Clone: YDJ1.2.2

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | IM0483 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM0483U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM2001U | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | A97051 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | A89313 | ASR | IOTest | GMP |

CD73

CD73 is a 5'-nucleotidase anchored to the membrane by a glycosylphosphatidylinositol (GPI) structure. It catalyzes the dephosphorylation of purine and pyrimidine ribo- and deoxyribonucleoside mono phosphates to their corresponding nucleosides. CD73 is a dimer of two identical 70 kD subunits. A soluble form of CD73 can be shed from the membrane through proteolytic cleavage or hydrolysis of the GPI anchor by phosphatidylinositol-specific phospholipase. CD73 is expressed on subsets of T and B cells, follicular dendritic cells and on epithelial and endothelial cells. CD73 regulates the availability of adenosine by converting AMP to adenosine. The expression and function of this enzyme are upregulated under hypoxic conditions, as well as by the presence of several pro-inflammatory mediators, such as TGF- β , IFNs, TNF- α , IL-1 β and prostaglandin E2. CD73 can transmit activation signals to T cells and mediates adhesion of lymphocytes to follicular dendritic cells and endothelial cells. The CD73/adenosine pathway is a potent additional suppressive pathway of Treg cells and also confers a suppressive anti-inflammatory function on the uncommitted primed precursor Thpp cell type.



Clone: AD-2

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------|------|--------|---------------|--------|--------|------------------|
| PE | 1 mL | Liquid | B68176 | ASR | IOTest | GMP |

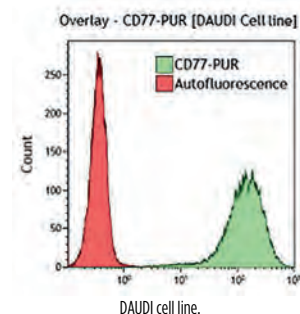
NEW

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Single-Color Conjugated Antibodies

CD77

The CD77 antigen is neutral glycosphingolipid of the globoseries globotriaosylceramide (Gb3). It is known as the Pk blood group antigen, a normal intermediate in the biosynthetic pathway of the P blood group antigen. CD77 is also present as an antigen of germinal center B lymphocytes entering apoptosis. It is expressed by endothelial cells. Studies have shown that the antigen may be associated with a Burkitt's Lymphoma-associated Antigen (BLA).



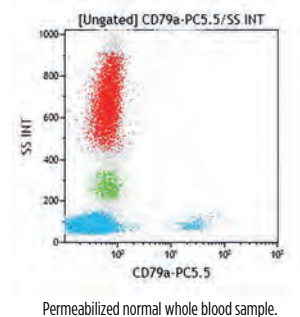
Clone: 38.13

Isotype: IgM Rat

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|------|------------------|
| UNLB | 100 tests | Liquid | IM0175 | RUO | - | GMP |

CD79a

The CD79a molecule (MB-1, Ig α) is part of the MB-1/B29 (CD79a/CD79b) disulfide-linked heterodimer which is non-covalently associated with membrane immunoglobulins (Igs) to build the B Cell antigen Receptor (BCR) complex. CD79a is a 40-45 kDa glycoprotein and belongs to the Ig superfamily of surface antigens. CD79a protein is specifically and strictly expressed throughout B lymphocyte differentiation. It appears early in ontogeny, probably before expression of cytoplasmic μ -chain, and is present in the cytoplasm of plasma cells.



Clone: HM47

Isotype: IgG1 Mouse

The HM47 antibody is recommended to be used in flow cytometry after permeabilization with saponin-based permeabilization reagent IntraPrep. The HM47 antibody reacts with a cytoplasmic epitope of the CD79a molecule.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|-----------|--------|---------|--------|--------|------------------|
| PE | 100 tests | Liquid | IM2221 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM2221U | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM3456U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B42018 | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | B36287 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | A60793 | ASR | IOTest | GMP |

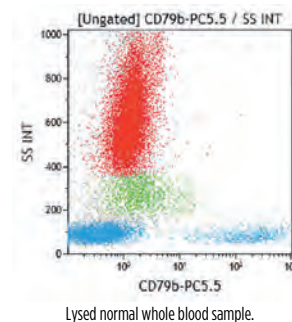
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



CD79b

The CD79b molecule (B29, IgB) is part of the CD79a / CD79b disulphide-linked heterodimer, non-covalently bound to surface immunoglobulins to form B cell receptors (BCR). The molecular weight of CD79b is about 33 to 40 kDa in reducing conditions. The CD79b molecule expression occurs early in B cells ontogeny. It is restricted to B lymphocytes, first appearing on the surface at the pre-B cell stage and remaining through all stages of B cell differentiation prior to plasma cells. CD79b plays an important role in the regulation of antigen receptor function like the CD3 subunits do with TCR function on T lymphocytes.



Clone: CB3-1

Isotype: IgG1 Mouse

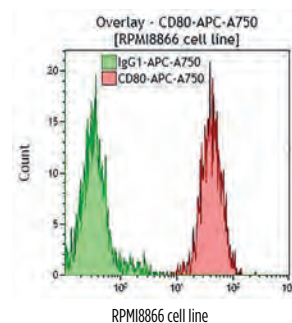
The CB3-1 antibody reacts with the external part of the CD79b molecule and is to be used in flow cytometry. This antibody is not suitable for intracytoplasmic staining. For this application the use of the CD79a antibody is recommended.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|-----------|--------|---------|--------|--------|------------------|
| PE | 100 tests | Liquid | IM1612 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1612U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B21445 | ASR | IOTest | GMP |
| APC | 50 tests | Liquid | B96773 | CE | IOTest | 98/79/EC |
| APC | 0.5 mL | Liquid | A87784 | ASR | IOTest | GMP |

NEW

CD80

The CD80 antigen (B7, BB1) is a highly glycosylated single-chain protein. Its extracellular domain consists of two Ig-like domains. This 60 kDa molecule shares with CD86 the capability to be the ligand for two structurally similar molecules expressed on T lymphocytes, CD28 and CD152 (CTLA-4). CD80 antigen is expressed on in vitro activated B lymphocytes after 24h stimulation and at maximal level 48-72h post activation. It is not expressed on the majority of resting B cells from peripheral blood but identifies a subpopulation of B cells that has been previously activated. The antigen is also expressed by HTLV-1 transformed T cells and activated monocytes. CD80 binding provides co-stimulatory signals for T cell activation.



Clone: MAB104

Isotype: IgG1 Mouse

The MAB104 monoclonal antibody reacts with in vitro activated B lymphocytes, some B cell lines, and weakly with a small proportion of non-activated B cells. This antibody also reacts with activated T cells but not with peripheral monocytes and T cells.

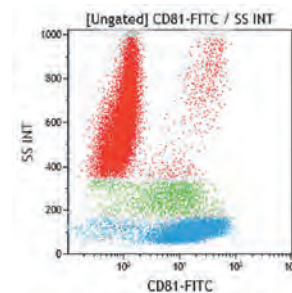
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|--------|--------|---------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1853U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1976U | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B30644 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B30642 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B30643 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD81

The CD81 molecule is a single chain, 4 transmembrane domain protein (Tetraspan/TM4SF). Both the NH₂- and COOH-termini are located inside the cytoplasm, and two loops of the protein sequence are exposed extracellularly. The CD81 antigen is not glycosylated and its molecular weight is 26 kDa. Its tissue distribution is broad. This antigen may be present in some cases as multimolecular complexes, in association with other members of the TM4 superfamily (CD37, CD53) or, on the surface of B cells, in association with CD19 and/or CD21 and/or MHC class II antigens. Most B lymphocytes, at all stages of cellular differentiation, express CD81 at relatively high levels.



Lysed normal whole blood sample.

Clone: JS64

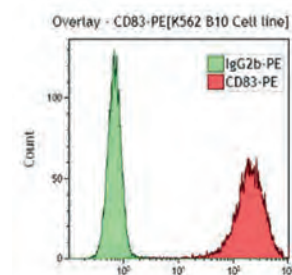
Isotype: IgG2a Mouse

The JS64 antibody reacts with the majority of normal lymphocytes, monocytes and eosinophils. Neutrophils and platelets are negative. JS64 has an anti-proliferative effect on some cell lines, but does not cause apoptosis.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B19717 | ASR | IOTest | GMP |
| FITC | 1 mL | Liquid | B25329 | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM2579 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A87789 | ASR | IOTest | GMP |

CD83

CD83, or HB15 molecule, is a 43 kDa glycoprotein member of the immunoglobulin superfamily. It is composed of a single extracellular V-type Ig-like domain, a transmembrane region and a 40 amino acid cytoplasmic domain. CD83 is predominantly expressed by dendritic lineage cells including Langerhans cells, skin and peripheral blood dendritic cells. It is also expressed by interdigitating reticulum cells present in the T cell zones of lymphoid organs as well as being weakly expressed by some germinal center lymphocytes. CD83 is expressed by in vitro generated dendritic cells. It is not expressed by resting peripheral blood leucocytes at detectable levels and is only expressed at low levels following lymphocyte activation in vitro.



K562 B10 Cell line.

Clone: HB15a

Isotype: IgG2b Mouse

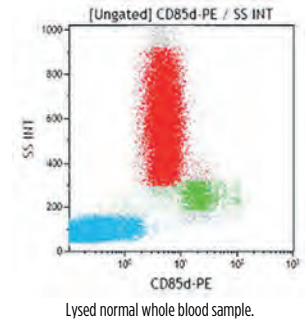
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM2410U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM2218U | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM3240U | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD85d (ILT4)

CD85d (ILT4) is a member of the new immunoglobulin (Ig)-like transcripts (ILT) family of genes located on human chromosome 19q13.4. ILT4 is also known as leucocyte Ig-like receptor (LIR)-2 and monocyte / macrophage Ig-like receptors (MIR)-10. ILT4 is a transmembrane protein recognized by 42D1 monoclonal antibody. The protein has extracellular Ig-SF domains, and ITIM motifs in the cytoplasmic tail that inhibit cellular responses by recruiting phosphatases such SHP-1. ILT4 is confined to the myelomonocytic lineage as it is expressed on monocytes, macrophages, and dendritic cells (DCs). ILT4 binds to HLA-G molecules with a 3- to 4-fold higher affinity than to classical MHC class I molecules. ILT4 may modulate one or several of the antigen presenting functions mediated by DCs, control inflammatory responses mediated by monocytes / macrophages or inhibit their cytotoxicity. The recognition of HLA-G by ILT4 may play a role in materno-fetal tolerance as HLA-G is selectively expressed in the trophoblast. It has been shown that recipient's CD8+CD28- T suppressor (Ts) cells may induce tolerance by up-regulating ITL3 and ILT4 expressions in donor's dendritic cells, rendering these antigen-presenting cells (APCs) tolerogenic.



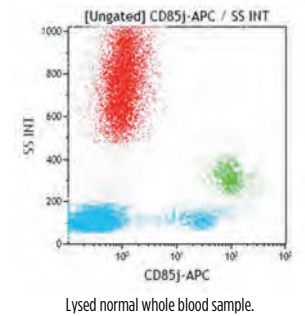
Clone: 42D1

Isotype: IgG2a Rat

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | A22334 | RUO | IOTest | GMP |

CD85j (ILT2)

CD85j, also called ILT2, is a member of the immunoglobulin (Ig)-like transcripts (ILT) family of genes located on human chromosome 19 (the numerical subclassification refers to the members in the order of the gene on the chromosome). It is a 110-kDa transmembrane glycoprotein. ILT2 receptor is a NK receptor involved in inhibition of NK and T cells cytolytic activity and cytokine production. ILT2 is also known as leucocyte Ig-like receptor (LIR)-1 and monocyte / macrophage Ig-like receptor (MIR)-7. The protein has 4 extracellular Ig-SF domains, and 4 cytoplasmic ITIM motifs in the cytoplasmic tail. Both myeloid and lymphoid cells express ILT2. Among lymphoid cells, NK cells, T cell subsets and all peripheral B cells express ILT2. It is also expressed on monocytes, macrophages, and dendritic cells. Ligands for CD85j are non-classical class I HLA-G molecules, certain alleles of HLA-A and -B loci and the human cytomegalovirus gene product, UL18, a viral homolog of HLA class I molecules. The inhibitory function of CD85j has been explored mainly in NK and T cells. In NK cells, ILT2 inhibits the cytolysis of HLA-Class I-positive target cells. In T cells, ILT2 inhibits both signaling and cellular events that control the activation of T cells.



Clone: HP-F1

Isotype: IgG1 Mouse

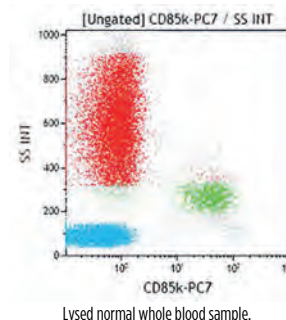
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | A07408 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B30645 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD85k (ILT3)

The CD85k antigen (ILT3) is a member of Immunoglobulin (Ig)-Like Transcripts (ILT), also known as Leucocyte Ig-like Receptors (LIR) and Monocyte / Macrophage Ig-like Receptors (MIR). ILT are expressed on monocytes, macrophages, dendritic cells (DCs) and granulocytes, except ILT2, which is expressed by both myeloid and lymphoid cells: NK, T cell subsets and all peripheral B cells. All ILT receptors except (ILT6) are transmembrane proteins and have been classified in 3 types: Inhibitory: ILT2, 3, 4, 5, LIR8; Activating: ILT1, LIR6a, 7, LIR8, with a cytoplasmic tail associated to FcR γ ; Soluble: ILT6. The CD85k antigen (otherwise known as LIR-5, HM18) is a transmembrane protein of 60 kDa, constitutively phosphorylated. Unlike ILT2 and ILT4, ILT3 does not bind to HLA-A, -B and -G1 molecules. The ligand of ILT3 is unknown, however research studies point out the following functional properties: ILT3 is involved in antigen uptake and presentation; ILT3 negatively regulates Antigen Presenting Cell (APC) functional responses triggered via stimulatory receptors such as CD11b, CD16, MHC-class II. The transmission of a negative signal via ITIMs may be one of the inhibitory mechanisms, ranging from temporary to permanent inactivation, that control homeostasis, and immunological tolerance. It has been shown that ILT3, unregulated on monocytes and DCs by CD8+CD28- T suppressor cells, renders these APC tolerogenic.



Clone: ZM3.8

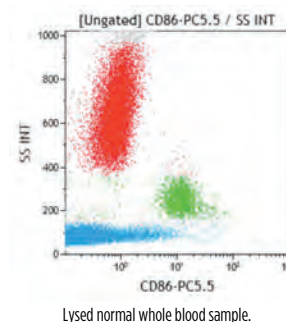
Isotype: IgG1 Mouse

The ZM3.8 antibody immunoprecipitates a protein of 55 kDa from ILT3-transfected T cells and a protein of 60 kDa from monocytes.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PC7 | 1 mL | Liquid | A46529 | ASR | IOTest | GMP |

CD86

The CD86 antigen (B7-2, B70) is a single-chain trans-membrane glycoprotein, structurally similar to CD80. Its molecular weight is 80 kDa, under reducing conditions. The extracellular region is composed of one V-type and one C-type Ig-like domains. There are 8 potential sites for N-glycosylation. The cytoplasmic tail has 3 potential sites for protein kinase C phosphorylation. CD86 shares with the CD80 molecule the same co-receptors on T cells, CD28 and CD152 (CTLA-4). CD86 binds to CD152 with a 20-100-fold higher affinity than to CD28. CD86 is expressed constitutively by interdigitating dendritic cells, and at lower level by peripheral blood dendritic cells. It is strongly expressed by monocytes. On lymphocytes, CD86 appears as a B-cell activation antigen. CD86 is preferentially expressed by memory B cells and germinal center B cells, but not on plasma cells. Its expression can be up-regulated by activation through surface immunoglobulin, CD40, MHC class II molecules or by PMA with ionomycin. T cells activated by CD3 ligation have also been reported to express CD86.



Clone: HA5.2B7

Isotype: IgG2b Mouse

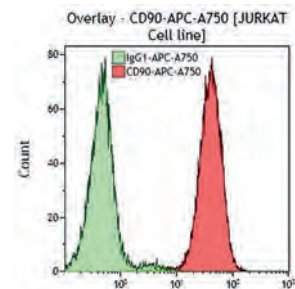
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|--------|--------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2729U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B30647 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B30648 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B30646 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD90

The human CD90 antigen (also known as Thy-1) is the smallest (18 kDa) member of the immunoglobulin gene superfamily (IgSF). It is a highly glycosylated molecule with a glycosyl-phosphatidylinositol (GPI) anchor consisting of a single IgSF variable domain. The CD90 molecule has a broad tissue distribution and is expressed in nervous tissue, connective tissue and various stromal cell lines. It characterizes a rare subset of human fetal bone marrow cells, that contains multipotent hematopoietic progenitor activity. This antigen is expressed on a subset of CD34 positive cells from human bone marrow, cord blood or fetal liver. It is also expressed on very small subsets of thymocytes and peripheral T-lymphocytes.



Jurkat cell line: IL-2 producing T lymphocyte cell line

Clone: F15-42-1-5

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1839U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM1840U | ASR | IOTest | GMP |

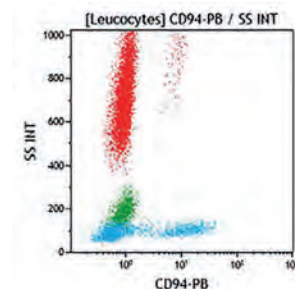
Clone: Thy1/310

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|--------|--------|---------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B30649 | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM3703 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B36121 | ASR | IOTest | GMP |

CD94

CD94 is a type II transmembrane glycoprotein of 30 kDa, belonging to the Ca⁺⁺-dependent (C-type) lectin family. Like NKG2A (or Kp43) on human natural killer (NK) cells, CD94 associates with one member of the NKG2 family to form disulphide-linked, NK cell receptor for MHC class I molecules, with a broader specificity than the human killer cell inhibitory (KIR) / activator (KAR) receptors of the Ig-superfamily. Ligation of CD94 either potently triggers or inhibits NK cell proliferation and cell-mediated cytotoxicity. Recent studies strongly indicate that the specificity of CD94/NKG2 receptors is for HLA-E, a non-classical MHC class I molecule. CD94/NKG2A and CD94/NKG2B heterodimers constitute inhibitory NK cell receptors, whereas the association of CD94 with NKG2C corresponds to an activating receptor. The expression of CD94 appears restricted to most NK cells and to a T lymphocyte subpopulation including a subset of $\gamma\delta$ TCR+ T-cells and $\alpha\beta$ TCR+ CD8+ CD56+ T-cells, mainly V α 2/V δ 2.



Lysed normal whole blood sample.

Clone: HP-3B1

Isotype: IgG2a Mouse

Ligation of CD94 with the HP-3B1 monoclonal antibody inhibits IL-2-dependent proliferation of NK-cells, and induces apoptosis in a subset of IL-2-stimulated NK cells.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|-----------|--------|---------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B90465 | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | IM2276 | RUO | IOTest | GMP |
| APC | 0.5 mL | Liquid | B09980 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD95

The CD95 (Fas or APO-1) antigen is a 40-50 kDa transmembrane glycoprotein. It belongs to the Tumor Necrosis Factor (TNF) superfamily and contains three cysteine-rich repeats. This cell surface molecule mediates apoptosis (programmed cell death). CD95 antigen is expressed on a substantial proportion of peripheral blood CD4+ lymphocytes, CD8+ lymphocytes and B lymphocytes but on a minor proportion of NK cells. It is not found on platelets or erythrocytes, but is expressed variably on granulocytes and monocytes. CD95 is strongly up-regulated on activated T cells, B cells, NK cells and thymocytes. Moreover, it is widely expressed on cell lines of T, B, NK and myeloid lineages. Most other tissues express CD95.

Clone: CH11

Isotype: IgM Mouse

The CH11 antibody *in vitro* induces apoptosis in some CD95 expressing cell lines.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|---------|--------|--------|--------|------|------------------|
| UNLB | 0.05 mg | Liquid | IM1504 | RUO | - | GMP |

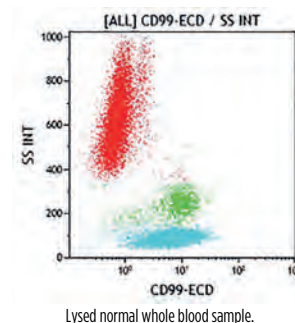
Clone: UB2

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|----------|--------|--------|--------|------|------------------|
| PE | 50 tests | Liquid | IM1739 | RUO | - | GMP |

CD99

CD99 is an heavily O-glycosylated 32-kDa type I transmembrane protein. Its expression has been reported in many cell types, such as hematopoietic cells, endothelial cells, central nervous system ependymal cells, thymocytes, granular cells of the ovary, Sertoli cells, and pancreatic islet cells. It is variably expressed on blood cells: at high density on T cells, NK cells and erythrocytes, at low density on B cells, eosinophils and platelets. Within the functions of CD99 in cells highly expressing this antigen, studies have shown cell death of thymocytes and T lymphocytes, migration through monocyte endothelial junctions by adhesion and diapedesis, cell-cell adhesion in lymphocytes. CD99 has intercellular protein phosphorylation activity, which triggers modulation of T-cell adhesion, induction of homotypic adhesion of corticothymocytes, apoptosis and rosette formation with erythrocytes.



Clone: HCD99

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| ECD | 0.5 mL | Liquid | B76291 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B76270 | ASR | IOTest | GMP |

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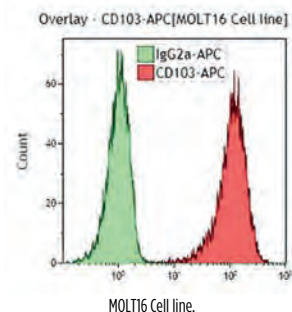
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Single-Color Conjugated Antibodies

CD103

The CD103 antigen was originally described as the human mucosal antigen 1 (HML-1) and was subsequently proved to be the integrin α E subunit. CD103 is composed of a 150 kDa chain associated with a 25 kDa chain by a disulfide bond. It is expressed as a heterodimer in association with the integrin β 7 chain. CD103 is expressed on mucosa-associated T lymphocytes and activated cells. This human intra-epithelial lymphocyte marker is expressed in very few resting peripheral blood lymphocytes. α E β 7 binds to E-cadherin on epithelial cells. Activation and TGF β -1 induce CD103 expression.



Clone: 2G5

Isotype: IgG2a Mouse

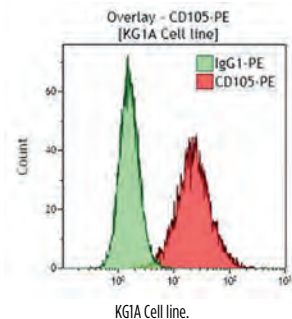
The 2G5 antibody stains a few bone marrow cells and, rarely, peripheral blood lymphocytes.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|----------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | B49222 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM1856U | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B06204 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0318 | RUO | - | GMP |

NEW

CD105

The CD105 antigen, also called Endoglin, is a 170-180 kDa RGD containing molecule which is present on the cell surface as a disulphide-linked homodimer. The molecule is a co-receptor for Transforming Growth Factor (TGF) β 1 and β 3. It is expressed mainly on endothelial cells, but also strongly in pre-B lymphocytes and in a subpopulation of monocytes. CD105 is a regulatory protein of TGF-beta receptor complex. CD105 expression and function in primitive hematopoiesis indicate that this molecule could cooperate with the dissociation of TGF- β 1 cell cycle effects from its other effects on cell survival and differentiation.



Clone: TEA3/17.1.1

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|----------|--------|---------------|--------|--------|------------------|
| PE | 50 tests | Liquid | B92442 | CE | IOTest | 98/79/EC |
| PE | 1 mL | Liquid | B76299 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B43293 | ASR | IOTest | GMP |

NEW

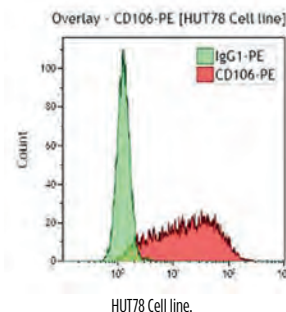
NEW

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Single-Color Conjugated Antibodies

CD106

The CD106 antigen, also known as Vascular Cell Adhesion Molecule-1 (VCAM-1), is an adhesion molecule which binds to integrin $\alpha 4/\beta 1$ (VLA-4) and integrin $\alpha 4/\beta 7$ on lymphocytes. It is a 110 kDa cell surface sialoglycoprotein belonging to the immunoglobulin superfamily. CD106 contains 7 Ig-like C2-type (immunoglobulin-like) domains. CD106 antigen is present on activated endothelial cells, tissue macrophages, dendritic cells and bone marrow fibroblasts. It is involved in the adhesion of lymphocytes, monocytes and eosinophils to activated endothelium. Recent studies shown that CD106 identifies a unique subpopulation of Mesenchymal Stem Cells (MSCs) with powerful immunosuppressive activity.



Clone: 1G11

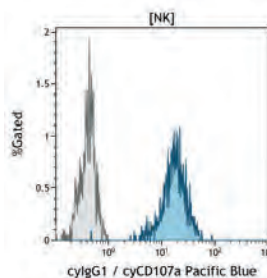
Isotype: IgG1 Mouse

The 1G11 antibody inhibits T lymphocyte adhesion to TNF-stimulated endothelial cells.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | A66085 | RUO | IOTest | GMP |

CD107a (LAMP-1)

The CD107a antigen is the heavily glycosylated 110 kDa lysosomal-associated membrane protein, LAMP-1. Together with LAMP-2, they are the mayor glycoproteins on the membrane of lysosome granules. CD107a molecule is ubiquitously found as intracellular antigen. It is also expressed on the surface of activated platelets, PHA activated, a few monocytic cell lines, and fetal thymus stromal cells. It has been described as a marker of cytotoxic CD8+ Tcell degranulation and of NK cell functional activity. As platelet activation marker, it has characteristics of an adhesive molecule. A minor fraction (<2%) of LAMP-1 is associated with the plasma membrane of most nucleated cells, presumably as a result of selective exchange of lysosomal and plasma membranes. Increased surface expression of LAMP-1 has been observed on transformed cells of high metastatic potential, and on embryonic cells.



Lysed normal whole blood sample gated on NK cells.

Clone: H4A3

Isotype: IgG1 Mouse

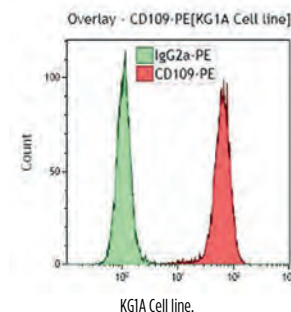
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B13978 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B12934 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD109 (E123)

The CD109 antigen is a monomeric glycosyl phosphatidylinositol (GPI)-linked glycoprotein of 170 kDa. It is a novel member of the α 2 macroglobulin (α 2M) / C3, C4, C5 family of thioester-containing proteins. CD109 is found on vascular endothelial cells, some epithelial cells, activated T-cells, activated platelets, leukemic megakaryoblasts and a subset of bone marrow CD34+ cells. It is not expressed on fresh peripheral blood lymphocytes (PBL). Poorly differentiated (CD34+, TdT+, CD7+) T-acute leukemias and rare cases of chronic myeloid leukemia in megakaryoblast crisis express the CD109 antigen. Furthermore, megakaryoblastoid cell lines (MO7e, MOLM-1) are CD109+. The CD109 antigen may represent a very early marker for hematopoietic cells committed to the megakaryocyte lineage. In contrast, the adult bone marrow CD34+ CD109+ subset identifies the most primitive hematopoietic stem cells capable of long-term culture and lymphoid progenitors of the B-cell lineage.



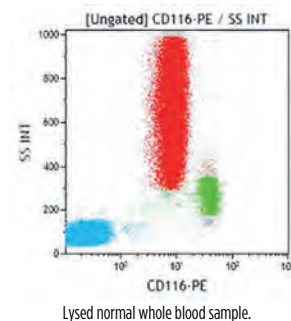
Clone: 8A3

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | A08933 | RUO | IOTest | GMP |

CD116 (GM-CSFR)

The CD116 antigen, a 75-85 kDa molecule, is the human Granulocyte-Monocyte Colony-Stimulating Factor (GM-CSF) receptor α chain. The CD116 antigen is not expressed by lymphocytes, but strongly by monocytes and granulocytes as well as their precursors. It is also present on endothelial cells, fibroblasts and Langerhans cells. CD116 associates with the common β chain (CDw131) of the IL-3 and IL-5 receptors to form a high affinity receptor for GM-CSF.



Clone: SCO6

Isotype: IgG1 Mouse

The SCO6 antibody recognizes an epitope of the GM-CSF receptor α chain. It is a high affinity antibody which binds to the membrane and to the soluble form of GM-CSFR. It immunoprecipitates the molecule. SCO6 antibody does not work in Western blot assays.

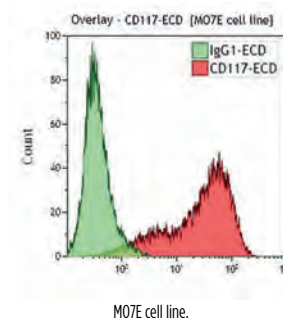
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | IM1977 | RUO | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD117 (c-kit)

The CD117 antigen, also known as Stem Cell Factor Receptor (SCFR), mast-cell-Kit, and steel factor receptor, is a 145 kDa transmembrane glycoprotein encoded by the *ckit* proto-oncogene. The CD117 molecule belongs to the class III Receptor Tyrosine Kinase (RTK) family. Within the haematopoietic compartment, the CD117 molecule is expressed on approximately 50 % of CD34+ progenitors engaged in erythrocytic, myelo-monocytic and megakaryocytic differentiation. Although CD117 is primarily a marker for non-lymphoid progenitors, it has been reported to be detected on early lymphoid progenitors. CD117 expression has been found on a small subset of resting NK cells (CD56bright), and about 30% of immature CD3- CD4- CD8- thymocytes. CD117 is also expressed on mast cells and detected on non-hematopoietic cells such as reproductive system, melanocytes and embryonic brain cells.



Clone: 95C3

Isotype: IgG1 Mouse

The 95C3 antibody reacts with BFU-E, CFU-GEMM, CFU-GM and CFU-G. The 95C3 antibody reduces the binding of SCF to its receptor to about half of the maximum value.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM1360U | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | IM2657U | ASR | IOTest | GMP |

Clone: 104D2D1

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|-----------|--------|---------|--------|--------|------------------|
| PE | 100 tests | Liquid | IM2732 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM2732U | ASR | IOTest | GMP |
| ECD | 0.5 mL | Liquid | B38307 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | IM2733 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2733U | ASR | IOTest | GMP |
| PC5.5 | 50 tests | Liquid | B96754 | CE | IOTest | 98/79/EC |
| PC5.5 | 0.5 mL | Liquid | A66333 | ASR | IOTest | GMP |
| PC7 | 100 tests | Liquid | B49221 | CE | IOTest | 98/79/EC |
| PC7 | 1 mL | Liquid | IM3698 | ASR | IOTest | GMP |
| APC | 100 tests | Liquid | B36300 | CE | IOTest | 98/79/EC |
| APC | 1 mL | Liquid | IM3638 | ASR | IOTest | GMP |
| APC-A750 | 50 tests | Liquid | B92450 | CE | IOTest | 98/79/EC |
| APC-A750 | 0.5 mL | Liquid | A86051 | ASR | IOTest | GMP |

NEW

NEW

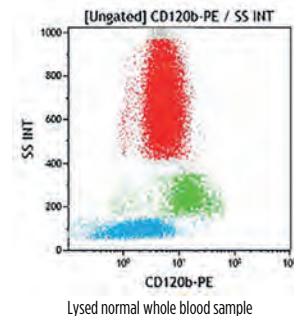
NEW

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Single-Color Conjugated Antibodies

CD120b (TNF-R2)

The CD120b molecule, also known as tumor necrosis factor-receptor 2 (TNF-R2) is a 75 kDa, integral membrane glycoprotein and a member of the tumor necrosis factor (TNF) receptor superfamily. Its extra-membraneous portion shows 4 cysteine-rich domains (CRDs), one of which seems to be required for ligand binding. The CD120b molecule is a receptor for TNF- α . Lymphotoxin- α (LT α), also known as TNF- β when secreted as a soluble homotrimer, as well as the membrane-associated LT α 2/ β 1 heterotrimer. Soluble TNF resulting from cleavage of membrane TNF by the TNF- α converting enzyme (TACE) can also bind to the CD120b receptor. From a functional perspective, signaling by TNF receptor family requires clustering of 3 receptors by trimeric ligands and subsequent association of the intracellular tails with transduction factors, like the TNF receptor-associated factors (TRAF). TNF-R2 triggering can lead to NF- κ B activation, but does not result in cell death. However, the most effective cell killing occurs when membrane bound TNF crosslinks both CD120a and CD120b receptors. The CD120b molecule (TNF-R2) is restricted to hematopoietic cells. It is expressed on monocytes, neutrophils, NK cells and dendritic cells, as well as on a subset of T cells. Very weak expression can be seen on some B cells, and no expression is reported on basophils.



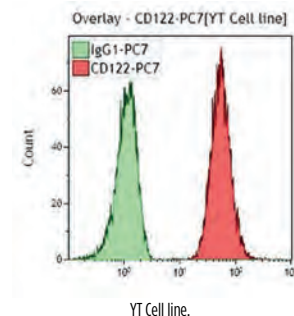
Clone: 80M2

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | A22360 | RUO | IOTest | GMP |

CD122 (IL-2R β)

The CD122 antigen is the human IL-2 receptor β chain (p75). CD122 associates with CD25 and CD132 (IL-2R γ) to form the IL-2 high affinity receptor. It is also a component of the IL-15 receptor. CD122 can directly bind IL-2 and is involved in IL-2 signal transduction. The CD122 antigen is expressed on NK cells, B and T lymphocytes and monocytes.



Clone: CF1

Isotype: IgG1 Mouse

CF1 is a non blocking antibody.

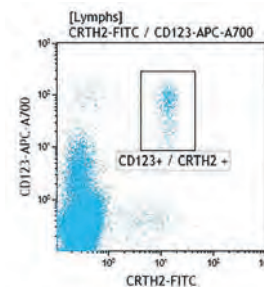
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PC7 | 1 mL | Liquid | A53365 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD123 (IL-3R α)

The CD123 antigen, alias Interleukin-3 alpha receptor (IL-3R α), belongs to the cytokine receptor family. It is constitutively expressed by committed hematopoietic stem / progenitor cells, by most of the myeloid lineage (CD13+, CD14+, CD33+, CD15low), and by some CD19+ cells, it is absent from CD3+ cells. CD123 is a useful new marker for distinguishing B-cell disorders with circulating villous lymphocytes.



Lysed normal whole blood sample gated on lymphocytes.
CD123-APC-A700 in dual staining with CRTH2-FITC.

Clone: SSDCLY107D2

Isotype: IgG1 Mouse

The SSDCLY107D2 monoclonal antibody reacts with plasmacytoid dendritic cells in situ (PDCs).

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|--------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | A32535 | ASR | IOTest | GMP |
| ECD | 0.5 mL | Liquid | B20027 | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B20022 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B13647 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B06376 | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | B24028 | ASR | IOTest | GMP |

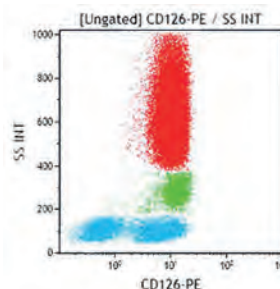
Clone: 9F5

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | B14808 | ASR | IOTest | GMP |

CD126 (IL-6R α)

The CD126 antigen is the human IL-6 receptor α chain. It is an integral membrane protein of 80 kDa. In peripheral blood it is detectable on monocytes, on activated B lymphocytes, and on CD4+ T lymphocytes. This antigen is also expressed by epithelial cells. The CD126 antigen associates with CD130 to form a high affinity IL-6 receptor. A soluble form of CD126 (sIL-6R) can be detected in plasma.



Lysed normal whole blood sample.

Clone: M91

Isotype: IgG1 Mouse

The M91 antibody recognizes the membrane and soluble form of IL-6R α chain. It binds to the amino terminal immunoglobulin domain of IL-6R α . It binds to IL-6/IL-6R α complexes and IL-6/IL-6R/gp130 complexes. It is a non-blocking antibody suitable for Western blot assays.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM1979 | ASR | IOTest | GMP |

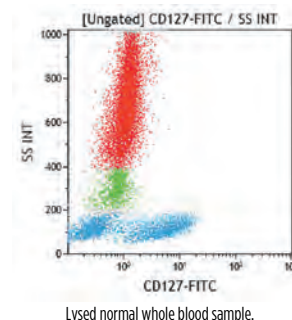
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



CD127 (IL-7R α)

The CD127 antigen is a 75-80 kDa type I transmembrane glycoprotein also known as IL-7 receptor α chain or IL-7R α . It forms a heterodimer with the common γ chain CD132 (IL-2R γ), which is shared with the receptors for IL-2, IL-4, IL-9, IL-13, IL-15, and IL-21, to form the high affinity IL-7 receptor. CD127 is found on normal B cell precursors but not on mature B lymphocytes. It is also expressed by thymocytes, the majority of peripheral T lymphocytes, a subset of monocytes and a subset of CD34+ cells. CD127 is a useful marker for identifying memory and effector T cells. Its expression is down-modulated on Treg cells. The ligation of IL-7 with its receptor is important for stimulation of mature and immature T cells as well as immature B cell proliferation and development.



Clone: R34.34

Isotype: IgG1 Mouse

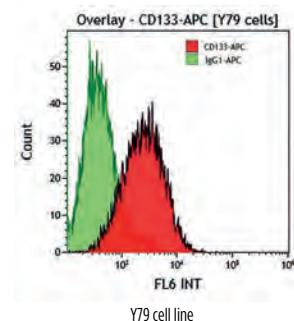
The R34.34 antibody inhibits binding of IL-7 to CD127.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | B25366 | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | B49220 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1980U | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | A64617 | ASR | IOTest | GMP |
| PC7 | 1 mL | Liquid | A64618 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B42026 | ASR | IOTest | GMP |
| APC-A700 | 0.5 mL | Liquid | A71116 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B12700 | ASR | IOTest | GMP |

NEW

CD133

CD133, also known as AC133 or PROM1, is a 5-transmembrane glycoprotein of 120kDa belonging to the prominin family. It is mainly expressed on primitive cell populations such as CD34 hematopoietic stem and progenitor cells, neural and endothelial stem cells. In association with CD309 (KDR or VEGFR-2), CD133 allows the specific detection of endothelial progenitor cells. CD133 function is unknown although a naturally occurring mutation is associated with degenerative disease in the retina of affected patients.



Clone: W6B3C1

Isotype: IgG1 Mouse

The clone W6B3C1 was assigned to CD133 during the Seventh HLDA Workshop on Human Leukocyte Differentiation Antigens. Similarly to AC133/1 clone, it recognizes the epitope 1.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|--------|--------|---------------|--------|--------|------------------|
| APC | 0.5 mL | Liquid | C15190 | ASR | IOTest | GMP |

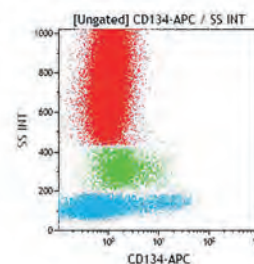
Available first semester 2018

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD134 (OX 40)

The CD134 antigen is a 35 kDa, type-1 transmembrane glycoprotein member of the tumor necrosis factor superfamily (TNFRSF) and is allocated number 4. This antigen was originally named OX40 from the first antibody that led to the discovery of this antigen on activated rat CD4+ T cells. In humans, CD134 is expressed at high levels on activated CD4+ T cells and virally stimulated CD4+ T cells. Its ligand, known as gp34, is a type-2 transmembrane glycoprotein member of the tumor necrosis factor (TNF) superfamily, expressed on activated T and B cells, dendritic cells and macrophages. The CD134 antigen, through its interaction with adaptor proteins TRAF2, TRAF3 and TRAF5, is a costimulatory signal transducer of T-cell receptor-mediated activation that has been shown to activate NF- κ B, a signaling factor involved in transcription of survival genes. Thus, CD134 engagement with its ligand induces clonal expansion and survival of CD4+ cells during primary responses, and results in the accumulation of increasing numbers of memory cells with time. Finally, CD134 has been shown to be involved in the T cell adhesion to endothelium.



Lysed normal whole blood sample.

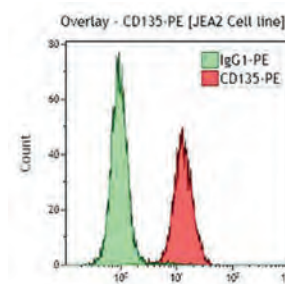
Clone: Ber-ACT35

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| APC | 0.5 mL | Liquid | B30629 | ASR | IOTest | GMP |

CD135 (flt3/flk2)

The CD135 antigen, also called FLT3 or FLK2 or STK1, is an integral transmembrane glycoprotein of 130 kDa to 150 kDa, which belongs to the class III receptor tyrosine kinase (RTK) family. These receptors directly bind extracellular ligands and transduce regulatory signals through intracytoplasmic tyrosine kinase activity. The CD135 antigen is expressed on myelomonocytic and primitive B cell progenitors. On normal bone marrow cells, expression of CD135 can be found on CD34-positive as well as CD34-negative cells. Most of the CD34^{bright}, CD135-positive cells co-express CD117 at high levels. They may represent early cycling, not quiescent stem cells. CD135-positive cells in the CD34 low and CD34-negative populations do not co-express CD117 molecule and may represent B-lymphoid precursors.



JEA2 Cell line.

Clone: SF1.340

Isotype: IgG1 Mouse

The SF1.340 antibody is specific for an extracellular domain of CD135. This antibody does not compete with the FLT3 ligand for binding to FLT3.

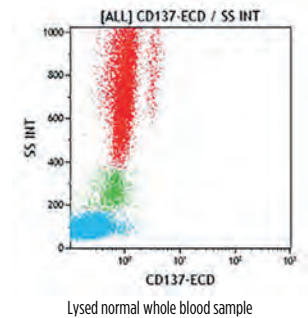
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2234U | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD137

CD137, also known as 4-1BB or ILA (for Induced by Lymphocyte Activation) is a 39kDa type I integral membrane protein of the TNF/NGF family. CD137 is expressed on activated T and B cells, NK cells, monocytes and follicular dendritic cells. Differential splicing leads to the release of a 16-kDa soluble form from activated T cells. CD137 is involved in monocyte activation by inducing an increase in the production of IL-6, IL-8 and TNF- α , and an inhibition of IL-10 production. In addition, CD137 plays a role in the induction of B lymphocyte apoptosis and the co-stimulation of T-cell proliferation.



Clone: 4B4-1

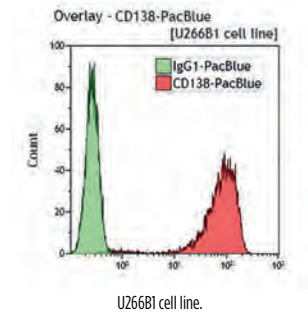
Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|--------|--------|---------------|--------|--------|------------------|
| ECD | 0.5 mL | Liquid | B76262 | ASR | IOTest | GMP |

NEW

CD138

The CD138 antigen (also known as syndecan-1) is a member of the syndecan family, which is comprised of 4 types of transmembrane heparan sulfate proteoglycans macromolecules (syndecan-1, -2 or fibroglycan, -3 or N-syndecan, and -4 or amphiglycan). These molecules are involved in interactions with extracellular matrix proteins, with cell-surface molecules and with soluble proteins such as cytokines. CD138 expression in human hematopoietic cells is restricted to plasma cells in normal bone marrow. Peripheral blood monocytes, T- and B-lymphocytes are not reactive. Tonsil cells and early B-cell precursors in human bone marrow also are negative. CD138 is expressed in a variety of mature tissues, including epithelial cells, endothelial cells, fibroblasts, keratinocytes and normal hepatocytes. CD138 may act as an essential regulator of ligand-specific activation of primary signalling receptors at the cell surface, by co-engagement of various accessory ligands.



Clone: B-A38

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|--------------|-----------|--------|---------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B37788 | ASR | IOTest | GMP |
| KrO | 0.5 mL | Liquid | B42019 | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A54190 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | A40316 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A54191 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | A40317 | ASR | IOTest | GMP |
| PC5.5 | 50 tests | Liquid | B96786 | CE | IOTest | 98/79/EC |
| PC5.5 | 0.5 mL | Liquid | A98835 | ASR | IOTest | GMP |
| APC | 50 tests | Liquid | B49219 | CE | IOTest | 98/79/EC |
| APC | 0.5 mL | Liquid | A87787 | ASR | IOTest | GMP |

NEW

NEW

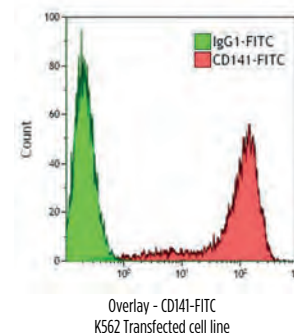
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



CD141 (BDCA-3)

CD141, also known as thrombomodulin (TM) and BDCA-3, is an endothelial cell surface receptor. It is a 75 kD type I membrane glycoprotein and members of C-type lectin family. Two major isoforms exist, differentiated by the presence or not of sulfated glycosaminoglycan at Ser/Thr region. CD141 antigen is expressed on neutrophils, monocytes and platelets. CD141 is expressed at high levels on a minor subpopulation of human myeloid dendritic cells that show monocytoïd morphology. This subpopulation of dendritic cells is of special interest, because it has an influence on regulatory T cells and hence on immune responses. CD141 is also expressed by vascular endothelial cells, and keratinocytes. It is a cofactor in the activation of protein C and initiation of the protein C anticoagulant pathway by binding to its ligand thrombin.



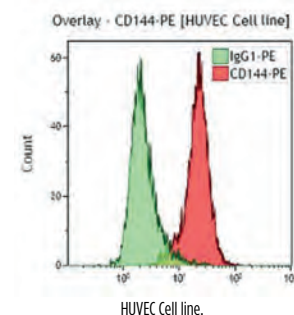
Clone: M80

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| FITC | 1 mL | Liquid | B43289 | ASR | IOTest | GMP |

CD144 (VE-Cadherin)

CD144, also called Cadherin 5, CDH5 or VE-Cadherin is a 140 kDa protein belonging to the cadherin family of cell adhesion molecules which interact homophilically in trans and form lateral interactions in cis. VE-cadherin is the major component of endothelial adherens junctions and is specific to endothelial cells. It is present in all endothelial cells of all types of vessels. It is located at the intercellular cleft sites of the junction within endothelial tissue. CD144 cannot be found in any other cell type, including blood cells or hemopoietic stem cells, and, like a signature for the endothelium, is expressed during development, when cells become committed to the endothelial lineage. The cadherin 5 molecule may play a role in the permeability properties of vascular endothelium.



Clone: TEA 1/31

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | A07481 | ASR | IOTest | GMP |

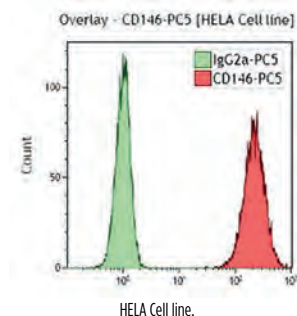
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



CD146

The CD146 molecule, also known as S-Endo, is a single chain transmembrane glycoprotein with a molecular weight of 118 kDa, belonging to the immunoglobulin superfamily (IgS). The extracellular structure consists of five Ig-like domains: two V-type, and three C2-type Ig-like domains. The CD146 antigen is related to cell adhesion molecules of the IgS family and its presence is concentrated at regions of cell-cell contact, confirming its role in adhesion and particularly in maintenance of monolayer integrity. CD146 is constitutively expressed in the endothelium, and is also observed on other cell types such as smooth muscle cells, and intermediate trophoblasts. Among peripheral whole blood leucocytes, CD146 expression is not detected, except on a subset of activated T-lymphocytes.



Clone: TEA 1/34

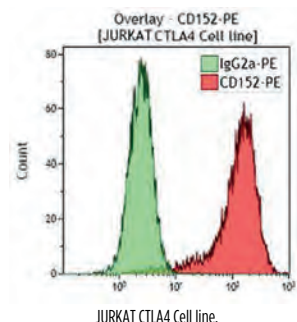
Isotype: IgG2a Mouse

The TEA 1/34 monoclonal antibody was assigned to the CD146 (Code: E077) during the HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------------|------|--------|---------------|--------|--------|------------------|
| PE | 2 mL | Liquid | A07483 | ASR | IOTest | GMP |
| PC5 | 1 mL | Liquid | A22364 | ASR | IOTest | GMP |

CD152 (CTLA-4)

The CD152 antigen, also called CTLA4, is an integral membrane protein belonging to the immunoglobulin superfamily, which is expressed either as a 30 kDa monomer or as a disulfide-linked homodimer. It has homology with the T cell antigen CD28, and like CD28, is a ligand for CD80 and CD86. CTLA-4 is transiently expressed by activated T cells and is not detectable in resting T cells. CD152 and CD28 are involved in the costimulation required for T cell activation. CD152 is an essential checkpoint control for autoimmunity; however, the molecular mechanism (s) by which CTLA-4 achieves its regulatory function are not well understood, especially how it functionally intersects with the CD28 pathway.



Clone: BNI3

Isotype: IgG2a Mouse

The BNI3 antibody can be used to detect intracytoplasmic CD152 (CTLA4) by flow cytometry after permeabilization with IntraPrep Permeabilization Reagent.

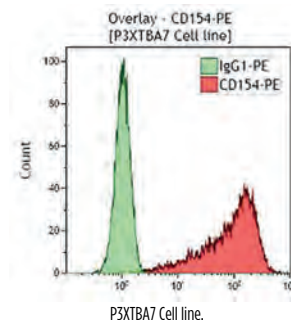
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------------|---------------|--------|--------|------------------|
| PE | 100 tests | Liquid | IM2282 | RUO | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM2070 | RUO | - | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD154

The CD154 antigen (CD40-ligand), also known as TRAP (Tumor necrosis factor Related Activation Protein), is a member of the Tumor Necrosis Factor (TNF) superfamily. It is a 32 kDa type II transmembrane molecule. CD154 is rapidly induced on T cells (CD4+ and some CD8+ cells) following TCR activation. First identified on activated T cells, CD154 is also expressed on platelets, as well as monocytes and B cells. CD154 can also be shed from activated platelets and lymphocytes in a soluble form (sCD154). This ligand for the CD40 molecule is present on some basophils and mast cells. It has critical regulatory roles in T- and B-lymphocyte function. CD40/CD154 interaction is essential for the development of thymus-dependent humoral immune responses. Ligation of CD40 on B cells by CD154 on T cells promotes B cell proliferation, immunoglobulin (Ig) production, isotype switching and memory B-cell generation.



Clone: TRAP-1

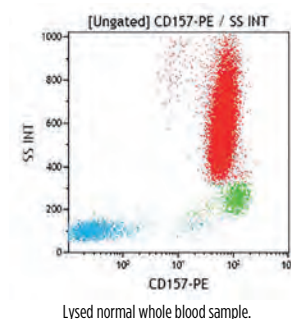
Isotype: IgG1 Mouse

The TRAP-1 antibody inhibits activation induced by full-length soluble human CD154.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2216U | ASR | IOTest | GMP |

CD157

The CD157 antigen, also known as bone marrow stromal cell antigen 1 (BST-1) is a highly glycosylated, glycosyl-phosphatidylinositol (GPI)-anchored membrane protein with a molecular weight of 43 kDa. The amino acid sequence of human BST-1 has 33% identity with CD38. Both CD38 and CD157 play dual roles as receptors and ectoenzymes, endowed with complex activities related to signaling and cell homeostasis. As with CD38, BST-1 displays ADP ribosyl cyclase activity and facilitates pre-B cell growth. CD157 is constitutively expressed by myeloid cells in peripheral blood mononuclear cells (PBMCs). The molecule is also expressed by synovial, vascular endothelial and follicular dendritic cells. Moreover, CD157 is also present on other cell types and tissues, such as dermal fibroblasts, human mast cells from lung, uterus, foreskin, and peritoneal mesothelial cells, among others.



Clone: RF3

Isotype: IgG Mouse

The RF3 antibody reacts with an external epitope of BST-1 on several human cell lines including certain bone marrow stromal cell, human umbilical vein endothelial cell (HUVEC) and U937 cell lines.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|---------|--------|--------|--------|------|------------------|
| FITC | 0.05 mg | Liquid | IM2557 | RUO | - | GMP |

Clone: SY/11B5

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | B6816O | ASR | IOTest | GMP |

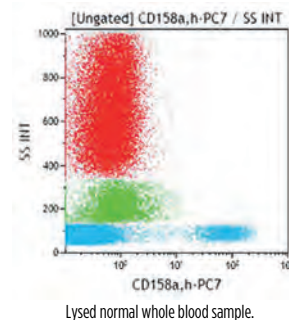
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Single-Color Conjugated Antibodies

CD158a,h

The CD158a and CD158h molecules are monomeric integral membrane glycoproteins existing in different forms. CD158a, or p58.1, is a 58 kDa molecule, and CD158h, or p50.1, is a 50 kDa molecule, both having identical extracellular portions, but different transmembrane and cytoplasmic regions. Another comprehensive nomenclature refers to these molecules as KIR2DL1 for CD158a and KIR2DS1 for CD158h. These acronyms stand for Killer cell Immunoglobulin (Ig)-like Receptor (KIR), with extracellular part containing 2 Ig Domains (2D), and cytoplasmic tails being either long (L) or small (S). The long intracellular portion of CD158a, or p58.1, makes it an inhibitory form, since it contains two characteristic ITIM motifs (Immunoreceptor tyrosine based inhibition motif) and is involved in the transduction of the inhibitory signal. Whereas the stimulatory form CD158h, or p50.1, lacks these ITIM motifs. CD158a/p58.1 functions as an inhibitory receptor for a group of HLA-C molecules (Cw2, cw4, Cw5 and Cw6 supertypes). The inhibitory effect is dominant over the activation exerted by the activator form p50.1. The CD158a and CD158h molecules are indistinguishable from the extracellular viewpoint. They are expressed by a subset of NK cells, and can be detected on the surface of sub-populations of peripheral T lymphocytes, mostly of the CD8+ phenotype.



Clone: EB6B

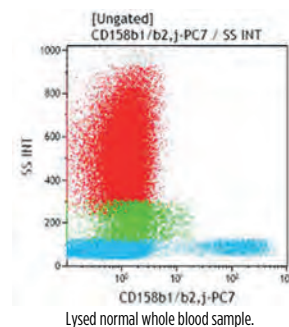
Isotype: IgG1 Mouse

The EB6B antibody reacts with both CD158a (p58.1 or KIR2DL1) and CD158h (p50.1 or KIR2DS1). The antibody restores the ability of p58.1⁺ NK clones to lyse targets expressing HLA-C molecules.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | A09778 | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | A66898 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | A66899 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A22332 | ASR | IOTest | GMP |

CD158b1/b2,j

The CD158b1, CD158b2 and CD158 j molecules are monomeric integral membrane glycoproteins existing in different forms. CD158b1 and CD158b2 (p58.2 and p58.3, respectively) are 58 kDa molecules. CD158j (p50.2) is a 50 kDa molecule. All three have identical extracellular portions, but different transmembrane and cytoplasmic regions. CD158b1 and CD158b2 likely represent allelic forms of the same locus. There is another comprehensive nomenclature which refers to these molecules as KIR2DL2 for CD158b1 (p58.2), KIR2DL3 for CD158b2 (p58.3), and KIR2DS2 for CD158j; these acronyms stand for Killer cell Immunoglobulin (Ig)-like Receptor (KIR), with extracellular part containing 2 Ig Domains (2D), and cytoplasmic tails being either long (L) or short (S). The long intracellular portion of CD158b1/b2 (p58.2/p58.3) makes them inhibitory forms, since they contain two characteristic ITIM motifs (Immunoreceptor Tyrosine-based Inhibition Motif) and are involved in the transduction of an inhibitory signal through the activation of the protein tyrosine phosphatases SHP-1 and/or SHP-2. The stimulatory form CD158h (p50.1) lacks these ITIM motifs. CD158b1/b2 (p58.2/p58.3) function as inhibitory receptors for a group of HLA-C molecules (Cw1, Cw3, Cw7 and Cw8 supertypes). The inhibitory effect is dominant over the activation exerted by the activator form p50.2. The CD158b1/b2 and CD158j molecules are indistinguishable from the extracellular viewpoint. They are expressed by a subset of NK cells, and can be detected on the surface of sub-populations of peripheral T lymphocytes, mostly of CD8+ phenotype.



Clone: GL183

Isotype: IgG1 Mouse

The GL183 antibody reacts with both p58.2/p58.3 and p50.2. The antibody restores the ability of p58.2⁺ NK clones to lyse targets expressing HLA-C molecules.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|--------|--------------|---------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM2278U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | A66900 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | A66901 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A22333 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM1846 | RUO | - | GMP |

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Single-Color Conjugated Antibodies

CD158e1/e2

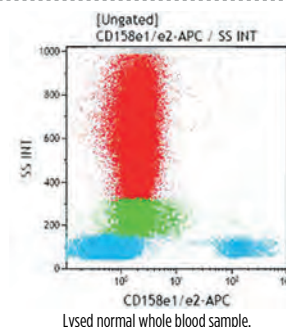
The CD158e1 and CD158e2 molecules (also known as p70 molecules) are monomeric integral membrane glycoproteins of 70 kDa. CD158e1 and CD158e2 likely represent allelic forms of the same locus of the NKBI gene. These proteins belong to the family of NK receptors for MHC class I molecules and show a high degree of homology with p58 and p140 receptors. There is another comprehensive nomenclature which refers to these molecules as KIR3DL1 for CD158e1, and KIR3DS1 for CD158e2. These acronyms stand for Killer cell Immunoglobulin (Ig)-like Receptor (KIR), with extracellular part containing 3 Ig Domains (3D), and cytoplasmic tails being either long (L) or short (S). CD158e1 comprises 3 C-type extracellular Ig domains, and two characteristic ITIM motifs (Immunoreceptor Tyrosine-based Inhibition Motif) in the intracellular portion. These motifs are involved in the transduction of an inhibitory signal through the activation of the protein tyrosine phosphatases SHP-1 and/or SHP-2. CD158e1/e2 function as inhibitory receptors for HLA-B molecules of the Bw4 supertype. These molecules are expressed by a subset of NK cells, and can be detected on the surface of sub-populations of peripheral T cells, mostly of CD8+ phenotype.

Clone: Z27.3.7

Isotype: IgG1 Mouse

The anti-KIR/p70 antibody Z27 restores the ability of p70+ NK clones to lyse HLA-Bw4 targets.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|---------------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM3292 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A60795 | ASR | IOTest | GMP |



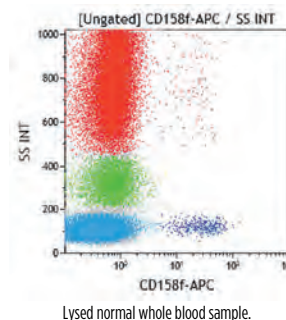
CD158f (KIR2DL5)

The CD158f molecule (also known as KIR2DL5) is a 60 kDa monomeric glycoprotein with two Ig-like extracellular domains and a long cytoplasmic domain. CD158f is an inhibitory receptor and a member of the KIR (Killer-cell Immunoglobulin-like Receptor) family of receptors, which recognizes subsets of HLA-Class I alleles. KIR2DL5 gene is found in only a fraction of individuals in the population, and it is represented in the human genome by two genes, KIR2DL5A and KIR2DL5B. KIR2DL5 has alleles with mRNA transcripts that are clonally distributed in NK and T lymphocytes. KIR2DL5 is predicted to encode a purely inhibitory receptor, according to its signaling motifs (two ITIMs (Immunoreceptor Tyrosine-based Inhibition Motif) and a 1 transmembrane region lacking charged amino acid residues). KIR2DL5, together with KIR2DL4, are the only members of a gene lineage coding for KIR with a DO-D2 organization of the Ig-like domains, which distinguishes them from all other KIR2Ds, having domains of the D1-D2 type. Upon tyrosine phosphorylation, KIR2DL5 recruits the Src homology region 2-containing protein tyrosine phosphatase-2 and, to a lesser extent, Src homology region 2-containing protein tyrosine phosphatase-1. KIR2DL5 is an inhibitory receptor which may play a specialized role in innate immunity. In particular, it is expressed in a fraction of blood NK cells with the CD56dim phenotype and in a variable proportion of circulating T lymphocytes.

Clone: UP-R1

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|---------------|--------|--------|------------------|
| PE | 1 mL | Liquid | B19715 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B19716 | ASR | IOTest | GMP |



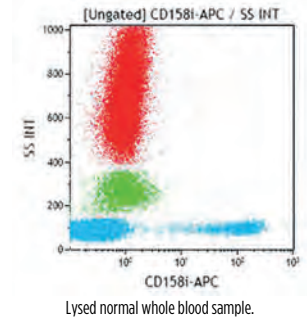
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Single-Color Conjugated Antibodies



CD158i

The CD158i molecule (also known as p50.3) is a monomeric integral membrane glycoprotein of 50 kDa. This protein belongs to the family of NK receptors for MHC class I molecules. There is another comprehensive nomenclature which refers to this molecule as KIR2DS4; this acronym stands for Killer cell Immunoglobulin (Ig)-like Receptor (KIR), with extracellular part containing 2 Ig domains (2D), and a short (S) cytoplasmic tail. CD158i comprises 2 C-type extracellular Ig domains. The intracytoplasmic portion lacks characteristic ITIM motifs (Immunoreceptor Tyrosine-based Inhibition Motif) and displays a charged residue in the trans-membrane portion. CD158i receptor seems involved in NK cell activation, following HLA-Cw3 supertype recognition. Antibody-induced cross-linking of CD158i (p50.3) results in both early activation events and late effector function.



Lysed normal whole blood sample.

Clone: FES172

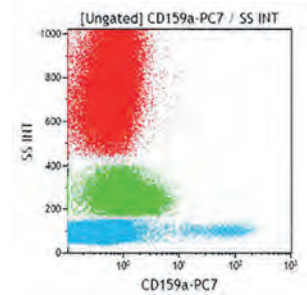
Isotype: IgG2a Mouse

The FES172 antibody stains NK subsets, but the p50.3 antigen appears to be expressed only by some individuals, and to be co-expressed with p58 KIRs.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM3337 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A60796 | ASR | IOTest | GMP |

CD159a (NKG2a)

CD159a (NKG2a) is a 40 kDa (reduced), 75 kDa (unreduced) type II transmembrane protein associated with CD94 to form a disulphide-linked heterodimer. CD159a is a member of the Ca⁺⁺-dependent (C-type) lectin family. The CD94/NKG2A dimer is an inhibitory NK receptor for MHC Class I, with a broader specificity than Killer cell Immunoglobulin (Ig)-like Receptors (KIR). The intracellular portion of CD159a (NKG2A) contains two characteristic ITIM motifs (Immunoreceptor tyrosine based inhibition motif) involved in the transduction of the inhibitory signal. The CD159a (NKG2A) antigen is always co-expressed with CD94. The CD94/NKG2A complex is detectable in sub-populations of NK cells, T cells and thymocytes.



Lysed normal whole blood sample.

Clone: Z199

Isotype: IgG2b Mouse

The Z199 antibody reacts specifically with CD94^{bright} NK cells expressing the inhibitory form of the CD94 molecules. It does not stain the activator form of CD94 which corresponds to the association of CD94 with other products of the NKG2a gene family. The antibody restores the ability of CD94^{bright} NK clones to lyse HLA class I targets.

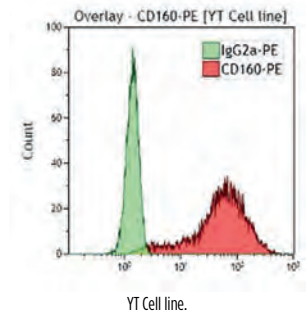
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------------|---------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM3291U | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B10246 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A60797 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM2750 | ASR | - | GMP |

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Single-Color Conjugated Antibodies

CD160

The CD160 molecule (BY55 antigen) is a 27-kDa, glycosyl phosphatidylinositol (GPI)-anchored glycoprotein of 181 amino acids, with a single immunoglobulin (Ig)-like domain. The molecule contains two potential sites for N-glycosylation and is rich in cysteine (6 residues in the mature polypeptide), indicating an important capacity for forming intra- and inter-chain disulfide bonds, which likely support the disulfide-linked multimeric (80 kDa) expression at the cell surface. Its expression is highly restricted to circulating cytotoxic T and NK cells, and in tissues, to intestinal intraepithelial lymphocytes, as revealed by CD160 mRNA blot analysis and various phenotyping studies. In peripheral blood, CD160+ cells consist of a majority of CD3- TCR $\gamma\delta$ + NK cells, which is significantly reduced in HIV+ individuals, and of a minority of CD3+ CD8bright T lymphocytes, which is significantly increased in HIV+ individuals. In bone marrow, CD160+ cells, though less abundant than in adult peripheral blood, also consist of the two populations observed in peripheral blood. In cord blood, CD160+ cells consist of a unique CD3- TCR- NK cell population, 80% of these cells being CD56+. CD160 is a ligand for classical and non-classical MHC-class I molecules. The ligation of MHC-class I by CD160 provides a costimulatory signal restricted to peripheral blood activated T cells, suggesting a pathway being additional and/or alternative to the CD28 costimulation mechanism. This pathway may be relevant in memory T cells that lack CD28, such as the intestinal intraepithelial lymphocytes.



Clone: BY55

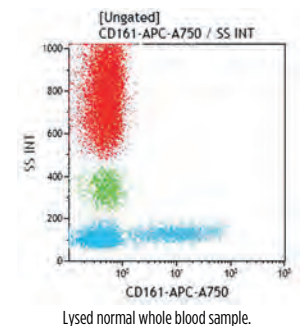
Isotype: IgM Mouse

The BY55 antibody was initially reported to react with a protein structure of 80 kDa exclusively expressed by circulating cytotoxic lymphocytes. It does not block the binding of the CD160 molecule to MHC-class I molecules.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM3657 | ASR | IOTest | GMP |

CD161 (NKR-P1A)

The CD161 antigen is also designated as the NKR-P1A molecule. CD161 is a type II integral membrane protein expressed as a monomer of 44 kDa or as a disulphide-linked homodimer of 80 kDa. The carboxy-terminal extracellular domain is homologous to Ca⁺⁺-dependent (C-type) lectin superfamily. CD161 is an activatory NK receptor, but in contrast with other NK receptors such as KIR (p58, p70, p140) and CD94/NKG2, CD161-mediated activation is not HLA-dependent. CD161 is expressed on all NK cells and on sub-populations of T lymphocytes.



Clone: 191B8

Isotype: IgG2a Mouse

The 191B8 antibody partially blocks the spontaneous NK cytotoxicity in the P815 model.

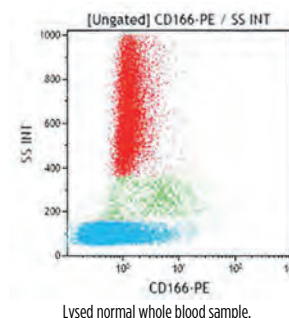
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM3450 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B30631 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B30630 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD166 (ALCAM)

The CD166 antigen, also known as activated leukocyte cell adhesion molecule (ALCAM), is a single chain type 1 transmembrane glycoprotein, containing 10 potential N-linked glycosylation sites, and belonging to the immunoglobulin superfamily (IgSF). It shows a 100 – 105 kDa molecular weight, and is composed of five extracytoplasmic Ig-like domains linked to a 32-amino acid cytoplasmic tail through a short membrane-spanning region. The CD166 antigen is an adhesion molecule that binds to the CD6 molecule, or forms ALCAM-ALCAM homophilic interactions. Studies suggest that CD166 molecules can oligomerize at the site of cell-cell contact via their three C2-type Ig-like proximal domains. The CD166 molecule appears to be a non-lineage restricted molecule, expressed on a variety of cell types, including selected hematopoietic cells, endothelial cells, cortical and medullar thymic epithelial cells, bone marrow mesenchymal stem cells, fibroblasts, and hepatocytes. In peripheral blood, ALCAM is expressed on activated T- and B-cell subsets, on monocytes, on circulating dendritic cells, and weakly on granulocytes. While expressed in a wide variety of tissues, ALCAM is usually restricted to subsets of cells involved in dynamic growth and/or migration. In the thymus, the interaction between the CD6 molecule, as expressed on CD6+ thymocytes, and the CD166 molecule expressed on thymic epithelial cells may play a role in T cell development. Other studies suggest that the CD166 adhesion molecule is involved in embryonic hematopoiesis, as well as in hemangioblast differentiation and capillary tube formation.



Clone: 3A6

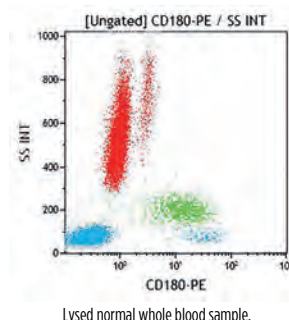
Isotype: IgG1 Mouse

The 3A6 antibody blocks the binding of the CD6 ligand to its CD166 receptor as seen on adhesion experiments of CD6-expressing COS cells to thymic epithelial cells. The 3A6 antibody was clustered to the CD166 during HLDA 6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | A22361 | ASR | IOTest | GMP |

CD180

CD180 is a type 1 membrane protein consisting of extracellular leucinerich repeats (LRR) and a short cytoplasmic tail. It regulates B cell recognition of lipopolysaccharide. The extracellular LRR is associated with a molecule called MD-1 and forms the cell surface receptor complex RP105/MD-1. It belongs to the family of pathogen receptors, Toll-like receptors (TLR). RP105/MD-1, working in concert with TLR4, controls B cell recognition and signaling of lipopolysaccharide (LPS), a membrane of constituent of Gram-negative bacteria. The extracellular domain of CD180 contains 22 LRR, tandem repeats of leucine-rich motif (LMR). This LMR is a 24-28 amino acid sequence in which leucines are characteristically positioned. The ligation of CD180 on B cells by a monoclonal antibody induces activation that leads to upregulation of costimulatory molecules, CD80 and CD86, and an increased cell size. CD180 is expressed on mantle zone B cells and marginal zone B cells, but weakly or negative on germinal center B cells. CD180 is also expressed on peripheral blood monocytes and dendritic cells.



Clone: MHR73-11

Isotype: IgG1 Mouse

The monoclonal antibody MHR73-11 was generated against human RP105 complexed with mouse MD-1 and recognizes the CD180 protein.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | B68148 | ASR | IOTest | GMP |

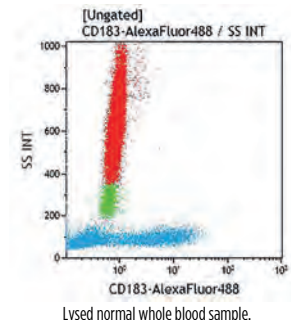
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Single-Color Conjugated Antibodies

CD183 (CXCR3)

CD183, also called CXCR3, is a 41 kDa transmembrane G protein-coupled CXC receptor, belonging to the family of chemokine receptors. It has selectivity for IP10, Mig and I-TAC chemokines. Cellular production of CD183 ligands is induced by interferon, suggesting an important role of CD183 in Th1-type inflammatory processes. CD183 signaling induces chemotactic migration in inflammation-associated effector T cells, involving integrin activation and cytoskeletal changes. CD183 is expressed on T cells (Th1), NK cells, dendritic cells, mast cells, eosinophils.



Clone: G025H7

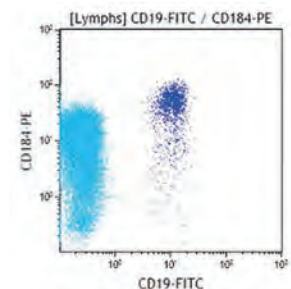
Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|--------|--------|--------|--------|--------|------------------|
| AF488 | 0.5 mL | Liquid | B68144 | ASR | IOTest | GMP |

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CD184 (CXCR4)

CD184 (also known as CXCR4, or Fusin) is a seven-transmembrane domain G protein-coupled surface receptor. Its natural ligand is the stromal cell-derived factor-1 (SDF-1), a C-X-C chemokine which is strongly chemotactic for monocytes and lymphocytes. CD184 has initially been described as the human immunodeficiency virus-1 (HIV-1) entry co-receptor, associated with the surface CD4-gp120 complex before HIV-1 enters target cells. It also acts as an alternative receptor for some isolates of HIV-2. The SDF-1 / CD184 pair may also play a role in the development of the nervous system. Unlike other chemokine receptors, the cellular distribution of CD184 (CXCR4) is nearly ubiquitous; it is expressed on a variety of CD4+ and CD4- cells in the immune system and the central nervous system. In blood, CD184 is highly expressed on neutrophils, monocytes, dendritic cells, NK cells, B cells, and T cells, as well as on platelets. CD184 exhibits a rapid (30 seconds) up-regulation upon activation of lymphocytes, followed by internalization (within 2 minutes). Accordingly, CD184 is detected in large amounts in intracellular stores within leucocytes. Absent from eosinophils and basophils in fresh whole blood, this antigen is inducible ex vivo on eosinophils by glucocorticoids, and on basophils by SDF-1. As a GPCR, CXCR4 binding of SDF-1 triggers certain signaling pathways such as ras, and PI3 kinase. One downstream effect of SDF-1 / CD184 interaction is the activation of transcription factors such as AP-1 and chemokine regulated genes. JAK / STAT pathways also play a role in SDF-1 / CXCR4 signaling.



Clone: 12G5

Isotype: IgG2a Mouse

The 12G5 antibody partially inhibits chemotaxis and calcium influx induced by SDF-1. It stains predominantly the naïve, resting CD26^{low} CD45RA⁺ CD45RO⁻ T lymphocyte subset of peripheral blood T cells. The 12G5 mAb has been assigned to the CD184 cluster of differentiation during HLDA 7.

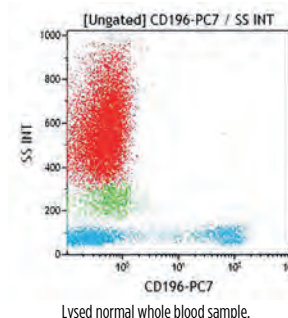
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | A07409 | ASR | IOTest | GMP |

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Single-Color Conjugated Antibodies

CD196 (CCR6)

CD196, also known as CCR6, is G-protein-coupled receptor (GPCR) consisting of an extracellular amino terminal, seven membrane-spanning regions and a cytoplasmic carboxyl terminal. CCR6 is a member of the beta chemokine receptor. CD196 is a 374 amino acids long protein and has a calculated molecular weight of 42 kDa. CD196 is predominantly expressed by B lymphocytes, certain subsets of effector and memory T cells and by immature dendritic cells but not by monocytes, NK cells or granulocytes. CD196 binds CCL20, although members of the β defensin family (family of anti-bacterial peptides) also bind CD196 with a lower affinity. CD196 positive cells, and its ligand CCL20, have been detected in numerous organs, especially the secondary lymphoid organ. CCL20 is selectively made by the follicle-associated epithelium (FAE) overlying Peyer patches (PPs) and isolated lymphoid follicles (ILFs). CCL20 contributes to the recruitment of CCR6-expressing B cells to these structures. In humans, CCR6 can function to mediate arrest of T cells on dermal endothelial cells and is highly expressed on T cells resident in both healthy and diseased skin. CCR6 and/or CCL20 have been implicated in the pathogenesis of inflammatory joints diseases and inflammatory bowel diseases. Human T cells that are able to produce IL-17 express CCR6. It suggests that CCL20 and CCR6 have a role in inflammatory diseases by recruiting Th17 cells to target tissues.



Clone: B-R35

Isotype: IgG2a Mouse

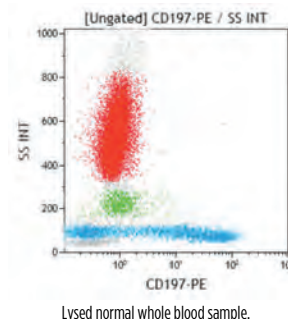
The B-R35 monoclonal antibody specifically binds to CCR6.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PC7 | 0.5 mL | Liquid | B68132 | ASR | IOTest | GMP |

NEW

CD197 (CCR7)

CCR7 is G protein-coupled receptors (GPCR) with seven transmembrane receptors. It binds CCL19 and CCL21. CCR7 and its ligands link innate and adaptive immunity through their effects on interactions between T cells and dendritic cells. The chemokine receptor CCR7 plays a pivotal role in the homing of naïve T cells and regulatory T cells to secondary lymphoid organs, and the migration of dendritic cells into afferent lymphatic vessels. Naïve T cells enter the lymph node through high endothelial venules, which express CCL21. Dendritic cells and macrophages enter the lymph node through afferent lymphatics. The encounter of T cells and dendritic cells in the T cell zone is CCR7-dependent. In addition, during immunological surveillance, B lymphocytes recirculate between B-cell-rich compartments (follicles or B zones) in secondary lymphoid organs, surveying for antigen. After antigen binding, B cells move to the boundary of B and T zones to interact with T-helper cells; this B cell migration is directed by CCR7 and its ligands. CCR7-positive cancer cell expression has been associated with lymph node metastasis. By bringing together T cells, B cells, and DCs to form functional microenvironments in secondary lymphoid organs, CCR7 has been identified as a major homing receptor and important regulator for initiating an antigen-specific immune response.



Clone: G043H7

Isotype: IgG2a Mouse

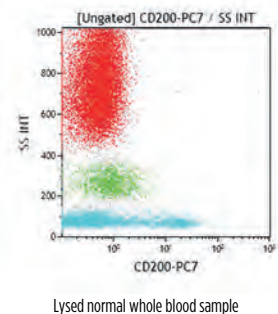
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | B30632 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B46025 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD200

CD200 is a highly conserved membrane glycoprotein that belongs to the Ig superfamily (IgSF) containing a two immunoglobulin-like domain (V, C), a single transmembrane and a short cytoplasmic domain. Diverse cell types express CD200 on surface, including thymocytes, B cells, activated T and B cells, dendritic cells, neurons and endothelia. CD200 and CD200R are highly conserved type I membrane glycoproteins, which present N-terminal immunoglobulin-like domains based interaction. While the distribution of CD200 expression is very broad, CD200R is primarily expressed in myeloid and lymphoid cells. They fulfill multiple functions in regulating inflammation interaction by promoting inhibitory activities of the immune system. The interaction between CD200/CD200R results in activation of the intracellular inhibitory pathway with RasGAP recruitment and thus contributes to effector cell inhibition. It was confirmed that the CD200R activation stimulates the differentiation of T cells to the Treg subset, upregulates indoleamine 2,3-dioxygenase activity, modulates cytokine environment from a Th1 to a Th2 pattern, and facilitates an antiinflammatory IL-10 and TGF- β synthesis. CD200/CD200R are required for maintaining selftolerance. Many studies have demonstrated the importance of CD200 in controlling autoimmunity, inflammation, inhibitory activities, hypersensitivity.



Clone: OX-104

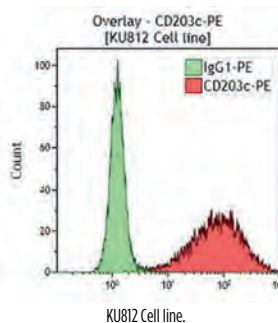
Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|----------|----------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | B68124 | ASR | IOTest | GMP |
| PC7 | 50 tests | Liquid | B92472 | CE | IOTest | 98/79/EC |
| PC7 | 0.5 mL | Liquid | B43299 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B43301 | ASR | IOTest | GMP |

NEW
NEW

CD203c

The CD203c molecule is a type II transmembrane protein that belongs to the ectonucleotide pyrophosphatase / phosphodiesterase 3 (E-NPP3) family of enzymes involved in hydrolysis of oligonucleotides, nucleoside phosphates, and NAD. Basophils and mast cells are hematopoietic effector cells involved in allergic and inflammatory reactions. Both cell types highly express the high affinity IgE receptor. The CD203c is expressed on human peripheral blood basophils, but not on other blood cells. It is also expressed by mature mast cells, and by CD34+ bone marrow progenitors of basophils and mast cells. Moreover, the CD203c antigen is up-regulated after activation of basophils by anti-IgE antibodies and allergens.



Clone: 97A6

Isotype: IgG1 Mouse

The 97A6 antibody immunoprecipitates two proteins of 270 and 150 kDa at reducing conditions, and one protein of 270 kDa at nonreducing conditions, suggesting that the 97A6 antigen is a disulfide-linked dimer of two proteins of about 150 kDa each.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | B92404 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM3575 | ASR | IOTest | GMP |
| PC7 | 1 mL | Liquid | A66906 | ASR | IOTest | GMP |

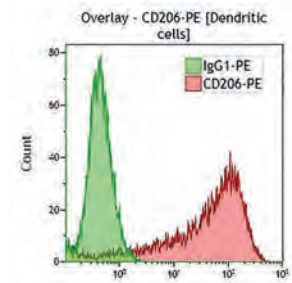
NEW

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD206 (MMR)

CD206, also named macrophage mannose receptor (MMR), is a type I single-chain transmembrane glycoprotein of 175 kDa with a multilectin receptor structure. The Mannose Receptor is thought to play a key role in the internalization of sugar-containing proteins thus concentrating antigens for transport to processing compartments and peptide loading compartments. First detected on tissue macrophages, the Mannose Receptor is mainly expressed on immature dendritic cells and on a variety of other cells. Absent on lymphocytes and monocytes, the Mannose Receptor is up-regulated on monocytes during their differentiation to macrophages.



Dendritic cells from in vitro activated density-purified whole blood sample (PBL).

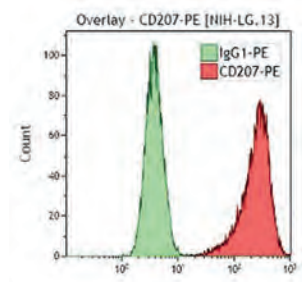
Clone: 3.29B1.10

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B36119 | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM2741 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B36120 | ASR | IOTest | GMP |

CD207 (Langerin)

CD207 (Langerin) is an antigen described as selectively expressed by Langerhans cells (LC), a subset of immature dendritic cells (DC) formed in epidermis and mucosa. Langerin is a 40 kDa glycoprotein predominantly N-glycosylated which contains no disulfide bond. Its expression, restricted to the Langerhans cell lineage, is demonstrated at both the surface membrane and in the cytoplasm. Several lines of evidence indicate that Langerin is a marker specific for the acquisition of the Langerhans cell phenotype. It is down-regulated beyond the LC maturation stage. Langerin is not involved in antigen delivery into the MHC class II pathway but may play a role in antigen capture. Langerin is present only in epidermis and airway epithelia. Langerin is not detected in purified DCs isolated from peripheral blood, lymph nodes or thymus. CD1a⁺ DCs derived from CD34⁺ cord blood cell cultures in the presence of GM-CSF and TNF- α express Langerin between day 8 and 12. DCs derived from peripheral blood monocytes cultured with GM-CSF and IL-4 do not express Langerin.



NIH-LG.13 Cell line.

Clone: DCGM4

Isotype: IgG1 Mouse

The DCGM4 antibody stains exclusively immature DCs of the LC lineage. Both intracytoplasmic and surface membrane staining is observed. DCGM4 acts as a ligand for Langerin, triggering rapid endocytosis within 20 minutes at 37°C. The antibody has been used in intracellular immunofluorescence analyzed in confocal microscopy. The DCGM4 antibody has been used to determine the differentiation of the CD1a⁺/CD11c⁺ subset of blood DCs into LCs, and in the characterization of DCs infiltrating breast carcinoma tissue.

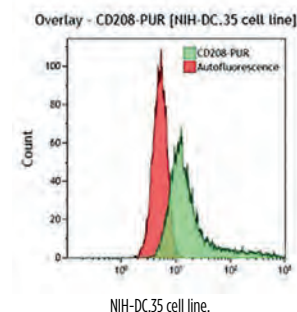
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM3577 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD208 (DC-LAMP)

The DC-LAMP antigen (70-90 kDa) is a new member of the LAMP (lysosome-associated membrane protein) family. As other LAMP members such as CD68, DC-LAMP is a type I integral membrane protein of 416 amino acid residues, highly glycosylated (7 N- and some O-glycosylation sites), with 90% of the molecule located in the lumen of lysosomes. DC-LAMP is specifically expressed by those mature dendritic cells (DC) located in T cell areas of lymphoid tissues, which are known as interdigitating dendritic cells (IDC). A direct correlation between the expression of DC-LAMP and that of other maturation markers such as CD86 has been established. DC-LAMP first appears in the MHC Class II compartment, suggesting an important contribution of DC-LAMP to the processing of exogenous antigens.



Clone: 104.G4

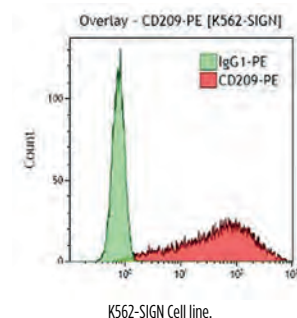
Isotype: IgG1 Mouse

In flow cytometry, the 104.G4 antibody shows intracytoplasmic staining of DCs derived either from CD34⁺ cell cultures activated with TNF α and CD40L, or from monocyte cultures activated with TNF α , LPS and CD40L.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|------|------------------|
| UNLB | 0.2 mg | Liquid | IM3448 | RUO | - | GMP |

CD209 (DC-SIGN)

The CD209 antigen, also named dendritic cell (DC)-specific-intracellular adhesion molecule 3 (ICAM-3)-grabbing non-integrin (DC-SIGN), is a 44 kDa type II transmembrane C-type lectin with a single carbohydrate recognition domain (CRD). Like other C-type lectin members, CD209's extracellular structure is able to bind mannose residues in a Ca⁺⁺ dependent manner. Highly specific to DCs, CD209 plays a key role in the primary immune response as receptor/processor for a variety of ligands, including: ICAM-3: initiation of DC-T cell immunological synapse; ICAM-2: transendothelial DC migration; HIV-1 gp120: capture of HIV-1 and transpresentation to CD4⁺ T cells; CMV envelope glycoprotein B: capture of CMV; Unknown ligands: capture of Ebola virus, and of Leishmania amastigotes. CD209 is expressed by immature DCs in peripheral tissues, with the noticeable exception of Langerhans cells. It is also expressed by DCs in lymphoid tissues, and by certain macrophages. In peripheral blood, a percentage of plasmacytoid DCs (or DC2) may also express CD209. It is totally absent from monocytes, and an observed up-regulation of CD209 expression on monocyte-derived DCs correlates with the down-regulation of CD14. Monocyte-derived macrophages may express CD209, only when cultured in the presence of IL-13.



Clone: AZND1

Isotype: IgG1 Mouse

The AZND1 monoclonal antibody (mAb) is useful for many purposes, including flow cytometric analysis of CD209-expressing cells, immunohistochemical analysis of CD209⁺ cells on frozen tissue sections, immunoprecipitation of CD209 antigen, and investigation of its functions, due to the blocking or inhibiting properties of AZND1 mAb. The AZND1 mAb to DC-SIGN has been assigned to the CD209 cluster of differentiation during HLDA 7.

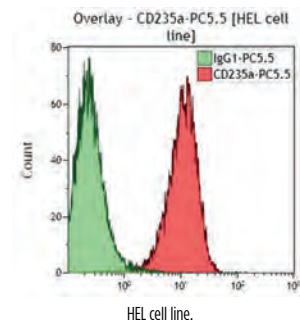
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | A07407 | RUO | IOTest | GMP |
| UNLB | 0.2 mg | Liquid | A07406 | RUO | - | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD235a (Glycophorin A)

The CD235a antigen, also called Glycophorin A, is a transmembrane, single-pass glycoprotein that contains carbohydrate, mostly in the form of sialic acid. CD235a has a molecular weight of 10 kDa. It is expressed by erythroid precursors and erythrocytes. Glycophorin A carries the antigen determinants for the MNS blood groups and has been proposed to be an inhibitor of hemagglutination and hemolysis. Glycophorin A binds siglec 5, and may also serve as receptor for cytokines and pathogens, including the malaria parasite, *Plasmodium falciparum* and some viruses, including influenza virus and hepatitis A virus.



Clone: 11E4B-7-6 (KC16)

Isotype: IgG1 Mouse

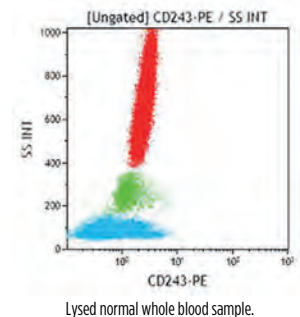
The 11E4B-7-6 (KC16) antibody binds to the amino acid sequence 27-39 of glycophorin A and has no reactivity to glycophorin B. It reacts with immature erythrocytes including erythroblasts, proerythroblasts and reticulocytes.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | B49206 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM2212U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07792 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM2211U | ASR | IOTest | GMP |
| PC7 | 1 mL | Liquid | A71564 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | A89314 | ASR | IOTest | GMP |

NEW

CD243 (P-glycoprotein)

The CD243 antigen (P-gp) is the 170-180 kDa multi-drug resistance (mdr)-1 gene product. This protein carries out ATP-dependent efflux of structurally diverse lipophilic compounds, including many anti-cancer chemotherapy agents. In hematopoietic cells, the *mdr1* gene product is expressed, but at relatively low levels. P-gp is expressed in specialized epithelial cells with secretory or excretory functions. In the liver, P-gp is found on the biliary surface of hepatocytes and small biliary ductules; in the pancreas, on the laminal surface of epithelial cells of small ductules and, in the kidney, on the brush border of the proximal tubules. Additional sites of expression include the gastrointestinal tract, endothelial cells of the brain and the adrenal glands.



Lysed normal whole blood sample.

Clone: UIC2

Isotype: IgG2a Mouse

The UIC2 antibody reacts with an external epitope of the human P-glycoprotein (P-gp). UIC2 antibody inhibits Pgp-mediated efflux and potentiates the cytotoxic action of P-gp transported drugs in MDR cells.

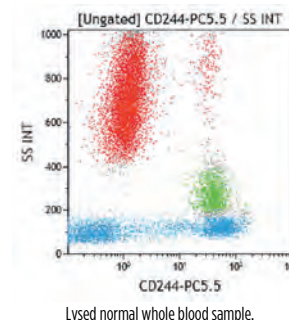
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------|------|--------|----------------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2370U | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD244 (2B4)

The CD244 antigen, also called 2B4, is a 38 kDa cell surface signal transduction molecule found on almost all human NK cells. It induces a granule independent killing mechanism by NK effector cells. It is also found on $\gamma\delta$ TCR T cells and approximately half of peripheral $\alpha\beta$ TCR CD8+ T cells. It is not found on B or naïve CD8+ T cells. Upon activation, most CD8+ T cells become CD244-positive. However, a small but significant minority of CD8+ T cells remain CD244-negative. This subset is associated with lower cytotoxic activity, lower γ -IFN production and higher IL-4 and IL-10 production. CD244 is a high affinity receptor for CD48.



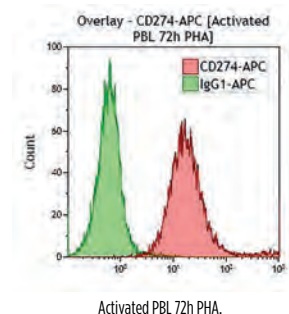
Clone: C1.7

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|--------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM1608 | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B21171 | ASR | IOTest | GMP |

CD274 (PD-L1)

The CD274 antigen is known as Programmed Cell Death 1 ligand 1 (PDCD1LG1 or PD-L1) or B7-H1. It is encoded by a gene located on the human chromosome 9p24. Immune cell function implicates important modulators known as cosignaling receptors. On T cells, the cosignaling receptors belong to either the immunoglobulin (CD28-like) or TNF receptor (TNFR) superfamilies. The CD28 immunoglobulin-superfamily is composed of coinhibitory (CD28, ICOS) and costimulatory receptors. Programmed Death- 1 (PD-1) is one of the three coinhibitory receptors with Cytotoxic T Lymphocyte Antigen 4 (CTLA4) and CD272. CD274 antigen is one of the two ligands, with PD-1 ligand 2 (PD-L2), for PD-1 and belongs to the B7 family. The PD-1 - PD-L1 interaction plays a critical role in regulating T cell activation and tolerance. In particular, it plays a role during development by inhibiting the TCR-mediated positive selection of thymocytes. It has also been shown to be implicated in the regulation of CD4 positive T cells proliferation. CD274 antigen is expressed on immature dendritic cells (iDC), mature dendritic cells (mDC), IFN- γ -treated monocytes, and follicular dendritic cells.



Clone: PD-L1

Isotype: IgG1 Mouse

The PD-L1 monoclonal antibody recognizes dendritic cells, T cells and follicular dendritic cells. It has been assigned to the CD274 cluster of differentiation during the 8th HLDA Workshop on Human Leukocyte Differentiation Antigens, held in Adelaide, Australia, in 2004.

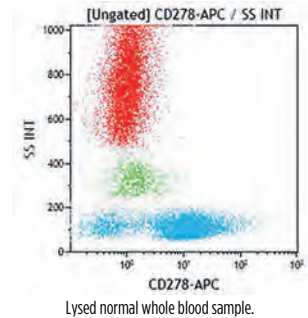
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|----------|--------|--------|--------|--------|------------------|
| PC7 | 50 tests | Liquid | A78884 | RUO | IOTest | GMP |
| APC | 0.5 mL | Liquid | B36126 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD278 (ICOS)

The CD278 antigen, also known as ICOS molecule (inducible T-cell costimulator, Inducible Costimulator), is a disulfide-linked homodimeric T-cell surface glycoprotein of 55-60 kDa, which belongs to the CD28 and CTLA-4 cell-surface receptor family. The CD278 molecule plays an important role in cell-cell signaling, immune responses, and regulation of cell proliferation. While CD278 antigen is not constitutively expressed on naïve peripheral blood T cells, it is highly expressed on unstimulated thymocytes of germinal centers, showing a role in T cell differentiation. Upon activation by antigen presenting cells, T cells (CD4 positive cells and CD8 positive cells) express inducible co-stimulatory receptors, including CD28, CTLA4 and ICOS. The resulting interaction of CD278 (ICOS) with its ligand ICOS-L (B7-like molecule present on B cells) participates to interleukin production, especially IL-10 and IL4. The central role of CD278 in the generation and maintenance of humoral immunity has also been shown to be important. Upon the co-stimulation of T cells through ICOS and CD28, ICOS binds its ligand ICOS-L leading to IgG and IgM secretion as well as IgE production. It is not expressed on resting peripheral T cells, B cells, NK cells, monocytes/macrophages, platelets and granulocytes.



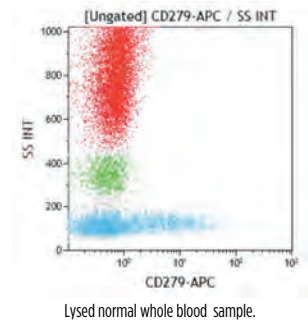
Clone: ISA-3

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | A49080 | RUO | IOTest | GMP |
| APC | 0.5 mL | Liquid | B36127 | ASR | IOTest | GMP |

CD279 (PD-1)

The CD279 antigen, also known as Programmed Death 1 (PD-1), belongs to the immunoglobulin superfamily. It contains an immunoreceptor tyrosine-based inhibitory motif (ITIM) in its cytoplasmic tail. It is encoded by the PDCD1 gene, which is located on the human chromosome 2q37.3. Immune cell function implicates important modulators known as cosignaling receptors. On T cells, the cosignaling receptors belong to either the immunoglobulin (CD28-like) or TNF receptor (TNFR) superfamilies. The CD28 immunoglobulin-superfamily is composed of coinhibitory and costimulatory receptors. Programmed Death-1 (PD-1) is one of the coinhibitory receptors, with notably Cytotoxic T Lymphocyte Antigen 4 (CTLA4) and CD272 (BTLA). The interaction of PD-1 with its ligands, PD-L1 and PD-L2, plays a critical role in regulating T cell activation and tolerance.



Clone: PD1.3

Isotype: IgG2b Mouse

The PD1.3 monoclonal antibody recognizes T cells, activated CD4 and CD8 positive cells and activated B cells. This antibody has been assigned to the CD279 cluster of differentiation during the 8th HLDA Workshop on Human Leukocyte Differentiation Antigens, held in Adelaide, Australia, in 2004.

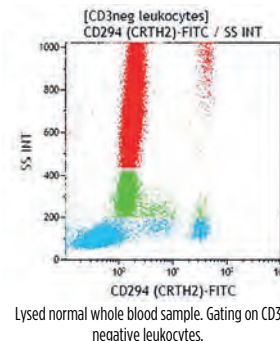
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | B30634 | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B36123 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | A78885 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B30633 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD294 (CRTH2)

CD294, also known as CRTH2, is a seven-transmembrane G-protein-coupled receptor known as the chemoattractant receptor-homologous molecule expressed on Th2 cells. Prostaglandin D receptor (DP), and CRTH2 have been identified as receptors for Prostaglandin D2 (PGD2), but they differ in their signaling pathways. PGD2 is the major metabolite of arachidonic acid produced by allergen-activated mast cells. CRTH2 molecule is preferentially expressed on human T-helper (Th) 2 and T cytotoxic (Tc) 2 cells but not on Th1 and Tc1 cells. CRTH2 is the most reliable surface marker selectively associated with circulating T (Th and Tc) cells able to produce IL-4 (as well as IL-5 and IL-13) and not IFN γ . On normal whole blood leukocytes, CD294 is also highly expressed on basophils and eosinophils. The expression of CD294 in peripheral blood mononuclear cells (PBMCs) is restricted to an activated state of Type 2 cells. CD294 may be weakly expressed on some monocytes and/or dendritic cells (CD14dim, CD16pos,HLA-DRpos,CD33pos). CD294 may act in mediating the recruitment and/or activation of basophils, eosinophils and Th2 cells at sites containing mast cells activated by invading allergens. CRTH2, but not DP, induces migration of Th2 cells, eosinophils and basophils in response to PGD2.



Clone: BM16

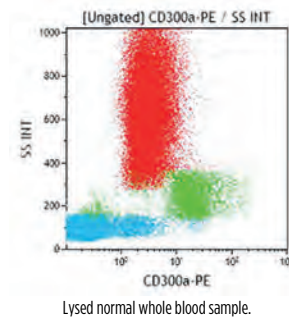
Isotype: IgG2a Rat

The BM16 monoclonal antibody precipitates a 55 to 70 kDa protein from cell lysates of CRTH2-transfected Jurkatt and Th2 clone, corresponding to PGD2 receptor.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | B42020 | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | A07413 | RUO | IOTest | GMP |

CD300a (IRp60)

The CD300a, also known as inhibitory receptor protein (IRp60), is a surface molecule of 60 kDa expressed by all human natural killer (NK) cells. The IRp60 gene, located on human chromosome region 17q25 encodes a molecule, highly O- and N-glycosylated, belonging to the immunoglobulin superfamily (Ig-SF) that displays one extracellular Ig-like domain of the V-type, a hydrophobic transmembrane portion and a cytoplasmic tail containing ITIM motifs involved in the inhibitory function. The ligand of the CD300a is still unknown but CD300a does not appear to recognize HLA-class I molecules. Upon cross-linking, IRp60 recruits and activates SH2-containing phosphatases SHP-1 and SHP-2 which switch off the activating signaling cascade by dephosphorylating a variety of tyrosine phosphorylated proteins. Cross-linking of IRp60 by E59.126 monoclonal antibody strongly inhibits the spontaneous cytotoxicity of NK cells as well as the NK-mediated cytolytic activity induced via different non-HLA-specific or HLA-specific activating receptors. CD300a may play a more general role in the regulation of the immune response since it is expressed on other cell types, including T lymphocyte subsets, monocytes and granulocytes.



Clone: E59.126

Isotype: IgG1 Mouse

The E59.126 antibody has been used in flow cytometry and Western blotting to characterize IRp60.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------|------|--------|---------------|--------|--------|------------------|
| PE | 1 mL | Liquid | A22328 | ASR | IOTest | GMP |

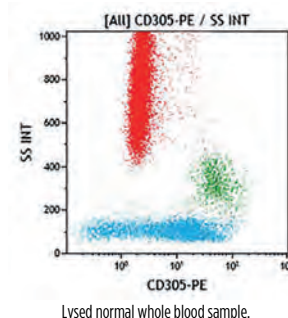
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



CD305 (LAIR1)

CD305, also called LAIR1 (Leucocyte-associated Ig-like receptor 1), is a 31 kDa type 1 transmembrane molecule with a single N terminal extracellular Ig superfamily C2 domain. The extracellular domain contains one N-glycosylation site. CD305 is expressed on the majority of lymphocytes, NK cells, monocytes, dendritic cells and naïve B cells. It inhibits cell cytotoxicity, cell activation, proliferation and differentiation by phosphorylation of its cytoplasmic ITIM motifs.



Clone: NKTA255

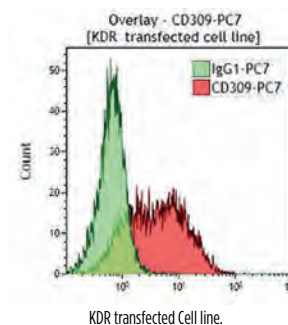
Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | B68156 | ASR | IOTest | GMP |

NEW

CD309 (KDR)

CD309 antigen, also called KDR (Kinase insert domain receptor), or flk-1 (Fetal liver kinase 1) belongs to the VEGF (vascular endothelial growth factor) receptor family. It is known as the VEGFR-2 and is one of the three cell signaling tyrosine-kinase receptors of the VEGF family [VEGFR-1 (flt-1), VEGFR- 2 (KDR/flk-1), VEGFR-3 (flt-4)] and plays a key role in vascular development and regulation of vascular permeability. These receptors are transmembrane proteins that contain seven immunoglobulin-like domains in their extracellular part and two tyrosine kinase domain in their intracellular part. The KDR gene maps to the chromosome 4q11-q12. CD309 is the receptor for VEGF but it also binds VEGF-C, VEGF-D, and VEGF-E. Through the binding to CD309, which is expressed almost in endothelial cells, VEGF induces endothelial cell proliferation, and promotes cell migration. CD309 is expressed during early stages of embryogenesis. It has also been shown that VEGF can induce, in vivo, angiogenesis as well as permeabilization of blood vessels, and plays a central role in the regulation of vasculogenesis. It is expressed on CD34 positive cells defining a CD34+ CD309+ common precursor for both hematopoietic cells and endothelial cells called hemoangioblast.



Clone: KDR-1

Isotype: IgG1 Mouse

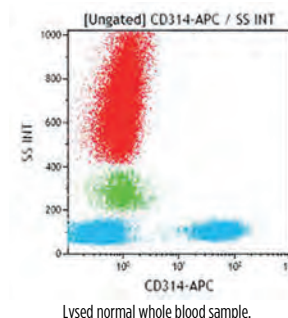
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | A64615 | ASR | IOTest | GMP |
| PC7 | 1 mL | Liquid | A64616 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD314 (NKG2D)

CD314, also known as NKG2D, is a 42 kDa type II transmembrane protein belonging to the C-type lectin superfamily. The name NKG2D may be misleading as it is not a typical NKG2 family member. It has low homology with the other members and dimerizes with itself to form a homodimer while other members dimerize with CD94. The surface expression of NKG2D requires association with a signaling adaptor protein, a KAP10 (DAPI10) homodimer that contains a Y-x-x-M motif. Upon tyrosine phosphorylation, that motif recruits and activates phosphatidylinositol 3' (PI 3)-kinase. Unlike natural cytotoxicity receptors (NCRs), NKG2D is not only expressed by all NK cells but also by most $\gamma\delta$ T cells and by virtually all CD8+ $\alpha\beta$ T cells. In addition, its expression can be up-regulated on NK cells by different cytokines (IL-15, IL-12 and IFN- γ). Human CD314 ligands identified so far are MICA and MICB, stress-inducible and broadly expressed molecules on tumors of epithelial origin, some melanomas, and ULBPs, targets of the human CMV protein, expressed on a wide range of cells. NKG2D triggering would appear to overrule the inhibitory signals delivered by the KIR and HLA class I interactions. NKG2D might play a complementary role in the NK-cell mediated lysis of target cells that appear to express HLA class I molecules normally and that express one or more NKG2D-specific ligands.



Clone: ON72

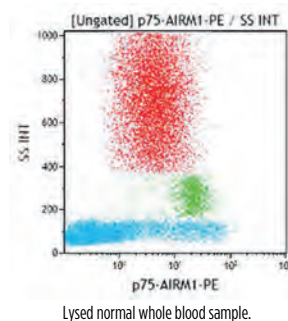
Isotype: IgG1 Mouse

The ON72 antibody has been used in flow cytometry to analyze the expression of NKG2D on NK cells.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | A08934 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A22329 | ASR | IOTest | GMP |

CD328 (p75 AIRM1)

The p75 adhesion inhibitory receptor molecule 1 (p75/AIRM1), also known as Siglec-7, belongs to the CD33-related Siglec subgroup. p75 AIRM1 is a type I transmembrane glycoprotein, belonging to the immunoglobulin superfamily (Ig-SF) and sharing sequence homology with the sialic acids binding Ig-like lectins. The extracellular domain of the p75/AIRM1 molecule is relatively highly N-glycosylated and displays three extracellular Ig-like domains. The cytoplasmic tail is characterized by a classical ITIM motif responsible for the inhibitory functions of this receptor. p75 AIRM1 is expressed on activated and resting NK cells, monocytes, some chronic (CML) and acute myeloid leukemias (AML). p75 AIRM1 is a novel, HLA independent, inhibitory receptor that may play a relevant role in the negative regulation of human NK cell functions.



Clone: Z176

Isotype: IgG2b Mouse

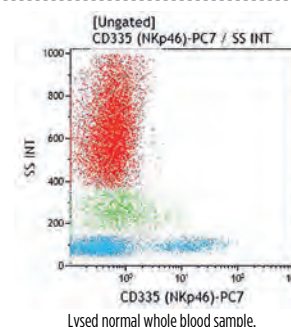
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|----------|--------|--------|--------|--------|------------------|
| PE | 50 tests | Liquid | A22330 | RUO | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD335 (NKp46)

CD335, also known as NKp46, is a 46-kDa transmembrane glycoprotein which is a NK-specific triggering receptor involved in non-MHC-restricted natural cytotoxicity and considered the prototype of the NK natural cytotoxicity receptors (NCRs). Its expression is restricted to all resting and activated NK cells, including the minor CD3-CD56brightCD16- subset. Although CD335 is highly expressed at the NK-cell surface in the majority of donors, some individuals have a proportion of NK cell (which vary up to 90%) expressing a “dull” NKp46 phenotype. CD335 is a member of the immunoglobulin superfamily characterized by two extracellular C2-type Ig-like domains. It is associated with the ITAM bearing molecules CD3 ζ and Fc ϵ RI γ . Although this association is likely to be essential for signal transduction via NKp46, CD3 ζ is not required for NKp46 surface expression. NKp46 represents a major activating receptor and plays a central role in the lysis and clearance of HLA class I- cells. The magnitude of lysis correlates with its level of surface expression.



Clone: BAB281

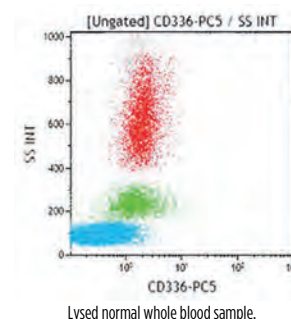
Isotype: IgG1 Mouse

BAB 281-mediated masking of NKp46 molecule inhibits NK cytotoxicity versus different target cells. In redirected killing assays, BAB281 binding to NKp46 induces a strong increase of cytolytic activity. Although hemagglutinins of viral origins have been identified as ligands for NKp46 receptor, the natural (non-viral) ligand for NKp46 is unknown.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM3711 | ASR | IOTest | GMP |
| PC5 | 0.5 mL | Liquid | A66902 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B38703 | ASR | IOTest | GMP |

CD336 (NKp44)

CD336, also known as NKp44, is a 44-kDa transmembrane glycoprotein which is selectively expressed by activated NK cells. NKp44 functions as a triggering receptor involved in non-MHC-restricted natural cytotoxicity by activated NK cells and is one of the NK natural cytotoxicity receptors (NCRs). Structurally, CD336 is a member of the immunoglobulin superfamily characterized by a single extracellular V-type Ig-like domain. It associates with a homodimer of ITAM motif-containing KARAP / DAP12 adaptor proteins. These adaptor proteins were found to be crucial both for the surface expression of NKp44 and for transducing activating signal. CD336 can mediate triggering of NK cell cytotoxicity as in redirected killing assays. Monoclonal antibody Z231-mediated cross-linking of NKp44 in cloned NK cells resulted in strong lysis of target cells and, Z231-mediated masking of NKp44 partially inhibits cytolytic activity. Such inhibition is greatly increased if an anti-CD335, also known as anti-NKp46 (BAB281), is combined with Z231. The CD336 ligand is still undefined. Since activated NK cells selectively express NKp44, it may play a partial role in the enhanced cytotoxicity of IL2-activated compared to those freshly isolated NK cells from peripheral blood.



Clone: Z231

Isotype: IgG1 Mouse

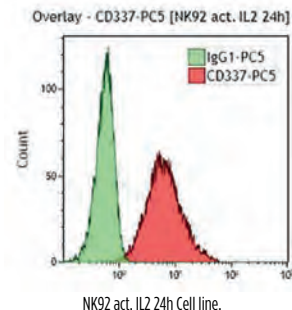
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM3710 | ASR | IOTest | GMP |
| PC5 | 0.5 mL | Liquid | A66903 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD337 (NKp30)

CD337, also known as NKp30, is a 30-kDa transmembrane glycoprotein which is a NK-specific triggering receptor involved in non-MHC-restricted natural cytotoxicity. NKp30 is strictly expressed by all resting and activated NK cells including the minor CD3-CD56brightCD16-subset. With NKp46 and NKp44 it is one of the three identified NK natural cytotoxicity receptors (NCR). Its surface expression parallels that of NKp46. NKp46dull NK cells are also characterised by a NKp30dull phenotype while NKp46bright NK cells show a NKp30bright phenotype. The NKp30bright or NKp30dull phenotypes are correlated with high or low cytotoxicity, respectively. CD337 is a member of the immunoglobulin superfamily characterized by a single extracellular V-type Ig-like domain. It is associated with a homodimer of ITAM motif-containing CD3 ζ adaptor proteins. These adaptor proteins are not necessary for surface expression of NKp30, but are necessary for signal transduction. In redirected killing assays, Z25-mediated cross linking of NKp30 induces strong NK cell activation. Conversely, Z25-mediated masking of NKp30 inhibits NK cytotoxicity against target cells. More importantly, CD337 represents the major receptor in induced NK-mediated killing of certain target cells, the lysis of which is largely NKp46 / NKp44 independent. Although the CD337 ligand is unknown, studies report NKp30-mediated lysis of immature dendritic cells (iDC). These findings suggest that DCs express one or more unidentified ligands for CD337.



Clone: Z25

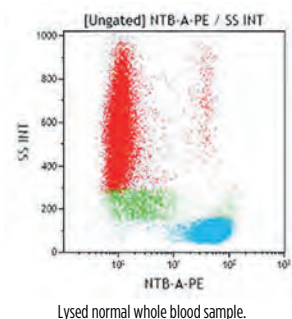
Isotype: IgG1 Mouse

The Z25 antibody has been used in flow cytometry to analyze the expression of NKp30 on NK cells.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM3709 | ASR | IOTest | GMP |
| PC5 | 0.5 mL | Liquid | A66904 | ASR | IOTest | GMP |

CD352 (NTB-A)

The natural killer (NK), T lymphocyte, B lymphocyte antigen (NTB-A) is a 60-kDa transmembrane glycoprotein of the CD2 family expressed on all human resting and activated NK, T and B cells. This antigen is not expressed on monocytes, neutrophils, and basophils but is expressed on eosinophils. The NTB-A antigen, a 331 amino acid protein, is a member of the immunoglobulin (Ig) superfamily. It is characterized, in its 225 amino acid extracellular domain, by one distal V-type domain without disulfide bond and two proximal C2-type domains, and in its 83 amino acid cytoplasmic domain by three tyrosine residues. One tyrosine residue is part of an ITIM motif and two are parts of an ITSM motif (TxYxxV/I). NTB-A is its own ligand through a homophilic binding. NTB-A associates with two adaptor proteins, the SLAM-associated protein (SAP) also known as SH2D1A and the Ewing's sarcoma activated transcript (EAT) 2. In NK cells, NTB-A acts as an activating coreceptor.



Clone: MA127

Isotype: IgG1 Mouse

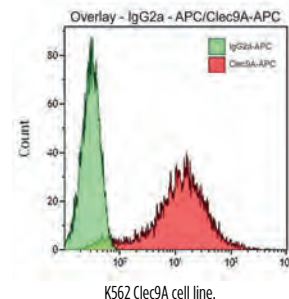
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|----------|--------|--------|--------|--------|------------------|
| PE | 50 tests | Liquid | A40926 | RUO | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

CD370 (Clec9A)

CLEC9A is a group V C-type lectin receptor (CTLR) comprised of a single extracellular C-type lectin domain (CTLD) connected to the transmembrane domain by a stalk region and an intracellular cytoplasmic tail. In humans, CLEC9A is expressed on the cell surface of a subset of Dendritic cells (DCs) and a subset of CD14+CD16- Monocytes. In dendritic cells, CLEC9A is selectively expressed on CD141+ (BDCA3+) dendritic cells. As opposed to other DC markers, CLEC9A presents the advantage of being expressed in both human and mouse DCs. Thus, it can serve as a DC marker crossing species barriers and may help in the translation from the mouse DC system to human immunobiology.



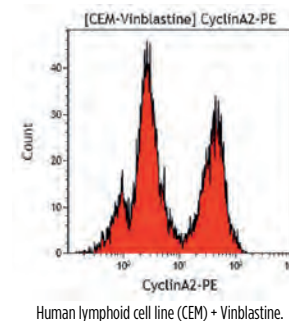
Clone: 8F9

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| APC | 0.5 mL | Liquid | B43291 | ASR | IOTest | GMP |

Cyclin A2

In humans, there are two A-type cyclins - an embryonic-specific cyclin A1 and a somatic cyclin A2. Cyclin A1 is only expressed in meiosis and very early embryos, whereas cyclin A2 is present in proliferating somatic cells. Cyclin A2 is a 48 kDa protein composed of 432 amino-acids. Cyclins control the activation of cyclin dependent kinases (CDKs) by associating with them to form a cyclin-CDK complex able to phosphorylate selected proteins and to induce downstream processes. The cyclin A2-CDK2 complex initiates DNA replication and is required for S phase progression. For passage through G2 to M phase, cyclin A2 complexes to the CDK1 (also called CDC2). Cyclin A2 is degraded via the ubiquitin-dependant proteolysis pathway in the early phases of mitosis.



Clone: 11B2G3

Isotype: IgG1 Mouse

The 11B2G3 antibody reacts with human cyclin A2.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| FITC | 2 mL | Liquid | A22327 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | B15092 | ASR | IOTest | GMP |

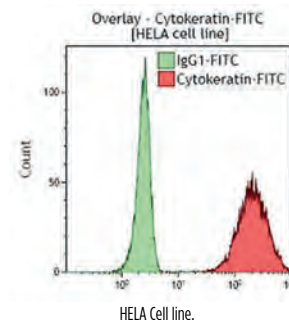
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



Cytokeratin

Cytokeratins belong to the intermediate filament protein family and are characteristic of epithelial cells. At present, more than 20 different cytokeratins have been identified based on the original two dimensional gel electrophoresis classification. A sub classification, based on charge, divides cytokeratins into two subfamilies: the acidic (negatively charged) cytokeratin (type I) and the neutral to basic (positively charged) cytokeratin (type II). They are typically expressed as pairs, consisting of one acidic and one basic molecule.



Clone: J1B3

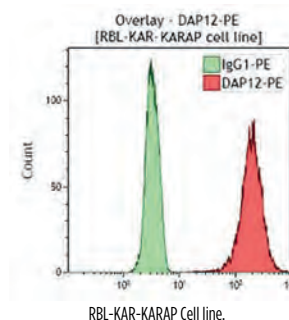
Isotype: IgG1 Mouse

This monoclonal antibody exclusively reacts with cells of epithelial origin, and shows a cytoplasmic staining pattern. It can be used as a gating tool in flow cytometry to distinguish epithelial from non-epithelial cells. Multi-color flow cytometric analysis requires preliminary permeabilization of the cells with digitonin or methanol.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM2356U | ASR | IOTest | GMP |

DAPI2 (DNAX / KARAP / TYROBP)

The DAPI2 antigen (DNAX activating protein of 12 kDa) is a type I transmembrane glycoprotein which is also known as KARAP (killer cell activating receptor-associated protein) or TYROBP (tyrosine kinase binding protein). It is encoded by a gene located on the chromosome 19q13 and contains an intracytoplasmic immunoreceptor tyrosine-based activation motif (ITAM). The DAPI2 antigen associates with a large family of receptors in hematopoietic cells conferring to this antigen a broad range of intracellular signaling functions. Interestingly, it has been shown to both potentiate or inhibit leukocytes activation. When associated with KIRs (stimulatory killer Ig-like receptors), the adaptor molecule DAPI2 functions as an activation unit leading to the T cell activation. It has also been shown that the activation of the syk/ZAP70 tyrosine kinases by DAPI2 plays a role in the stimulation of NK cells and T cells. On the contrary, the DAPI2 association with other receptors such as Fc receptor γ -chain and CD3 ζ may lead to the regulation of T cell immune response.



Clone: H10E12F4

Isotype: IgG1 Rat

The H10E12F4 monoclonal antibody recognizes monocytes, neutrophils, dendritic cells, NK cells and to a lesser extent basophils, and B lymphocytes. It does not recognize CD4 and CD8 T cells or B cells.

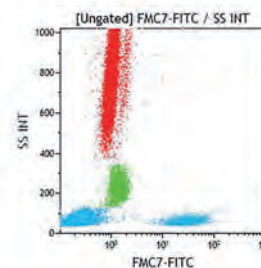
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------|-----------|--------|---------------|--------|--------|------------------|
| PE | 100 tests | Liquid | A78886 | RUO | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

FMC7 (CD20)

FMC7 is a transmembrane glycoprotein with a molecular weight of 105 kDa. This antigen was described as a particular conformation of a surface protein encoded by the CD20 gene. FMC7 antibody reactivity to its particular CD20 epitope was found to be dependent of membrane cholesterol level. In circulating blood cells, FMC7 is expressed by a B lymphocyte sub-population. It is not detected on T lymphocytes, NK cells, polymorphonuclear granulocytes, platelets, nor on erythrocytes. The subpopulation of B lymphocytes expressing the FMC7 antigen expresses surface immunoglobulins, thus defining a stage of maturation of the B lymphocytes distinct from FMC7- B lymphocytes.



Lysed normal whole blood sample.

Clone: FMC7

Isotype: IgM Mouse

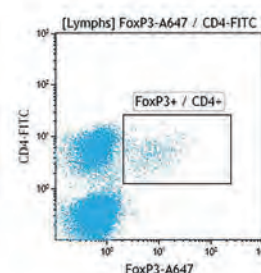
The FMC7 antibody reacts with a subpopulation of peripheral blood B lymphocytes and tonsil B cells, but it does not react with granulocytes, monocytes, platelets, erythrocytes, T lymphocytes or null cells.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|----------------|--------|--------|------------------|
| PB | 50 tests | Liquid | B96782 | CE | IOTest | 98/79/EC |
| PB | 0.5 mL | Liquid | B08466 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | A07791 | CE | IOTest | 98/79/EC |
| FITC | 1 mL | Liquid | IM1364U | ASR | IOTest | GMP |

NEW

FoxP3

FoxP3 (Forkhead box protein P3, also known as Scurfin, JM2, or IPEX), is the major transcription factor that determines the fate and identity of CD4+ CD25+ Treg cells. It is constitutively expressed in natural Tregs (nTregs) and acts as the master regulator in nTreg development and suppressive function. nTreg (CD4+ CD25+ FoxP3+ Treg cells) are important regulators of almost all immune responses, and they mediate suppressive functions both through the production of cytokines and direct cell-cell contacts. nTreg cells exit in the thymus, circulate and migrate to secondary lymphoid tissues, as well as to inflammatory sites, to exert suppressor activities. FoxP3 expression can also be directly induced in peripheral naïve CD4+ CD25- T cells, forming inducible Treg (iTreg) cells that also suppress immune responses. Diminished Treg cell development and function has been linked to auto-immunity and allergy whereas elevated Treg cell responses might play a role in undermining anti-infectious and anti-cancer immunity. FoxP3 contains 3 discernible functional domains, a single C2H2 zinc-finger motif, a leucinezipper-like motif, and a C-terminal forkhead domain, thereby exerting its positive and negative function as transcription factor. FoxP3 acts as transcriptional activator for genes that are typically up-regulated in nTregs while it represses transcription of both Th1 and Th2 cytokines in nTregs. FoxP3 can also exert regulatory capacity via protein-protein interactions.



Permeabilized normal whole blood sample. Gating on lymphocytes. Dual staining with CD4-FITC and FoxP3-A647.

Clone: 259D

Isotype: IgG1 Mouse

The monoclonal antibody 259D detects endogenous levels of human FoxP3 transcription factor.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|--------|--------|---------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B90432 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | B46031 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B46032 | ASR | IOTest | GMP |
| AF647 | 0.5 mL | Liquid | B30650 | ASR | IOTest | GMP |

NEW

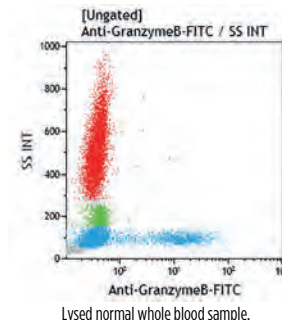
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Single-Color Conjugated Antibodies



Granzyme B

Granzyme B (GrB) is a single chain and single domain serine protease. It is a member of the chymotrypsin superfamily. The process of GrB glycosylation results in generation of a 32 kDa and a 35 kDa glycosylated forms of GrB. The 32 kDa GrB forms contain high mannose oligosaccharide moieties and accumulate in cytotoxic T lymphocytes (CTLs) after T cell receptor (TCR) stimulation. In contrast, the 35 kDa GrB forms, which possess only the complex oligosaccharide groups, are not stored in CTLs and instead they are secreted through the constitutive calcium-independent secretory pathway after TCR activation. GrB is the most abundant serine protease stored in secretory granules of CTLs and NK cells. GrB can be produced by plasmacytoid dendritic cells (peacs). GrB-induced cell death is a primary mechanism in cytotoxic T lymphocytes (CTLs) and natural killer (NK) cells to eliminate harmful target cells including allogeneic, virally infected and tumor cells. This mechanism implies activation of several pro-apoptotic pathways by direct proteolysis. The mannose 6-phosphate receptor has been identified as the plasma membrane receptor for GrB.



Clone: GB11

Isotype: IgG1 Mouse

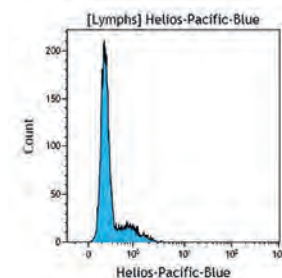
The monoclonal antibody GB11 recognizes the human, mouse and rat Granzyme B.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | B46038 | ASR | IOTest | GMP |

NEW

Helios

Helios belongs to the Ikaros transcription factor family. Members of this family are DNA binding proteins containing two-zinc finger N terminal domains and protein binding domain. Helios expression is restricted to the T lymphocytes lineage. Helios is suggested to play an important role in CD4+CD25+FoxP3+ regulatory cells. It has been shown that Helios up-regulates the expression of FoxP3 expression by binding to the FoxP3 promoter. Helios is a highly conserved transcription factor that has 97% sequence homology between human and mice.



Clone: 22F6

Isotype: IgG Hamster

The clone 22F6 reacts with human and mouse Helios.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------|----------|--------|---------------|--------|--------|------------------|
| PB | 50 tests | Liquid | B49311 | RUO | IOTest | GMP |

NEW

HIV-1 core antigen

Clone: KC57

Isotype: IgG1 Mouse

The KC57 antibody identifies the 55, 39, 33 and 24 kDa proteins of the core antigens of the human immunodeficiency virus type 1 (HIV-1). The 55 kDa protein is the precursor protein for the core antigen. The 39 and 33 kDa proteins are intermediate products and the 24 kDa protein is the core protein.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|----------------|--------|---------------|------------------|
| FITC | 100 tests | Liquid | 6604665 | RUO | COULTER CLONE | GMP |
| RD1 | 100 tests | Liquid | 6604667 | RUO | COULTER CLONE | GMP |

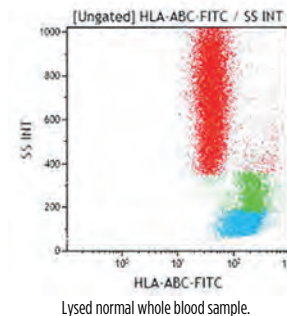
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Single-Color Conjugated Antibodies



HLA-ABC

HLA-A, -B, and -C are major histocompatibility complex (MHC)-class I antigens. Like other class I molecules (i.e. HLA-E, -F, -G), HLA-A, -B, and -C are heterodimers consisting of a 40 – 45 kDa transmembrane glycoprotein α -chain, noncovalently combined to the invariant β 2-microglobulin. All class I molecules have conserved, monomorphic domains, but are also characterized by their extensive degree of allelic polymorphism. MHC molecules play a central role in the immune response. They are involved in the maturation of T cell repertoire, in the activation of T lymphocytes by presentation of xenogenic peptides or in the allogenic response. HLA-A, -B and -C are “classical” MHC Class I molecules and are expressed on the surface of most nucleated human cell types.



Clone: B9.12.1

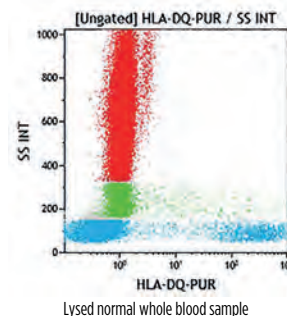
Isotype: IgG2a Mouse

The B9.12.1 monoclonal antibody recognizes a monomorphic epitope common to HLA-A, -B and -C molecules. B9.12.1 antibody does not recognize unassociated heavy chains.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM1838U | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM0107 | RUO | - | GMP |

HLA-DQ

The HLA (Human Leucocyte Antigen) system is the name given to the major histocompatibility complex (MHC) in man. The MHC complex is located on the short arm of the chromosome 6 and encodes three groups of molecules designated MHC class I, class II and class III. Coded by 5 loci (DM, DO, DP, DQ and DR) of the D locus, HLA class II molecules are also called HLA-DM, HLA-DO, HLA-DP, HLA-DQ and HLA-DR antigens. The HLA class II molecules like class I molecules, are composed of non-covalently associated α/β heterodimers. On HLA class II, both heavy (α) and light (β) chain with a molecular weight of 31-33 kDa and 26-29 kDa respectively span the cell membrane. The two immunoglobulin-like domains proximal to the cell membrane (α 2 and β 2) support the two polymorphic amino-terminal domains (α 1 and β 1) distal to the membrane which constitute a part of the “antigen presenting site”. HLA class II molecules are involved in the regulation of immune response whose expression is limited to antigen presenting cells, i.e. B lymphocytes, monocytes / macrophages, dendritic and Langerhans cells of the skin.



Clone: SPVL3

Isotype: IgG2a Mouse

The monoclonal antibody SPVL3 recognizes a monomorphic determinant of human class II HLA-DQ molecules. The SPVL3 antibody has been used in studies of inhibition of antigen-specific cytolytic T cell clones.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------------|---------------|--------|------|------------------|
| UNLB | 0.2 mg | Freeze-dried | IM0416 | RUO | - | GMP |

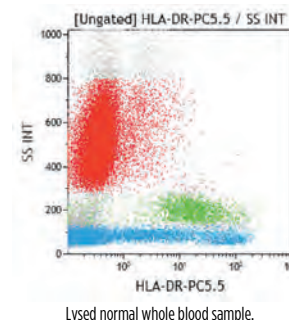
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



HLA-DR

The human major histocompatibility complex (MHC), also called human leucocyte antigens (HLA), is composed of three groups of molecules designated MHC class I, class II and class III. The MHC class II genomic region, or HLA-D region, contains the genes encoding HLA-DR, -DQ and -DP antigens. The MHC class II molecules are built by the non-covalent association of α/β heterodimers. Both heavy (α) and light (β) chains span the cell membrane. They have molecular weights of 31-33 kDa and 26-29 kDa respectively. HLA-DR molecules are found on antigen-presenting cells (APC), i.e. dendritic cells, B lymphocytes, monocytes, macrophages, Langerhans cells and thymic epithelial cells. They are also expressed on activated T cells, but not on granulocytes, platelets, or red blood cells. Resting T cells or endothelial cells that do not normally express these molecules can be induced to express them. HLA-DR is also expressed on some hematopoietic progenitor cells at different stages of differentiation.



Clone: B8.12.2

Isotype: IgG2b Mouse

HLA-DR antibodies are specific to non polymorphic determinants of human HLA class II DR molecules which are constituted of α and β polypeptides of 34 and 29 kDa respectively.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|----------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | IM0463U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM0464U | ASR | IOTest | GMP |

Clone: Immu-357

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------------|-----------|--------|----------------|--------|--------|------------------|
| PB | 50 tests | Liquid | B36291 | CE | IOTest | 98/79/EC |
| PB | 0.5 mL | Liquid | A74781 | ASR | IOTest | GMP |
| KrO | 0.5 mL | Liquid | B00070 | ASR | IOTest | GMP |
| FITC | 100 tests | Liquid | B96758 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM1638U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | IM1639 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM1639U | ASR | IOTest | GMP |
| ECD | 100 tests | Liquid | B92438 | CE | IOTest | 98/79/EC |
| ECD | 1 mL | Liquid | IM3636 | ASR | IOTest | GMP |
| PC5 | 100 tests | Liquid | A07793 | CE | IOTest | 98/79/EC |
| PC5 | 1 mL | Liquid | IM2659U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B20024 | ASR | IOTest | GMP |
| PC7 | 50 tests | Liquid | B49180 | CE | IOTest | 98/79/EC |
| PC7 | 0.5 mL | Liquid | A40579 | ASR | IOTest | GMP |
| APC | 1 mL | Liquid | IM3635 | ASR | IOTest | GMP |
| APC-A750 | 0.5 mL | Liquid | B42021 | ASR | IOTest | GMP |

HLA-DR, DP, DQ

The recognized epitope is specific to a non-polymorphic HLA class II (DR, DP, DQ) Ia antigen constituted of α and β polypeptides of 34 and 29 kDa respectively. This antigen is expressed on monocytes, macrophages, B lymphocytes and activated T lymphocytes.

Clone: 9-49 (I3)

Isotype: IgG2a Mouse

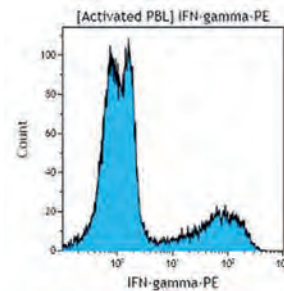
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------------|----------------|--------|---------------|------------------|
| FITC | 0.5 mg | Freeze-dried | 6603424 | ASR | COULTER CLONE | GMP |
| RD1 | 0.5 mL | Liquid | 6604366 | ASR | CYTO-STAT | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

IFN- γ

Human Interferon- γ (IFN- γ) is a 20-25 kDa (monomer) pleiotropic cytokine that is produced by activated T cells and NK cells and is involved in the regulation of almost all immune and inflammatory responses. IFN- γ is involved in the activation, growth and differentiation of T cells, B cells, macrophages, NK cells as well as other cell types. IFN- γ enhances MHC expression on antigen-presenting cells including epithelial, endothelial and connective tissue cell and monocytes cell lines. It also has weak antiviral activity and acts as a macrophage-activating factor (MAF) for tumor cytotoxicity leading to anti-tumor effects.



Activated peripheral blood lymphocytes (PBL).

Clone: 45.15

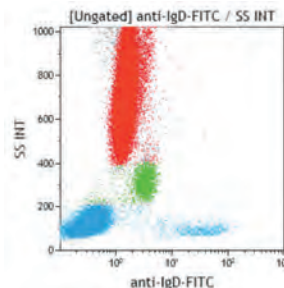
Isotype: IgG1 Mouse

The FITC- and PE-conjugated forms of the 45.15 antibody are optimized for flow cytometric detection of intracellular IFN- γ in stimulated peripheral blood mononuclear cells (PBMC) after permeabilization with IntraPrep permeabilization reagent.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------|----------------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B46034 | ASR | IOTest | GMP |
| FITC | 2 mL | Liquid | IM2716U | ASR | IOTest | GMP |
| PE | 2 mL | Liquid | IM2717U | ASR | IOTest | GMP |

IgD

IgD, a member of the immunoglobulin (Ig) family, is expressed in naïve B cells. It exists in a transmembrane and a soluble form. IgD is, together with IgM, the first antibody isotypes expressed during B cell ontogeny. Bone marrow B cell precursors acquire surface IgM after assembling heavy (H) and light (L) chain variable region exons from prototypic variable (V), diversity (D) and joining (J) gene segments through an antigen-independent process. After leaving the bone marrow to colonize secondary lymphoid organs, B cells acquire surface IgD of the same specificity as surface IgM through alternative splicing of a pre-messenger RNA comprising V(D)J and both heavy chain constant μ (C μ) and C δ exons.



Pre-washed lysed normal whole blood sample.

Clone: IA6-2

Isotype: IgG2a Mouse

The IA6-2 monoclonal antibody binds specifically to the heavy chain of human IgD.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|----------|--------|---------------|--------|--------|------------------|
| FITC | 50 tests | Liquid | B30652 | RUO | IOTest | GMP |
| PE | 50 tests | Liquid | B30653 | RUO | IOTest | GMP |
| APC | 50 tests | Liquid | B30651 | RUO | IOTest | GMP |

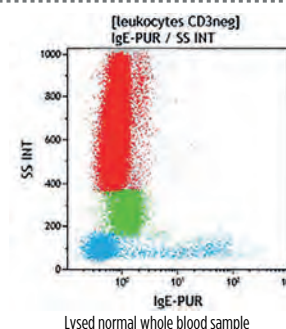
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



IgE (Dε2)

The anti-IgE mAb binds to circulating IgE as well as to IgE antibodies bound to the low affinity receptor FcεRII (expressed mainly on eosinophils, B lymphocytes), or to the high affinity receptor FcεRI (expressed on mast cells, basophils, monocytes and monocytes-derived cells). The anti-IgE antibody induces the histamine release from basophils. However, it is known in the literature information that basophils from 10% to 20% of donors completely fail to release histamine in response to anti-IgE, designated anti-IgE "non releasers".



Clone: E124.2.8

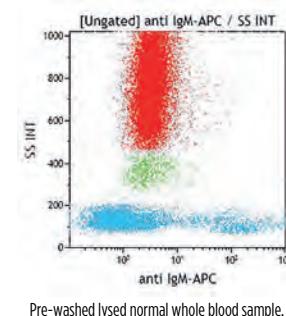
Isotype: IgG1 Mouse

The E124.2.8 monoclonal antibody binds specifically to the Dε2 constant domain of human Immunoglobulin E (IgE) (Dε2 is the heat labile region of IgE).

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------------|--------|--------|------|------------------|
| UNLB | 0.2 mg | Freeze-dried | A40174 | ASR | - | GMP |

IgM

The anti-IgM antibody binds to circulating IgM as well as to IgM antibodies bound to the FcμR. The FcμR is a transmembrane single sialoglycoprotein of 60 kD with O-linked oligosaccharides. It contains an extracellular Ig-like domain homologous to two other IgM-binding receptors (polymeric Ig receptor and Fcα/μR) but exhibits an exclusive Fcμ-binding specificity. Unlike other FcRs, the major cell types expressing FcμR are adaptive immune cells, including B and T lymphocytes. The FcμR can be expressed as a cell surface activation antigen throughout the pre-B and B cell stages in differentiation. Receptor expression is not directly linked with IgM production, as both μ- pre-B cells and isotype-switched B cells may express the FcμR. The FcμR is thus the third member of a family of Fc receptors expressed on B-lineage cells, and its preferential expression on activated B cells suggests a potential role in the response to antigens.



Clone: SA-DA4

Isotype: IgG1 Mouse

The SA-DA4 monoclonal antibody binds specifically to mu heavy chain of Human Immunoglobulin (IgM).

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|----------|--------|--------|--------|--------|------------------|
| PB | 50 tests | Liquid | B30656 | RUO | IOTest | GMP |
| FITC | 50 tests | Liquid | B30655 | RUO | IOTest | GMP |
| PE | 50 tests | Liquid | B30657 | RUO | IOTest | GMP |
| APC | 50 tests | Liquid | B30654 | RUO | IOTest | GMP |

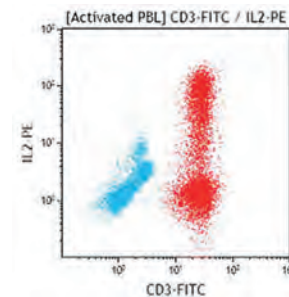
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



IL-2

Interleukin-2 (IL-2) is a 15-17 kDa cytokine produced and secreted by T cells. The induction of IL-2 secretion is the first step in T cell activation. IL-2 is the major autocrine growth factor for activated T cells and is obligatory for the generation of cytotoxic T cells. IL-2 also promotes the proliferation and the differentiation of NK precursors, B cells and monocytes. Activated CD4+ T cells of the Th1 phenotype produce predominantly IL-2 and Interferon- γ , whereas CD4+ T cells of the Th2 phenotype produce IL-4 and IL-10.



Activated peripheral blood lymphocytes (PBL).

Clone: N7.48A

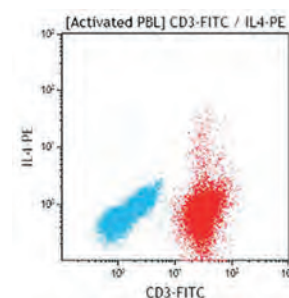
Isotype: IgG2a Mouse

N7.48A-PE conjugated antibody is optimized for flow cytometric detection of intracellular IL-2 in stimulated peripheral mononuclear cells (PBMC) after permeabilizing with formaldehyde/saponin-based IntraPrep Permeabilization Reagent.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2718U | ASR | IOTest | GMP |

IL-4

Interleukin-4 (IL-4) is a monomeric 20 kDa predominantly produced by activated T lymphocytes of the Th2 phenotype, by mast cells and by some antigen-presenting cells. Together with IL-2, IL-4 is an autocrine growth factor for activated T cells and for cytotoxic T cell precursors. IL-4 is a major factor involved in the activation of resting B lymphocytes. Together with IL-13, IL-4 induces isotype switch towards IgE and IgG1 isotypes. Activated CD4+ T cells of the Th1 phenotype produce predominantly IL-2 and Interferon γ , whereas CD4+ T cells of the Th2 phenotype produce IL-4, IL-5, IL6 and IL-10.



Activated peripheral blood lymphocytes (PBL).

Clone: 4D9

Isotype: IgG1 Mouse

The 4D9-PE-conjugated antibody is optimized for flow cytometric detection of intracellular IL-4 in stimulated peripheral mononuclear cells (PBMC) after permeabilizing with formaldehyde / saponin-based IntraPrep Permeabilization Reagent.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2719U | ASR | IOTest | GMP |

Clone: MP4-25D2

Isotype: IgG1 Rat

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PC7 | 0.5 mL | Liquid | B90441 | ASR | IOTest | GMP |

NEW

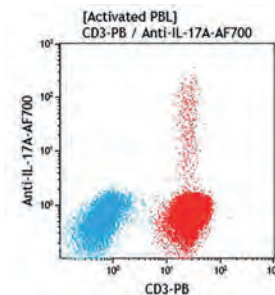
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



IL-17A

IL17-A is a member of the IL-17 family which is constituted by 6 members (IL-17A to IL-17F). IL-17A is commonly referred to as IL-17 and is produced as a homodimer of about 30 kDa. IL-17A is mainly secreted by a subset of CD4+ T cells, namely the Th17 cells, which are helper cells that are distinct from Th1 and Th2 cells. In addition to Th17 cells, other immune cells such as $\gamma\delta$ T cells, CD8+ T cells, NK cells and Innate Lymphoid cells (ILCs) can be activated to secrete IL-17. IL-17 is a pro-inflammatory molecule that induces the production of chemokines and other cytokines by various cell types, i.e. fibroblasts, epithelial cells, endothelial cells, macrophages and neutrophils, which helps the recruitment of innate immune cells at the site of activation.



Peripheral blood lymphocytes (PBL) activated with PMA/Ionomycin/Brefeldin A, permeabilized and fixed with PerFix-nc reagent.

Clone: BL168

Isotype: IgG1 Mouse

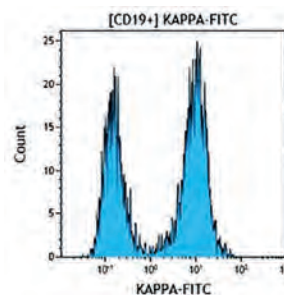
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|--------------|----------|--------|---------------|--------|--------|------------------|
| PB | 50 tests | Liquid | B76266 | RUO | IOTest | GMP |
| AF700 | 50 tests | Liquid | B90428 | RUO | IOTest | GMP |

NEW

NEW

κ Chain

Kappa (κ) chain is a 25Kd polypeptide that results from papain cleavage of the IgG molecule, encoded by the human immunoglobulin kappa locus (IGK) on chromosome 2. The subunit structure of IgG comprises 2 light chains and 2 heavy chains. Each light chain is composed of two tandem immunoglobulin domains: a) one variable domain (VL) and b) one constant (CL) domain. While the VL show considerable sequence diversity the CL shows internal homology with repeating units. Anti-Kappa antibodies recognize the Kappa light chain of immunoglobulins expressed at the surface of a cellular subpopulation corresponding to approximately 2/3 of mature B lymphocytes in peripheral blood. This light chain is also found on the surface of a sub-population of immature bone marrow B lymphocytes.



Lysed normal whole blood sample. Gated on B lymphocytes.

Clone: Polyclonal

Isotype: Fab'2 Goat

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------|---------------|--------|--------|------------------|
| FITC | 2 mL | Liquid | C15623 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B90420 | ASR | IOTest | GMP |

NEW

Available first semester 2018

Clone: Polyclonal

Isotype: F(ab')₂ Rabbit

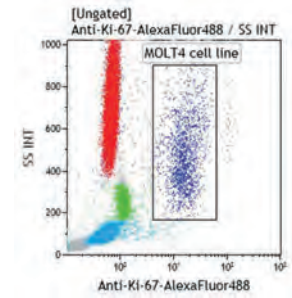
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|-----------|--------|---------------|--------|--------|------------------|
| FITC | 100 tests | Liquid | B49178 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | A64828 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

Ki-67

Ki-67 nuclear antigen is associated with cell proliferation and is found throughout the cell cycle (G1, S, G2, M phases). It is never expressed by resting (G0) cells. The Ki-67 antigen is a human nuclear protein defined by its reactivity with monoclonal antibody from the Ki-67 clone. Two isoforms of 345 and 395 kDa have been identified by cDNA sequence coding. Deduced amino acid sequence analysis of the Ki-67 antigen confirmed that the cDNA encodes for a nuclear and short-lived protein without any significant homology to known sequences. The Ki-67 antigen is expressed at active phases of the cell cycle (G1, S, G2 and M phases), but it is absent in resting cells (G0 phase). The level of Ki-67 antigen expression varies during cell cycle and it has been correlated to several cell pathways: The Ki-67 decrease pathway is characterized by a declining Ki-67 staining and leads eventually to the exit from the active cell cycle (G0). If cells on this pathway get stimulated by growth factors, they can enter the Ki-67 increase pathway that brings the cells back into S phase. Cells following the Ki-67 stable pathway exhibit a constant intensity of Ki-67 staining during the G1 phase. This pathway is thought to correspond to optimal local growth conditions. The cellular localization of the Ki-67 protein is cell cycle phase dependent. During interphase, the antigen can be exclusively detected within the nucleus, whereas in M phase most of the protein is relocated to the surface of the chromosomes. The antigen is rapidly degraded as the cell enters the non proliferative state.



Lysed normal whole blood sample spiked with MOLT4 cell line

Clone: Ki-67

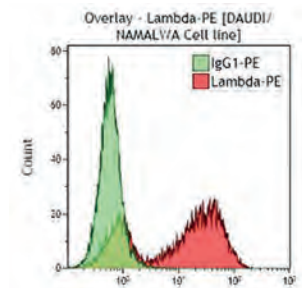
Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|--------|--------|--------|--------|--------|------------------|
| AF488 | 0.5 mL | Liquid | B68180 | ASR | IOTest | GMP |

NEW

λ Chain

The Lambda light chain of immunoglobulins is expressed at the surface of a cellular sub-population corresponding to approximately 1/3 of mature B lymphocytes in peripheral blood. This light chain is also found on the surface of a sub-population of immature bone marrow B lymphocytes.



DAUDI / NAMALWA Cell line.

Clone: Polyclonal

Isotype: Fab'2 Goat

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | C15189 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B90416 | ASR | IOTest | GMP |

Available first semester 2018

Available first semester 2018

Clone: Polyclonal

Isotype: F(ab')₂ Rabbit

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | B49174 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | A64827 | ASR | IOTest | GMP |

NEW

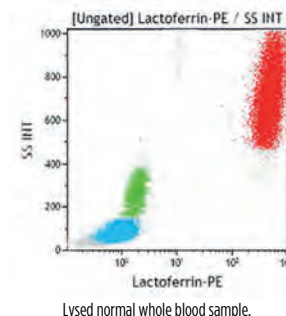
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



Lactoferrin

Lactoferrin is a 76 kDa single chain polypeptide with iron-binding property. This protein shows structural similarity to the plasma iron-transport protein transferrin. Lactoferrin is involved in various immuno-regulatory functions associated with anti-infective and inflammatory responses such as antibody synthesis, cytokine production, NK cell cytotoxicity, complement activation and lymphocyte proliferation. Lactoferrin synthesis occurs at the myelocytic stage during polymorphonuclear neutrophil (PMN) ontogeny and constitutes a component of secondary (or specific) granules. Unlike the myeloperoxidase, lactoferrin is absent from primary (or azurophilic) granules and appears later during maturation of the granulocytic lineage. Thus, in peripheral blood, intracellular lactoferrin expression is restricted to neutrophils.



Clone: CLB13.17

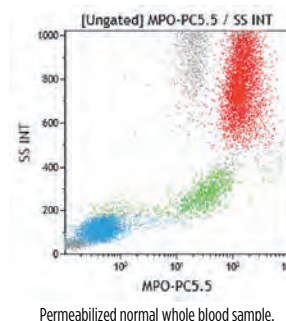
Isotype: IgG1 Mouse

The PE-conjugated CLB-13.17 antibody is optimized for flow cytometric detection of intracellular lactoferrin by flow cytometry after permeabilization with IntraPrep permeabilization reagent.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2742 | ASR | IOTest | GMP |

Myeloperoxidase

Myeloperoxidase (MPO) is a heterodimeric glycoprotein of 150 kDa with an $\alpha 2/\beta 2$ structure. The two subunits (α and β) have a molecular weight of 55 and 15 kDa, respectively. MPO synthesis occurs in bone marrow at an early stage of myeloid lineage differentiation. MPO is specifically expressed during promyelocytic formation, the stage at which azurophilic granules (or primary granules) are formed. MPO is still found in mature myeloid cells, becoming the major constituent of azurophilic granules of neutrophils. MPO is stored in polymorphonuclear neutrophilic granules and in macrophages, but it is not expressed in lymphocytes, platelets and erythrocytes. MPO catalyzes the formation of hypochlorous acid (HOCl) in the presence of active oxygen (H_2O_2). Intracellular MPO may also help to protect DNA against damage resulting from oxygen radicals produced during cell maturation and function.



Clone: CLB-MPO-1

Isotype: IgG2a Mouse

The CLB-MPO-1 antibody recognizes MPO and its enzymatically inactive form. This antibody can be used to detect intracytoplasmic myeloperoxidase in flow cytometry after permeabilization with IntraPrep permeabilization reagent.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|-----------|--------|---------|--------|--------|------------------|
| FITC | 100 tests | Liquid | IM1874 | CE | IOTest | 98/79/EC |
| FITC | 2 mL | Liquid | IM1874U | ASR | IOTest | GMP |
| PE | 100 tests | Liquid | B36288 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM3455U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | B23132 | ASR | IOTest | GMP |

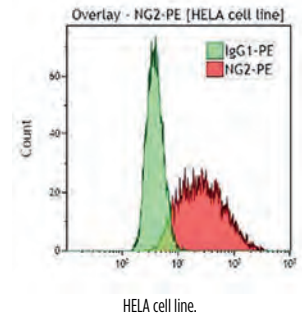
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



NG2 (7.1)

Human melanoma-associated chondroitin sulfate proteoglycan (MCSP), known as the homolog rat NG2 antigen, is a 250 kDa glycoprotein that is thought to play important roles in angiogenesis-dependent processes like wound healing and tumor growth. The core protein contains an open frame of 2322 amino acids encompassing a large extracellular domain, a hydrophobic transmembrane region and a relatively short cytoplasmic tail. This antigen is not expressed on normal hematopoietic cells but can be expressed on myeloid and lymphoid cell subsets with chromosomal modifications. It is also expressed on human glial cells. This antigen regulates signaling events that are important for both cell proliferation and cell migration through at least two distinct mechanisms: the focal adhesion kinase (FAK) and the extracellular signal-regulated kinases (ERK) 1/2.



Clone: 7.1

Isotype: IgG1 Mouse

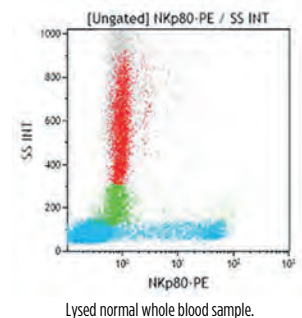
The 7.1 monoclonal antibody recognizes the human melanoma associated chondroitin sulfate proteoglycan molecule.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|----------------|--------|--------|------------------|
| PE | 100 tests | Liquid | B92429 | CE | IOTest | 98/79/EC |
| PE | 2 mL | Liquid | IM3454U | ASR | IOTest | GMP |

NEW

NKp80

The NKp80, also known as killer cell lectin-like subfamily F, member 1 (KLRF1) is a type II transmembrane glycoprotein of 80 kDa and 40 kDa under reducing conditions. It is expressed on NK cells and a subset of T lymphocytes whereas it is not expressed on B lymphocytes, monocytes and granulocytes. The NKp80 antigen is a 231 amino acid protein which belongs to the C-lectin family and is encoded by a gene located on chromosome 12. It is characterized, in its 169 amino acid extracellular domain by 4 glycosylation sites and by two tyrosine residues in its 39 amino acid cytoplasmic domain. The transmembrane domain contains 23 amino acids. The NKp80 molecule binds to the genetically linked receptor AICL which is up-regulated by Toll-like receptor stimulation. NKp80-AICL interaction regulates the immune responses at sites of inflammation by stimulating the release of proinflammatory cytokines.



Clone: MA152

Isotype: IgG1 Mouse

The monoclonal antibody MA152 recognizes NK cells, a subset of T lymphocytes. It does not react with NK92, NK3.3 and YT cell lines.

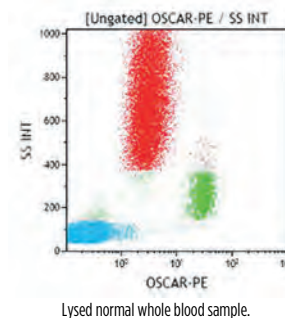
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------------|--------|--------|------------------|
| PE | 1 mL | Liquid | A52635 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

OSCAR

OSCAR, an abbreviation of osteoclast-associated receptor, is a new member of the leukocyte receptor complex. Human OSCAR is a cell-surface, monomeric N-glycosylated protein of approximately 45 kDa. The amino acid sequence shows homology with that of members of the KIR family. The protein exhibits two C2-type immunoglobulin extracellular domains, a transmembrane section that contains a positively charged arginine residue, and a short intracytoplasmic tail with no recognizable signaling motif. As suggested by the presence of the charged residue, OSCAR associates with the ITAM-adaptor FcR γ and not with other signaling molecules. The gene coding for OSCAR has been mapped to chromosome 19q13. Unlike mouse OSCAR, human OSCAR is widely expressed in cells of the myeloid lineage, and in particular, at all stages of dendritic cell (DC) differentiation and maturation. T cells, B cells, and NK cells do not express OSCAR. OSCAR is involved in antigen presentation and activation of human DCs. It allows processing and presentation of exogenous antigens.



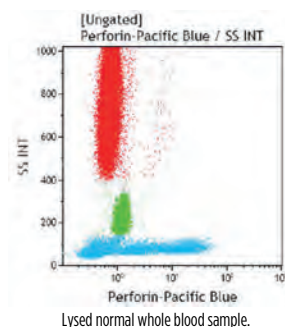
Clone: 11.1CN5

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|-----------|--------|--------|--------|--------|------------------|
| PE | 100 tests | Liquid | A24987 | RUO | IOTest | GMP |

Perforin

Perforin is a 70 kD N-glycosylated modified cytolytic protein. Following synthesis and post-translational modifications, perforin monomers are packaged into lysosome-like cytoplasmic granules of cytotoxic T lymphocytes (CTLs) and natural killer (NK) cells. Both types of cells kill their cellular targets by mechanisms that require direct contact between the effector and target cells. Cytoplasmic granule toxins, predominantly perforin, and a family of structurally related serine proteases (granzymes) with various substrate specificities are secreted by exocytosis and together induce apoptosis of the target cell. Perforin is one of the major effector molecules used by cytotoxic T cells and NK cells to mediate targeted cell lysis.



Clone: dG9

Isotype: IgG2b Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B46030 | ASR | IOTest | GMP |

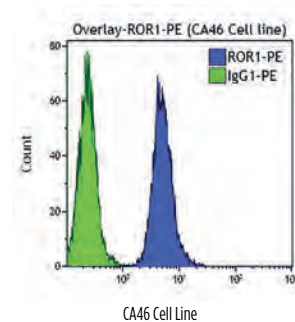
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies



ROR1

ROR1, the Receptor tyrosine kinase-like orphan receptor 1, is a member of the ROR receptor family consisting of two closely related type I transmembrane proteins ROR1 and ROR2. RORs are classified as pseudokinases lacking detectable catalytic activity. They are highly homologous in humans and mice. ROR1 and ROR2 are composed of a distinguished extracellular region with one immunoglobulin domain, one frizzled domain, and one kringle domain, followed by a transmembrane region and an intracellular region that contains a tyrosine kinase domain. ROR1 stands out for its selective and high expression in numerous blood and solid malignancies compared with a minimal expression in healthy adult tissues. Current understanding attributes a survival role for ROR1 in cancer cells; however, its oncogenic function is cancer-type-specific and involves various signaling pathways.



Clone: 2A2

Isotype: IgG1 Mouse

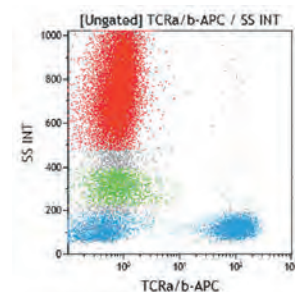
Epitope mapping studies showed that the 2A2 clone recognized N-terminal epitopes in the extracellular region of ROR1.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|---------------|--------|--------|------------------|
| PE | 1 mL | Liquid | B68136 | ASR | IOTest | GMP |

NEW

TCR PAN α/β

Human T cells recognize foreign antigens, in the context of host HLA molecules through the T-cell receptor for antigen (TcR). The TcRs are molecular complexes which comprise two units: a recognition unit, composed of either α - β or γ - δ heterodimer, which are present on the cell surface in a mutually exclusive manner, and, a transducing unit, the CD3 complex, common to α - β and γ - δ heterodimers, which triggers the T cell when the recognition unit is occupied by the antigen. The recognition units recognize any possible foreign antigen and the diversity necessary for this function of recognition is generated by somatic recombination the TcR genes. There are four TcR gene loci (α , β , γ and δ). Each of them is composed of several V (for variable) segments, coding for about 90 amino acids, very short D (for diversity) segments (α and δ loci only), and short J (for joining) segments (about 15 amino acids), and one or two C (for constant) segments.



Lysed normal whole blood sample.

Clone: IP26A

Isotype: IgG1 Mouse

The IP26A antibody recognizes a monomorphic determinant of the human α/β chain of the TcR complex.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|----------|--------|---------------|--------|--------|------------------|
| PE | 50 tests | Liquid | B49177 | CE | IOTest | 98/79/EC |
| PE | 1 mL | Liquid | A39499 | ASR | IOTest | GMP |
| PC5 | 0.5 mL | Liquid | A39500 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | B13981 | ASR | IOTest | GMP |

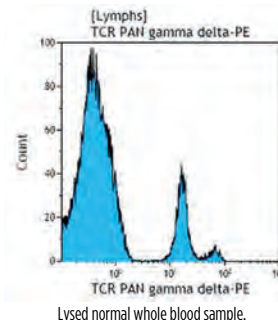
NEW

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Single-Color Conjugated Antibodies

TCR PAN γ/δ

The TCR is a molecular complex which comprises two units: a recognition unit, composed of either alpha-beta or gamma-delta heterodimer, which are present on the cell surface in a mutually exclusive manner, and, a transducing unit, the CD3 complex, common to alpha-beta and gamma-delta heterodimers, which triggers the T cell when the recognition unit is occupied by the antigen. The recognition unit recognizes foreign antigens and the diversity necessary for this function of recognition is generated by somatic recombination of the TCR genes. There are four TCR gene loci (alpha, beta, gamma and delta). Each of them is composed of several V (variable) segments, coding for about 90 amino acids, very short D (diversity) segments (alpha and delta loci only), and short J (joining) segments (about 15 amino acids), and one or two C (constant) segments. Most of T cells express the alpha/beta TCR (T cell receptor) protein and a small population of T cells expresses the gamma/delta TCR, which usually has a double negative (CD4/CD8) phenotype. Gamma/delta T-cells are normally the first line of defence at epidermal and epithelial surfaces and they represent 10-12% of lymphocytes in the spleen.



Clone: IMMU510

Isotype: IgG1 Mouse

The IMMU510 monoclonal antibody recognizes all γ/δ T cells, regardless of their variable chains. It stains 1.6% to 8.9% of peripheral CD3⁺ cells from healthy donors. In Western blot, it recognizes the δ chain in reducing conditions. It immunoprecipitates the three isoforms of the γ/δ T cell receptor. This antibody is suitable for immunohistochemistry on frozen sections. It has been used to study the distribution of γ/δ T cells and their functions.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|--------------|----------|--------------|----------------|--------|--------|------------------|
| FITC | 50 tests | Liquid | B49175 | CE | IOTest | 98/79/EC |
| FITC | 1 mL | Liquid | IM1571U | ASR | IOTest | GMP |
| PE | 50 tests | Liquid | B49176 | CE | IOTest | 98/79/EC |
| PE | 1 mL | Liquid | IM1418U | ASR | IOTest | GMP |
| PC5 | 50 tests | Liquid | IM2662 | CE | IOTest | 98/79/EC |
| PC5 | 0.5 mL | Liquid | IM2662U | ASR | IOTest | GMP |
| PC5.5 | 0.5 mL | Liquid | A99021 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | B10247 | ASR | IOTest | GMP |
| UNLB | 0.1 mg | Freeze-dried | IM1349 | RUO | - | GMP |

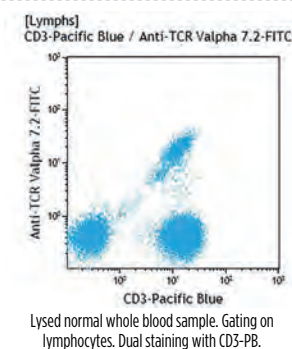
NEW

NEW

TCR V α 7.2

Also called TCRAV7S2 according to the nomenclature from Arden et al.

The iValpha7.2 segment in humans is an evolutionarily conserved invariant TCRalpha chain, expressed in mucosal associated invariant T (MAIT) cells, also called mNKT. MAIT cells are abundant in human blood (1-8% of T cells vs. 0.01-1% for NKT cells), the intestinal mucosa and mesenteric lymph nodes (MLN). MAIT cells are evolutionarily conserved innate-like T cells with anti-microbial properties. They are apparently also involved in non-infectious inflammatory disorders and in autoimmune inflammatory lesions. MAIT cells were found to specifically accumulate in the lamina propria (LP) of the intestine. This suggests that these cells may, in fact, be directed to microbial antigens presented by MR1 molecules, having a role of natural killer T cells (mNKT cells) in intestinal immunology. mNKT cells are a subset of non-conventional T cells recognizing endogenous and / or exogenous glycolipid antigens when presented by the major histocompatibility complex (MHC) class I-like antigen-presenting molecules CD1d and MR1. Upon T-cell receptor (TCR) engagement, mNKT cells can rapidly produce various cytokines that have important roles in mucosal immunity.



Clone: 3C10

Isotype: IgG1 Mouse

The monoclonal antibody 3C10 recognizes the Va7.2-Ja33 TCR α chain.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|----------|--------|---------------|--------|--------|------------------|
| FITC | 50 tests | Liquid | B90400 | RUO | IOTest | GMP |

NEW

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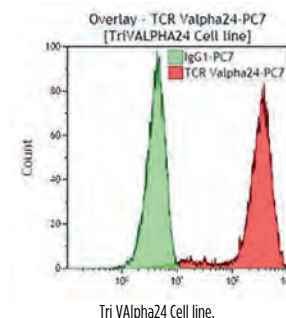
Single-Color Conjugated Antibodies



TCR V α 24

Also called TCRAV24S1 (according to the nomenclature from Arden et al.)

V α 24 is the only described member of the subfamily of the T cell receptor. It has been shown to be expanded in a clonal fashion in the CD3+ CD8- CD4- cell population in PBL of several donors. It is expressed by 0.4% to 1% of peripheral CD3+ cells from normal blood. An invariant V α 24/V β 11 T cell receptor is expressed in all individuals by clonally expanded CD4- CD8- T cells, reactive to bacterial antigens. This unique lymphocyte population restricted by the CD1d molecule recognition has been identified as the natural killer T (NKT) cells. The IGRa02 sequence is also referred to as TRAV10 (based on the IMGT gene nomenclature).



Clone: C15

Isotype: IgG1 Mouse

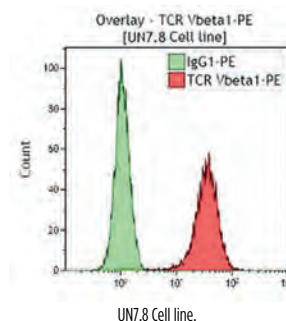
The C15 antibody recognizes the IGRa02 sequence, the only described member of this family.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1589 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2283 | ASR | IOTest | GMP |
| PC7 | 0.5 mL | Liquid | A66907 | ASR | IOTest | GMP |

TCR V β 1

Also called TCRBV1S1 and S2

V β 1 is the human variable β 1 chain of the T cell receptor. It is expressed by approximately 6% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV9 (based on the IMGT gene nomenclature).



Clone: BL37.2

Isotype: IgG1 Rat

The BL37.2 antibody recognizes both V β 1.1 and V β 1.2 allele products (HBVT73 cDNA and 46W/Q cDNA, respectively). None of the other V β specific antibodies from the TCR Workshop (San Francisco, CA, 1995) gave significant staining on the sorted cell lines.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM2406 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2355 | ASR | IOTest | GMP |

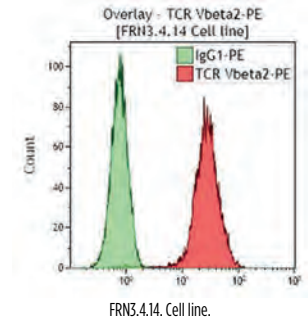
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

TCR V β 2

Also called TCRBV2S1

V β 2 is the human variable β 2 chain of the T cell receptor. It is expressed by 10% of peripheral CD3+ cells in normal blood. V β 2 is the target of Toxic Shock Syndrome Toxin 1 (TSST1). This sequence is also referred to as TRBV20-1 (based on the IMGT gene nomenclature).



Clone: MPB2D5

Isotype: IgG1 Mouse

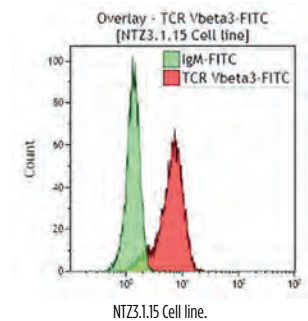
The MPB2D5 antibody recognizes all the members (Molt4 identical to PL2.13, PH34 and TCRVBV2S13 sequences) of the V β 2 subfamily that are in fact alleles.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM2407 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2213 | ASR | IOTest | GMP |

TCR V β 3

Also called TCRBV3S1

V β 3 is the human variable β 3 chain of the T cell receptor. V β 3 is the target of Staphylococcal Enterotoxin B (SEB) superantigen. This sequence is also referred to as TRBV28 (based on the IMGT gene nomenclature).



Clone: CH92

Isotype: IgM Mouse

The CH92 antibody recognizes the unique member of the V β 3 subfamily (PL4.4 identical to HBVT22 sequences). CH92 antibody recognizes the major subset of V β 3 cells.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM2372 | ASR | IOTest | GMP |

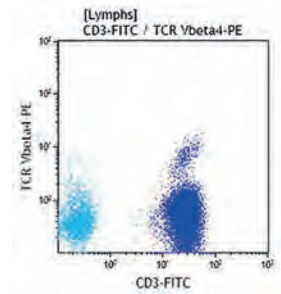
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

TCR V β 4

Also called TCRBV4

V β 4 is the human variable β 4 chain of the T cell receptor. It is expressed by 0.8% to 3.3% (mean 1.9%) of peripheral CD3-positive lymphocytes in normal blood. This sequence is also referred to as TRBV29-1 (based on the IMGT gene nomenclature).



Lysed normal whole blood sample. Gating on lymphocytes. Dual staining with CD3-FITC

Clone: WJF24

Isotype: IgM Rat

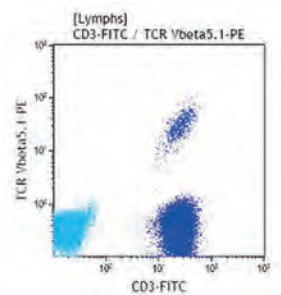
The WJF24 antibody recognizes the V β allele product.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | B07084 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM3602 | ASR | IOTest | GMP |

TCR V β 5.1

Also called TCRBV5S1

V β 5 is a multimembered subfamily of the T cell receptor. V β 5.1 is expressed by 4.2% to 7.2% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV5-1 (based on the IMGT gene nomenclature).



Lysed normal whole blood sample. Gating on lymphocytes. Dual staining with CD3-FITC.

Clone: IMMU 157

Isotype: IgG2a Mouse

Immu157 recognizes the V β 5.1 (HBP51 sequence) member of this subfamily. V β 5.2 and V β 5.3 (PL25 and 12A1 sequences) are not recognized. Recognition of other members of the V β 5 subfamily has not been found, but cannot be formally excluded.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1552 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2285 | ASR | IOTest | GMP |

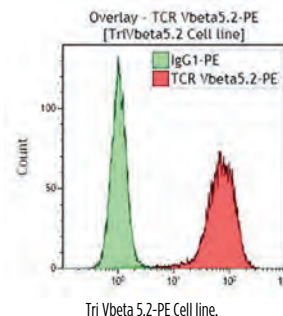
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

TCR Vβ5.2

Also called TCRBV5S2

Vβ5 is a multimembered subfamily of the T cell receptor. Vβ5.2 is expressed by 0.5% to 1.5% (mean 0.8%) of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV5-6 (based on the IMGT gene nomenclature).



Clone: 36213

Isotype: IgG1 Mouse

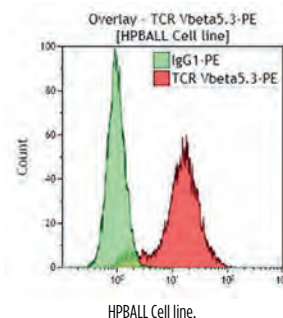
The 36213 antibody recognizes the PL25 sequence. Vβ5.1 (HBP51 sequence) and Vβ5.3 (IGRb08 sequence) are not recognized. Recognition of other members of the Vβ5 subfamily has not been found, but cannot be formally excluded.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1482 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2286 | ASR | IOTest | GMP |

TCR Vβ5.3

Also called TCRBV5S3

Vβ5 is a multimembered subfamily of the T cell receptor. Vβ5.3 is expressed by 1% to 1.8% (mean 1.4%) of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV5-5 (based on the IMGT gene nomenclature).



Clone: 3D11

Isotype: IgG1 Mouse

The 3D11 antibody recognizes the IGRb08 sequence. Vβ5.1 and Vβ5.2 (HPB51 and PL25 sequences) are not recognized. Reactivity on other members of the Vβ5 subfamily has not been found, but cannot be formally excluded.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------|------|--------|---------------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM2002 | ASR | IOTest | GMP |

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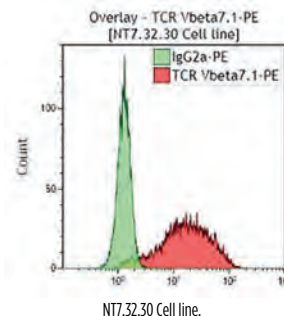
Single-Color Conjugated Antibodies



TCR Vβ7.1

Also called TCRBV7S1

Vβ7 is a multimembered subfamily of the T cell receptor. Vβ7.1 is expressed by 1.5% to 2.4% of CD3+ cells in normal blood. This sequence is also referred to as TRBV4-1, TRBV4-2, TRBV4-3 (based on the IMGT gene nomenclature).



Clone: ZOE

Isotype: IgG2a Mouse

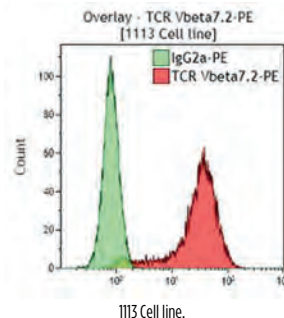
The ZOE antibody recognizes Vβ7.1 (PL4.9 sequence). It does not react with Vβ7.2, but the reactivity on other Vβ7 members like Vβ7.3 (HT267.2 sequence) has not been found, but cannot be formally excluded.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM2408 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2287 | ASR | IOTest | GMP |

TCR Vβ7.2

Also called TCRBV7S2

Vβ7 is a multimembered subfamily of the T cell receptor. Vβ7.2 is expressed by 0% (Vβ7.2 del. /Vβ7.2 del. haplotypes) to 5.5% (mean 1.5%) of peripheral CD3-positive lymphocytes in normal blood.



Clone: ZIZOU4

Isotype: IgG2a Mouse

The ZIZOU4 antibody recognizes the human TCR Vβ7.2 allele product. A genetically determined insertion/deletion-related polymorphism of the TCRB locus, including the functional Vβ7.2 variable gene segment, has been described. Thus, the expression of the Vβ7.2 allele product may not be expressed in some individuals (Vβ7.2 deleted/Vβ7.2 deleted haplotypes).

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | B06666 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM3604 | ASR | IOTest | GMP |

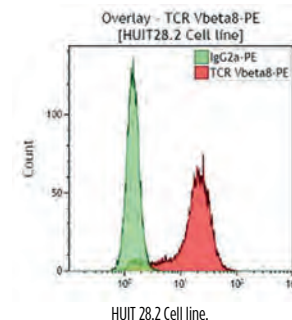
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Single-Color Conjugated Antibodies

TCR V β 8

Also called TCRBV8S1 and S2

V β 8 is the human variable β 8 chain of the T cell receptor. It is expressed by 2.6% to 5.1% of peripheral CD3+ cells in normal blood. V β 8 is the target of Staphylococcal Enterotoxin E (SEE). This sequence is also referred to as TRBV12-3, TRBV12-4 (based on the IMGT gene nomenclature).



Clone: 56C5.2

Isotype: IgG2a Mouse

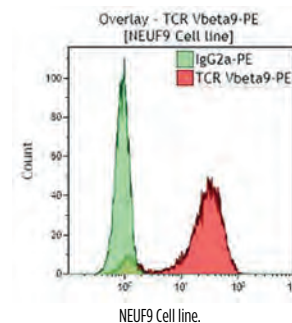
The 56C5.2 antibody recognizes V β 8.1 and V β 8.2 (YT35 and PL3.3 sequences). Other V β 8 sequences are believed to be pseudogenes.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1233 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2289 | ASR | IOTest | GMP |

TCR V β 9

Also called TCRBV9S1

V β 9 is the human variable β 9 chain of the T cell receptor. There is only one functional member of this T cell receptor subfamily (IGRb20 sequence, identical to sequence PL2.6). It is expressed by 1.6% to 3.2% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV3-1 (based on the IMGT gene nomenclature).



Clone: FIN9

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-----------|------|--------|---------------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM2003 | ASR | IOTest | GMP |

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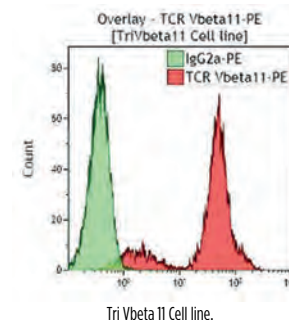
Single-Color Conjugated Antibodies



TCR Vβ11

Also called TCRBV11S1

Vβ11 is the human variable β11 chain of the T cell receptor. Two Vβ11 sequences are described, PL3.12 and PH15. These sequences differ only in their leader sequence and therefore lead to the same mature protein. An invariant Vα24/Vβ11 T cell receptor is expressed in all individuals by clonal expanded CD4⁻ CD8⁻ T cells, reactive to bacterial antigens. This unique lymphocyte population restricted by the CD1d molecule recognition has been identified as the natural killer T (NKT) cells. Vβ11 is expressed by 0.4% to 0.9% of peripheral CD3⁺ cells in normal blood. This sequence is also referred to as TRBV25-1 (based on the IMGT gene nomenclature).



Clone: C21

Isotype: IgG2a Mouse

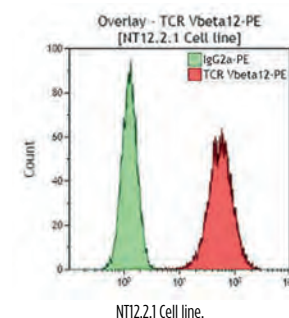
The C21 recognizes the gene product of PL3.12 and PH15 sequences. The specificity of this antibody has been confirmed at the First Human TcR Monoclonal Antibody Workshop in San Francisco in 1995.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|--------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1586 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2290 | ASR | IOTest | GMP |
| APC | 0.5 mL | Liquid | A66905 | ASR | IOTest | GMP |

TCR Vβ12

Also called TCRBV12S1

Vβ12 is a family of the T cell receptor. It is expressed by 1.1% to 1.9% of peripheral CD3⁺ cells in normal blood. This sequence is also referred to as TRBV10-3 (based on the IMGT gene nomenclature).



Clone: VER2.32.1

Isotype: IgG2a Mouse

The VER2.32.1 monoclonal antibody recognizes HBP54 identical to PH27 sequence often referred to as Vβ12.2. The reactivity of the other members of this family (PL4.2 sequence) and other recently described Vβ12 genes (HT96 sequence) has not been found but cannot be formally excluded.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1587 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2291 | ASR | IOTest | GMP |

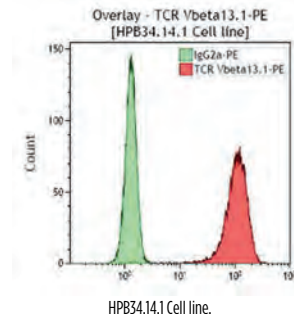
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

TCR Vβ13.1

Also called TCRBV13S1

Vβ13 is a complex subfamily of the T cell receptor. Vβ13.1 is expressed by 1.8% to 3.3% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV6-5, TRBV6-6, TRBV6-9 (based on the IMGT gene nomenclature).



Clone: IMMU 222

Isotype: IgG2b Mouse

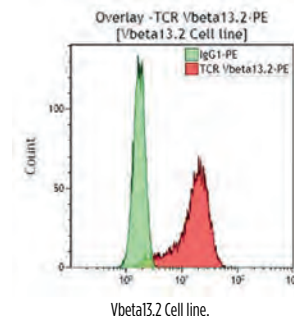
The IMMU 222 antibody recognizes Vβ13.1 member (HBP34 sequence). Vβ13.3 (IGRb14 sequence) is not recognized. Reactivity with other members of this subfamily has not been found, but cannot be formally excluded. It has been recently shown that Immu 222 can recognize the Vβ13.4 and Vβ13.6 (IGRb16 sequence) subsets.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1554 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2292 | ASR | IOTest | GMP |

TCR Vβ13.2

Also called TCRBV13S2

Vβ13 is a complex subfamily of the T cell receptor. Vβ13.2 is expressed by 0.8% to 5.3% (mean 2.8%) of peripheral CD3-positive lymphocytes in normal blood.



Clone: H132

Isotype: IgG1 Mouse

The antibody H132 recognizes the Vβ13.2 allele product, but does not react with the Vβ3.1, 13.3, 13.5 and 13.6 allele products of the Vβ13 subfamily. The specificity of this antibody has been confirmed at the Human TCR Workshop in San Francisco, CA, in 1995.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM3603 | ASR | IOTest | GMP |

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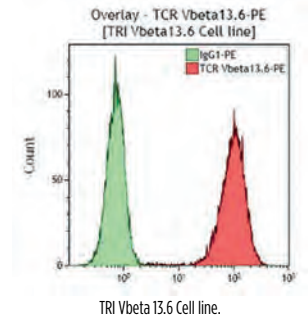
Single-Color Conjugated Antibodies



TCR Vβ13.6

Also called TCRBV13S6

Vβ13 is a complex subfamily of the T cell receptor. Vβ13.6 is expressed by 0.9% to 1.9% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV6-6 (based on the IMGT gene nomenclature).



Clone: JU74.3

Isotype: IgG1 Mouse

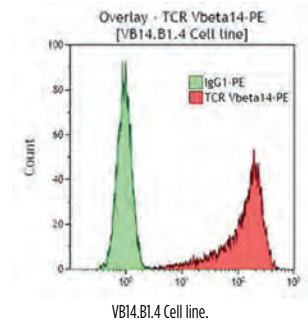
The JU74.3 antibody recognizes the Vβ13.6 sequence (IGRb16 sequence). Vβ13.1 (HBP34 sequence) is not recognized. The reactivity of the other members of this complex subfamily has not been found, but cannot be formally excluded.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1330 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | B07225 | ASR | IOTest | GMP |

TCR Vβ14

Also called TCRBV14S1

Vβ14 is a single member subfamily (PL8.1 sequence identical to PH21 sequence). It is expressed by 2.2% to 5.6% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV27 (based on the IMGT gene nomenclature).



Clone: CAS1.13

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1558 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2047 | ASR | IOTest | GMP |

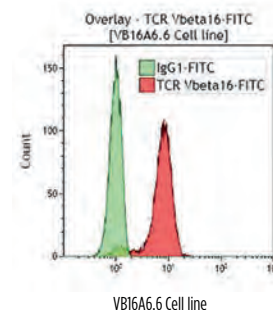
If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

TCR Vβ16

Also called TCRBV16S1

Vβ16 is a single member subfamily (HBP42 sequence identical to HT370 sequence). It is expressed by 0.4% to 1.1% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV14 (based on the IMGT gene nomenclature).



Clone: TAMAYA1.2

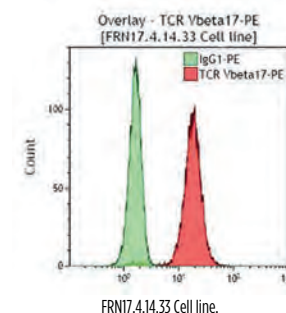
Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1560 | ASR | IOTest | GMP |

TCR Vβ17

Also called TCRBV17S1

Vβ17 is a single member subfamily (HBVT02 sequence). It is expressed by 3.3% to 7% of peripheral CD3+ cells in normal blood. Vβ17 is the target of Mycoplasma Arthritis Superantigen (MAS) and Staphylococcal Enterotoxin B (SEB). This sequence is also referred to as TRBV19 (based on the IMGT gene nomenclature).



Clone: E17.5F3.15.13

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1234 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2048 | ASR | IOTest | GMP |

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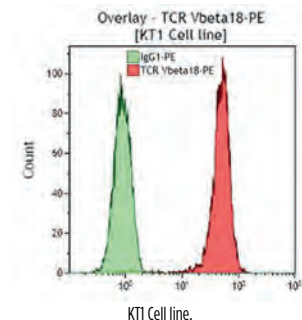
Single-Color Conjugated Antibodies



TCR Vβ18

Also called TCRBV18S1

Vβ18 is a single member subfamily (PH29 sequence identical to the HBVT56 sequence). It is expressed by 0.7% to 1.4% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV18 (based on the IMGT gene nomenclature).



Clone: BA62.6

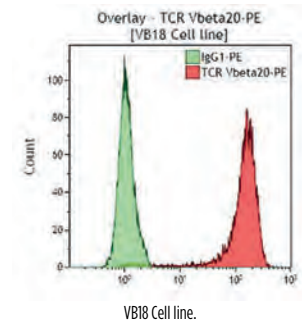
Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM2049 | ASR | IOTest | GMP |

TCR Vβ20

Also called TCRBV20S1

Vβ20 is a single member subfamily (HUT102 sequence) of the T cell receptor. Two alleles have been identified for this sequence. One of them is a frequent null allele (frequency estimated at 11%). No cells are stained on PBL from certain specimens whereas around 2.4% is expected for specimens expressing the functional allele. This sequence is also referred to as TRBV30 (based on the IMGT gene nomenclature).



Clone: ELL1.4

Isotype: IgG2a Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1562 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2295 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

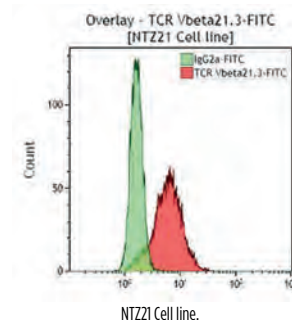
Single-Color Conjugated Antibodies



TCR Vβ21.3

Also called TCRBV21S3

Vβ21 is a subfamily of the T cell receptor. The Vβ21.3 is expressed by 2.2% to 3.6% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV11-2 (based on the IMGT gene nomenclature).



Clone: IG125

Isotype: IgG2a Mouse

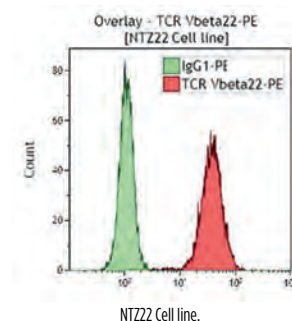
The IG125 antibody recognizes the IGRb01 sequence identical to TCR BV21.3 sequence. Recognition of other sequences within this subfamily has not been found, but cannot be formally excluded.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1483 | ASR | IOTest | GMP |

TCR Vβ22

Also called TCRBV22S1

Vβ22 is a subfamily of the T cell receptor. The Vβ22 is expressed by 2.4% to 5.1% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV2 (based on the IMGT gene nomenclature).



Clone: IMMU 546

Isotype: IgG1 Mouse

The IMMU 546 antibody recognizes the IGRb03 sequence. Another gene has been described for this family which differs by only one amino acid and may represent an allelic variant. Recognition of this sequence is likely, but has not been formally proven yet.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------------|------|--------|---------------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1484 | ASR | IOTest | GMP |
| PE | 1 mL | Liquid | IM2051 | ASR | IOTest | GMP |

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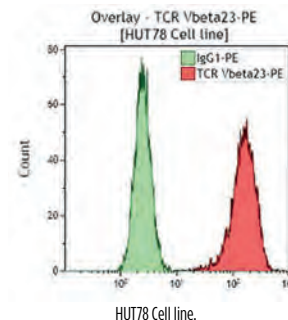
Single-Color Conjugated Antibodies



TCR Vβ23

Also called TCRBV23S1

Vβ23 is a family with a single member (IGRb04 sequence). Vβ23 is expressed on the HUT78 and H9 cell lines, which is frequently used to grow HIV. It is expressed by 0.4% to 5% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV13 (based on the IMGT gene nomenclature).



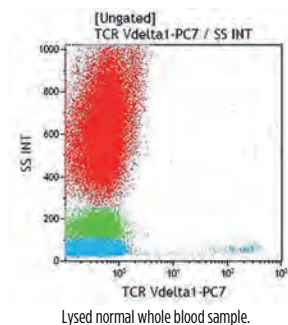
Clone: AF23

Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 1 mL | Liquid | IM2004 | ASR | IOTest | GMP |

TCR Vδ1

Vδ1 is a variable segment of the γδ T cell receptor. Vδ1 is rearranged on both Cα and Cδ and is expressed in these two cell types. Vδ1+ γδ+ cells are the major T cell population at birth and are over expressed in intestinal intraepithelial lymphocytes. This sequence is also referred to as TRDV1 (based on the IMGT gene nomenclature).



Clone: R9.12

Isotype: IgG1 Mouse

R9.12 reacts only with γδ+ Vδ1+ cells and not with αβ+ Vδ1+ cells.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------------|--------|--------|--------|------------------|
| PC7 | 0.5 mL | Liquid | B49309 | ASR | IOTest | GMP |
| UNLB | 0.1 mg | Freeze-dried | IM1761 | RUO | - | GMP |

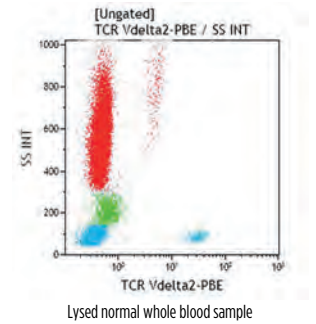
NEW

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Single-Color Conjugated Antibodies

TCR Vδ2

Vδ2 is the human variable δ2 gene of the γδ T cell receptor. Vδ2+ T cells are the main population of the circulating γδ T cells. It is expressed by 0.5% to 10% of PBL in normal blood, representing around 70% of the peripheral γδ T cells. Vδ2 is mostly associated with Vγ9. This sequence is also referred to as TRDV2 (based on the IMGT gene nomenclature).



Clone: IMMU 389

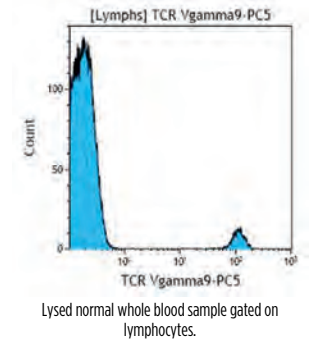
Isotype: IgG1 Mouse

The IMMU 389 antibody gives excellent results in immunofluorescence and frozen sections. It also works in Western blot. It recognizes the γδ complex from the Vδ2+ T cell receptor (non reducing conditions), and the isolated δ chain under reducing conditions. It immunoprecipitates the γδ complex of Vδ2+ T cell clones.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| PB | 0.5 mL | Liquid | B49310 | ASR | IOTest | GMP |
| FITC | 1 mL | Liquid | IM1464 | ASR | IOTest | GMP |

TCR Vγ9

Vγ9 is the only functional member of the group II γ variable genes of the γδ T cell receptor. It is expressed by 0.5% to 10% of PBL in normal blood, representing around 70% of circulating γδ+ T cells. Therefore, Vγ9 positive cells are the major population of circulating γδ T cells. Vγ9 is mainly associated with Vδ2. The combination Vγ9-Vδ2 γδ T cell seems to recognize mycobacterial antigens. This sequence is also referred to as TRGV9 (based on the IMGT gene nomenclature).



Clone: IMMU 360

Isotype: IgG1 Mouse

IMMU 360 may be used in flow cytometry, immunoprecipitation, Western blot and immunohistochemistry techniques.

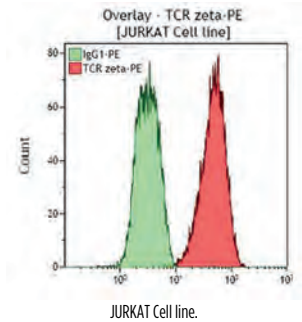
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------|--------|--------|--------|------------------|
| FITC | 1 mL | Liquid | IM1463 | ASR | IOTest | GMP |
| PC5 | 0.5 mL | Liquid | A63663 | ASR | IOTest | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

TCR ζ

The ζ subunit is a 16 kDa surface molecule associated with the T cell receptor. Its expression is restricted to T lymphocytes and NK cells. In T lymphocytes, the ζ subunit is expressed as a disulfide-linked homodimer of 32 kDa or as a disulfide-linked heterodimer with a 21 kDa subunit designated η . Both of these dimeric species are non-covalently associated with the remaining subunits of the CD3-TCR-antigen receptor complex. In NK cells, the ζ subunit is expressed as a disulfide-linked homodimer of 32 kDa or as a disulfide-linked heterodimer with a 12 kDa subunit. It is associated with the CD16 molecule (Fc γ R111).



Clone: 2H2D9 (TIA-2)

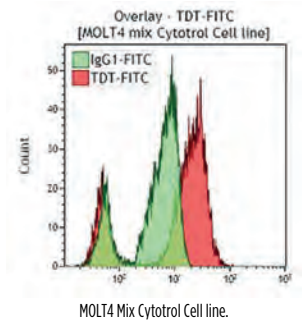
Isotype: IgG1 Mouse

The 2H2D9 (TIA-2) antibody recognizes a cytoplasmic epitope of the ζ subunit of the T lymphocyte receptor complex. It is suitable for immunoprecipitation, immunoblotting, and flow cytometric analysis of permeabilized cells. The TIA-2 antibody was evaluated during the Fifth International Workshop on Human Leukocyte Differentiation Antigens. TIA-2 antibody can be used to detect intracytoplasmic TCR- ζ in flow cytometry after permeabilization with digitonin.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM3169 | ASR | IOTest | GMP |

TdT

Terminal deoxynucleotidyl transferase (TdT) is a nuclear enzyme with a molecular weight of 58 kDa. This molecule catalyses random addition of nucleotides on the 3' OH termini of single-stranded DNA. TdT differs from other DNA polymerases because it does not require a template sequence for polymerization. TdT is mainly expressed during the maturation of the immune system in primary and secondary lymphoid organ cells: i.e. precursors of B lymphocytes in the bone marrow and precursors of T-lymphocytes in the thymus. The TdT expression is not found in myeloid, erythroid, or megakaryocytic precursors, or in other non lymphoid cell components in every tissue, including mesenchymal, epithelial, and germ cells.



Clone: HT1 + HT4 + HT8 + HT9

Isotype: IgG Mouse

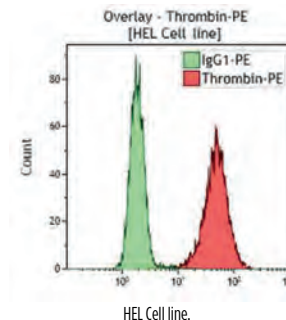
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|----------|--------|---------|--------|------|------------------|
| FITC | 50 tests | Liquid | IM3524 | CE | - | 98/79/EC |
| FITC | 1 mL | Liquid | IM3524U | ASR | - | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

Thrombin receptor

Thrombin is a coagulation protease produced at sites of vascular injury that activates platelets, endothelial cells, leukocytes and mesenchymal cells via cleavage of specific cell surface receptors known as proteinase activated receptors (PARs). A functional thrombin receptor from human platelets has been cloned and sequenced. It is a 66-kDa, single polypeptide chain that belongs to the cell surface G-protein-coupled receptor family, with seven transmembrane domains and an extracellular N terminus. The thrombin cleavage site is located in the N terminus between Arg41 and Ser42. Following cleavage by thrombin, activated receptors undergo desensitization and internalization but a fraction of them are recycled to the cell surface. The Thrombin Receptor is expressed on a variety of cells including platelets and endothelium. The receptor is a substrate of thrombin and has been shown to play a role in the activation of platelets.



Clone: SPAN 12

Isotype: IgG1 Mouse

The SPAN 12 antibody recognizes an epitope on the receptor that spans the thrombin cleavage site. It binds to intact receptors, but not to cleaved ones. SPAN 12 inhibits thrombin-induced receptor activation at reduced thrombin concentrations.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2583 | ASR | IOTest | GMP |

Clone: WEDE15

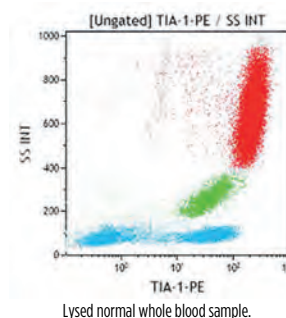
Isotype: IgG1 Mouse

The WEDE15 antibody recognizes an epitope on the receptor, distant from the N-terminal thrombin cleavage site (WEDEE). It reacts with both intact and cleaved receptors.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|------|--------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM2584 | ASR | IOTest | GMP |

TIA-1

The T cell intracellular antigen 1 (TIA-1) is a 17 kDa cytoplasmic granule-associated protein, expressed in cells possessing cytolytic potential. TIA-1 is also designated as GMP-17 (granule membrane protein of 17 kDa). The GMP-17/TIA-1 molecule could be involved in the molecular signaling cascade during Fas (CD95)-mediated apoptosis. In normal peripheral blood lymphocytes, TIA-1 is expressed by 90% of CD16+, 50-60% of CD8+, and less than 10% of CD4+ cells. Although TIA-1 may be detected in unstimulated T lymphocytes, activated T lymphocytes are induced to express disulfide linked polymers of the 17 kDa protein, also recognized by TIA-1. TIA-1 is expressed by all monocytes and granulocytes, by activated CD4+ T-cell clones and activated natural killer cell clones, and by Con A-activated thymocytes. On the contrary, TIA-1 is not expressed by B lymphocytes or B-cell lines.



Clone: 2G9A10F5

Isotype: IgG1 Mouse

The 2G9 antibody is a useful reagent for detecting cytolytic effector cells in tissue infiltrates. It was evaluated during HLDA 5 in the section of monoclonal antibodies reactive with intracellular antigens. It may be used to detect intracytoplasmic TIA-1 in flow cytometry after permeabilization with IntraPrep permeabilization reagent.

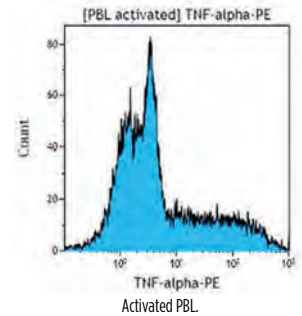
| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|--------|--------------|--------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM3293 | ASR | IOTest | GMP |
| UNLB | 0.2 mg | Freeze-dried | IM2550 | ASR | - | GMP |

If you require a different antibody fluorochrome combination, please refer to the Custom Design Services on page 14 or contact us via cds.support@beckman.com

Single-Color Conjugated Antibodies

TNF α

Tumor necrosis factor α (TNF α) or cachectin is a cytokine that was first identified based on its cytotoxic activity against various cell lines and tumor cells. Human TNF α is synthesized as a pro-protein with a molecular weight of 26 kDa (membrane-bound form). The pro-protein is cleaved by a specific metalloprotease (TACE) yielding a monomeric, soluble form of 17 kDa. Under physiological conditions, TNF α forms a homotrimeric protein. This cytokine is primarily produced by mononuclear phagocytes, and by activated lymphocytes. Immunostaining allows intracellular detection of TNF α before it can be detected by a bioassay. TNF α acts on target cells by binding to two types of receptors, the TNF α receptor I (TNF-R1 or CD120a) and the TNF α receptor II (TNF-RII or CD120b). TNF α elicits a wide spectrum of immune and inflammatory responses, including the induction of other cytokines and immunoregulatory molecules, cell growth and differentiation and apoptosis. This molecule is also involved in Th1 - Th2 (T helper 1 - T helper 2) cytokine pathways (or Type 1 - Type 2 responses), as a Th1-effector cytokine.



Clone: IPM2 (188)

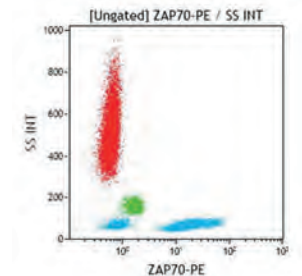
Isotype: IgG1 Mouse

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|-------|--------|--------|---------|--------|--------|------------------|
| PE | 2 mL | Liquid | IM3279U | ASR | IOTest | GMP |
| AF700 | 0.5 mL | Liquid | B76295 | ASR | IOTest | GMP |

NEW

ZAP-70

Zap-70, a Syk family protein tyrosine kinase expressed in T and NK cells, plays a critical role in mediating T cell activation in response to T cell receptor (TCR) engagement. Following TCR engagement, Zap-70 is rapidly phosphorylated on several tyrosine residues, presumably by two mechanisms: autophosphorylation and transphosphorylation by the Src family tyrosine kinase, Lck. Tyrosine phosphorylation of Zap-70 correlates with its increased kinase activity and downstream signaling events.



Lysed normal whole blood sample.

Clone: SBZAP

Isotype: IgG1 Mouse

The monoclonal antibody SBZAP was generated against a KLH-peptide sequence corresponding to the human ZAP-70 amino acid residues 280-309.

| Form | Size | Format | Part# | Status | Line | Quality Standard |
|------|----------|--------|--------|--------|--------|------------------|
| PE | 50 tests | Liquid | B57658 | RUO | IOTest | GMP |
| UNLB | 50 tests | Liquid | B10739 | RUO | - | GMP |

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Isotype Controls

IgG1 Mouse

| <i>Form</i> | <i>Size</i> | <i>Format</i> | <i>Line</i> | <i>Status</i> | <i>Part #</i> |
|-----------------|-------------|---------------|---------------|---------------|----------------|
| PB | 1 mL | Liquid | IOTest | ASR | A74766 |
| PB | 100 tests | Liquid | IOTest | CE | A74764 |
| KrO | 1 mL | Liquid | IOTest | ASR | A96415 |
| FITC | 2 mL | Liquid | IOTest | ASR | IM0639U |
| FITC | 100 tests | Liquid | IOTest | CE | A07795 |
| FITC | 50 tests | Liquid | CYTO-STAT | IVD & CE | 6603864 |
| FITC | 100 tests | Freeze-dried | COULTER CLONE | IVD & CE | 6602928 |
| PE | 2 mL | Liquid | IOTest | ASR | IM0670U |
| PE | 100 tests | Liquid | IOTest | CE | A07796 |
| RD1 | 100 tests | Liquid | COULTER CLONE | IVD & CE | 6602884 |
| ECD | 1 mL | Liquid | IOTest | ASR | IM2714U |
| ECD | 100 tests | Liquid | IOTest | CE | A07797 |
| ECD | 50 tests | Liquid | CYTO-STAT | RUO | 6604548 |
| PC5 | 1 mL | Liquid | IOTest | ASR | IM2663U |
| PC5 | 100 tests | Liquid | IOTest | CE | A07798 |
| PC5 | 50 tests | Liquid | CYTO-STAT | RUO | 6607012 |
| PC5.5 | 100 tests | Liquid | IOTest | CE | A62833 |
| PC5.5 | 1 mL | Liquid | IOTest | ASR | A62834 |
| PC7 | 100 tests | Liquid | IOTest | RUO | 6607099 |
| PC7 | 100 tests | Liquid | IOTest | CE | 737662 |
| APC | 100 tests | Liquid | IOTest | CE | IM2475 |
| APC | 1 mL | Liquid | IOTest | ASR | IM2475U |
| APC-A700 | 1 mL | Liquid | IOTest | ASR | A71118 |
| APC-A700 | 100 tests | Liquid | IOTest | CE | A79391 |
| APC-A750 | 1 mL | Liquid | IOTest | ASR | A71120 |
| APC-A750 | 100 tests | Liquid | IOTest | CE | A79393 |

IgG2a Mouse

| <i>Form</i> | <i>Size</i> | <i>Format</i> | <i>Line</i> | <i>Status</i> | <i>Part #</i> |
|-------------|-------------|---------------|-------------|---------------|----------------|
| FITC | 2 mL | Liquid | IOTest | ASR | A12690 |
| FITC | 100 tests | Liquid | IOTest | CE | A12689 |
| FITC | 50 tests | Liquid | CYTO-STAT | IVD & CE | 6603855 |
| PE | 2 mL | Liquid | IOTest | ASR | A09141 |
| PE | 100 tests | Liquid | IOTest | CE | A09142 |
| RD1 | 50 tests | Liquid | CYTO-STAT | IVD & CE | 6604119 |
| ECD | 1 mL | Liquid | IOTest | ASR | A09144 |
| PC5 | 1 mL | Liquid | IOTest | ASR | A09147 |
| PC5 | 100 tests | Liquid | IOTest | CE | A09148 |
| PC7 | 1 mL | Liquid | IOTest | ASR | A12692 |
| APC | 1 mL | Liquid | IOTest | ASR | A12694 |
| APC | 100 tests | Liquid | IOTest | CE | A12693 |

Isotype Controls



IgG2b Mouse

| <i>Form</i> | <i>Size</i> | <i>Format</i> | <i>Line</i> | <i>Status</i> | <i>Part #</i> |
|-------------|-------------|---------------|-------------|---------------|----------------|
| FITC | 50 tests | Liquid | CYTO-STAT | IVD & CE | 6603853 |
| RD1 | 0.5 mL | Liquid | CYTO-STAT | ASR | 6603852 |
| ECD | 0.5 mL | Liquid | CYTO-STAT | ASR | 6604700 |

IgM Mouse

| <i>Form</i> | <i>Size</i> | <i>Format</i> | <i>Line</i> | <i>Status</i> | <i>Part #</i> |
|-------------|-------------|---------------|-------------|---------------|----------------|
| FITC | 2 mL | Liquid | IOTest | ASR | IM1269U |
| UNLB | 100 tests | Liquid | - | RUO | IM1268 |

Table of Multi-Color Antibody Cocktails

| Specificity | FITC | PE / RD1 | ECD | PC5 | PC5.5 | PC7 | Part Number | | | | Page |
|----------------|-----------|-----------|------|------|-------|-----|----------------|----------------|---------------|----------------|----------------------|
| | | | | | | | RUO | ASR | CE | IVD & CE | |
| CD2 | | | | | | | | | | | |
| 2-color | | | | | | | | | | | |
| | CD2 | CD7 | - | - | - | - | | 6604239 | | | 158 |
| | CD2 | CD19 | - | - | - | - | M1289U | | | | 160 |
| | CD19 | CD2 | - | - | - | - | | | | 6603801 | 159 |
| CD3 | | | | | | | | | | | |
| 4-color | | | | | | | | | | | |
| | CD45 | CD4 | CD8 | CD3 | - | - | | | | 6607013 | 157, 197, 198 |
| | CD45 | CD56 | CD19 | CD3 | - | - | | | | 6607073 | 157, 197, 198 |
| 3-color | | | | | | | | | | | |
| | CD3 | CD4 | - | CD45 | - | - | M651 | | | | 166 |
| | CD3 | CD8 | - | CD45 | - | - | M670 | | | | 166 |
| | CD3 | CD19 | - | CD45 | - | - | M671 | | | | 166 |
| | CD4 | CD8 | - | CD3 | - | - | M650 | | | | 166 |
| | CD5 | CD7 | CD3 | - | - | - | | | A07725 | | 163 |
| | CD8 | CD4 | CD3 | - | - | - | | | A07726 | | 163 |
| | CD8 | CD4 | - | CD3 | - | - | | | | 6607053 | 157 |
| | CD8 | CD4 | - | - | - | CD3 | 6607103 | | | | 160 |
| | CD16 | CD56 | CD3 | - | - | - | | | A07728 | | 163 |
| | CD25 | CD4 | CD3 | - | - | - | | | A07727 | | 164 |
| | CD45 | CD4 | - | CD3 | - | - | | | | 6607015 | 157 |
| | CD45 | CD8 | - | CD3 | - | - | | | | 6607017 | 157 |
| | CD45 | CD19 | - | CD3 | - | - | | | | 6607072 | 158 |
| | CD45 | CD56 | - | CD3 | - | - | | | | 6607071 | 158 |
| | MPO | CD79a | CD3 | - | - | - | | | A07705 | | 165 |
| | Neg.Ctrl. | Neg.Ctrl. | CD3 | - | - | - | | | A07731 | | 166 |
| 2-color | | | | | | | | | | | |
| | CD3 | CD4 | - | - | - | - | | | A07733 | | 160 |
| | CD3 | CD4 | - | - | - | - | M1332 | | | | 167 |
| | CD3 | CD4 | - | - | - | - | | | | 6604929 | 158 |
| | CD3 | CD8 | - | - | - | - | | | A07734 | | 160 |
| | CD3 | CD8 | - | - | - | - | M1333 | | | | 167 |
| | CD3 | CD8 | - | - | - | - | | | | 6604930 | 158 |
| | CD3 | CD(16+56) | - | - | - | - | M2076 | | A07735 | | 160 |
| | CD3 | CD19 | - | - | - | - | | | A07736 | | 160 |
| | CD3 | CD19 | - | - | - | - | M1334 | | | | 167 |
| | CD3 | CD19 | - | - | - | - | | | | 6605015 | 158 |
| | CD3 | CD25 | - | - | - | - | M2667U | | | | 160 |
| | CD3 | CD56 | - | - | - | - | | | | 6607068 | 158 |
| | CD3 | - | - | CD56 | - | - | A07415 | | | | 161 |
| | CD3 | HLA-DR | - | - | - | - | M1295U | | | | 161 |
| | CD3 | HLA-DR | - | - | - | - | | | A07737 | | 161 |
| | HLA-DR | CD3 | - | - | - | - | M1300 | | | | 162 |

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| | | | | | | | RUO | ASR | CE | IVD & CE | |
| CD4 | | | | | | | | | | | |
| 4-color | | | | | | | | | | | |
| | CD45 | CD4 | CD8 | CD3 | - | - | | | | 6607013 | 157, 197, 198 |
| 3-color | | | | | | | | | | | |
| | CD3 | CD4 | - | CD45 | - | - | IM651 | | | | 166 |
| | CD4 | CD8 | - | CD3 | - | - | IM650 | | | | 166 |
| | CD8 | CD4 | CD3 | - | - | - | | | A07726 | | 163 |
| | CD8 | CD4 | - | CD3 | - | - | | | 6607053 | | 157 |
| | CD8 | CD4 | - | - | - | CD3 | 6607103 | | | | 160 |
| | CD25 | CD4 | CD3 | - | - | - | | | A07727 | | 164 |
| | CD45 | CD4 | - | CD3 | - | - | | | 6607015 | | 157 |
| 2-color | | | | | | | | | | | |
| | CD3 | CD4 | - | - | - | - | | | A07733 | | 160 |
| | CD3 | CD4 | - | - | - | - | IM382 | | | | 167 |
| | CD3 | CD4 | - | - | - | - | | | 6604929 | | 158 |
| | CD4 | CD8 | - | - | - | - | | IM0747U | | | 161 |
| | CD4 | CD8 | - | - | - | - | | | 6604614 | | 159 |
| | CD4 | CD29 | - | - | - | - | | 6603799 | | | 159 |
| | CD4 | CD45RA | - | - | - | - | | 6603800 | | | 159 |
| | CD8 | CD4 | - | - | - | - | | IM379U | | | 161 |
| | CD8 | CD4 | - | - | - | - | | | 6603802 | | 159 |
| | CD45RA | CD4 | - | - | - | - | IM272 | | | | 162 |
| CD5 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD5 | CD7 | CD3 | - | - | - | | | A07725 | | 163 |
| | CD5 | CD10 | CD19 | - | - | - | | | A07707 | | 163 |
| | CD5 | CD23 | CD19 | - | - | - | | | A07710 | | 163 |
| 2-color | | | | | | | | | | | |
| | CD19 | CD5 | - | - | - | - | IM346U | | | | 161 |
| CD7 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD5 | CD7 | CD3 | - | - | - | | | A07725 | | 163 |
| | HLA-DR | CD7 | CD45 | - | - | - | | | A07724 | | 165 |
| 2-color | | | | | | | | | | | |
| | CD2 | CD7 | - | - | - | - | | 6604239 | | | 158 |

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| | | | | | | | RUO | ASR | CE | IVD & CE | |
| CD8 | | | | | | | | | | | |
| 4-color | | | | | | | | | | | |
| | CD45 | CD4 | CD8 | CD3 | - | - | | | | 6607013 | 157, 197, 198 |
| 3-color | | | | | | | | | | | |
| | CD3 | CD8 | - | CD45 | - | - | IM670 | | | | 166 |
| | CD4 | CD8 | - | CD3 | - | - | IM650 | | | | 166 |
| | CD8 | CD4 | CD3 | - | - | - | | | A07726 | | 163 |
| | CD8 | CD4 | - | CD3 | - | - | | | 6607053 | | 157 |
| | CD8 | CD4 | - | - | - | CD3 | 6607103 | | | | 160 |
| | CD45 | CD8 | - | CD3 | - | - | | | 6607017 | | 157 |
| 2-color | | | | | | | | | | | |
| | CD3 | CD8 | - | - | - | - | | | A07734 | | 160 |
| | CD3 | CD8 | - | - | - | - | IM383 | | | | 167 |
| | CD3 | CD8 | - | - | - | - | | | 6604930 | | 158 |
| | CD4 | CD8 | - | - | - | - | | IM0747U | | | 161 |
| | CD4 | CD8 | - | - | - | - | | | 6604614 | | 159 |
| | CD8 | CD4 | - | - | - | - | | IM379U | | | 161 |
| | CD8 | CD4 | - | - | - | - | | | 6603802 | | 159 |
| | CD8 | CD38 | - | - | - | - | IM2695U | | | | 161 |
| | CD8 | CD56 | - | - | - | - | | 6603798 | | | 159 |
| | CD57 | CD8 | - | - | - | - | IM198 | | | | 162 |
| | HLA-DR | CD8 | - | - | - | - | IM199U | | | | 162 |
| CD10 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD5 | CD10 | CD19 | - | - | - | | | A07707 | | 163 |
| | CD19 | CD10 | CD45 | - | - | - | | | A07713 | | 164 |
| | CD20 | CD10 | CD19 | - | - | - | | | A07708 | | 164 |
| 2-color | | | | | | | | | | | |
| | CD10 | CD19 | - | - | - | - | | 6604241 | | | 159 |
| CD11c | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD25 | CD11c | CD19 | - | - | - | | | A07711 | | 164 |
| | CD103 | CD11c | CD19 | - | - | - | | | A07712 | | 165 |
| CD13 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD14 | CD13 | CD45 | - | - | - | | | A07722 | | 163 |
| | HLA-DR | CD13 | CD45 | - | - | - | | | A07720 | | 165 |
| CD14 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD14 | CD13 | CD45 | - | - | - | | | A07722 | | 163 |
| | CD14 | CD16 | CD45 | - | - | - | | | A07715 | | 163 |
| 2-color | | | | | | | | | | | |
| | CD45 | CD14 | - | - | - | - | | | A07738 | | 161 |
| | CD45 | CD14 | - | - | - | - | IM387 | | | | 167 |
| | CD45 | CD14 | - | - | - | - | | | 6603909 | | 159 |

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| | | | | | | | RUO | ASR | CE | IVD & CE | |
| CD(14+16) | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD(14+16) | CD85k | - | CD33 | - | - | | | A23413 | | 160 |
| | CD(14+16) | CD85k | - | CD123 | - | - | | | A23416 | | 160 |
| CD15 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD15 | CD33 | CD45 | - | - | - | | | A07721 | | 163 |
| CD16 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD14 | CD16 | CD45 | - | - | - | | | A07715 | | 163 |
| | CD16 | CD56 | CD3 | - | - | - | | | A07728 | | 163 |
| CD(16+56) | | | | | | | | | | | |
| 2-color | | | | | | | | | | | |
| | CD3 | CD(16+56) | - | - | - | - | IM2076 | | A07735 | | 160 |
| CD19 | | | | | | | | | | | |
| 4-color | | | | | | | | | | | |
| | CD45 | CD56 | CD19 | CD3 | - | - | | | | 6607073 | 157, 197, 198 |
| 3-color | | | | | | | | | | | |
| | CD3 | CD19 | - | CD45 | - | - | IM1671 | | | | 166 |
| | CD5 | CD10 | CD19 | - | - | - | | | A07707 | | 163 |
| | CD5 | CD23 | CD19 | - | - | - | | | A07710 | | 163 |
| | CD19 | CD10 | CD45 | - | - | - | | | A07713 | | 164 |
| | CD20 | CD10 | CD19 | - | - | - | | | A07708 | | 164 |
| | CD25 | CD11c | CD19 | - | - | - | | | A07711 | | 164 |
| | CD45 | CD19 | - | CD3 | - | - | | | | 6607072 | 158 |
| | CD103 | CD11c | CD19 | - | - | - | | | A07712 | | 165 |
| | Kappa | Lambda | CD19 | - | - | - | | | A07706 | | 165 |
| | FMC7 | CD23 | CD19 | - | - | - | | | A07709 | | 165 |
| | Neg.Ctrl. | Neg.Ctrl. | CD19 | - | - | - | | | A07730 | | 166 |
| 2-color | | | | | | | | | | | |
| | CD2 | CD19 | - | - | - | - | IM289U | | | | 160 |
| | CD3 | CD19 | - | - | - | - | | | A07736 | | 160 |
| | CD3 | CD19 | - | - | - | - | IM384 | | | | 167 |
| | CD3 | CD19 | - | - | - | - | | | | 6605015 | 158 |
| | CD10 | CD19 | - | - | - | - | | 6604241 | | | 159 |
| | CD19 | CD2 | - | - | - | - | | | | 6603801 | 159 |
| | CD19 | CD5 | - | - | - | - | IM346U | | | | 161 |
| CD20 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD20 | CD10 | CD19 | - | - | - | | | A07708 | | 164 |

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| | | | | | | | RUO | ASR | CE | IVD & CE | |
| CD23 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD5 | CD23 | CD19 | - | - | - | | | A07710 | | 163 |
| | FMC7 | CD23 | CD19 | - | - | - | | | A07709 | | 165 |
| CD25 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD25 | CD4 | CD3 | - | - | - | | | A07727 | | 164 |
| | CD25 | CD11c | CD19 | - | - | - | | | A07711 | | 164 |
| 2-color | | | | | | | | | | | |
| | CD3 | CD25 | - | - | - | - | IM2667U | | | | 160 |
| CD29 | | | | | | | | | | | |
| 2-color | | | | | | | | | | | |
| | CD4 | CD29 | - | - | - | - | | 6603799 | | | 159 |
| CD33 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD(14+16) | CD85k | - | CD33 | - | - | | | A23413 | | 160 |
| | CD15 | CD33 | CD45 | - | - | - | | | A07721 | | 163 |
| | CD34 | CD33 | CD45 | - | - | - | | | A07717 | | 164 |
| | CD71 | CD33 | CD45 | - | - | - | | | A07716 | | 165 |
| CD34 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD34 | CD33 | CD45 | - | - | - | | | A07717 | | 164 |
| | CD34 | CD117 | CD45 | - | - | - | | | A07718 | | 164 |
| | HLA-DR | CD34 | CD45 | - | - | - | | | A07719 | | 165 |
| CD36 | | | | | | | | | | | |
| 2-color | | | | | | | | | | | |
| | CD36 | CD235a | - | - | - | - | IM2279U | | | | 161 |
| CD38 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD38 | CD56 | CD45 | - | - | - | | | A07714 | | 164 |
| 2-color | | | | | | | | | | | |
| | CD8 | CD38 | - | - | - | - | IM2695U | | | | 161 |
| CD41 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD41 | CD235a | CD45 | - | - | - | | | A07723 | | 164 |

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| | | | | | | | RUO | ASR | CE | IVD & CE | |
| CD45 | | | | | | | | | | | |
| 4-color | | | | | | | | | | | |
| | CD45 | CD4 | CD8 | CD3 | - | - | | | | 6607013 | 157, 197, 198 |
| | CD45 | CD56 | CD19 | CD3 | - | - | | | | 6607073 | 157, 197, 198 |
| 3-color | | | | | | | | | | | |
| | CD3 | CD4 | - | CD45 | - | - | M1651 | | | | 166 |
| | CD3 | CD8 | - | CD45 | - | - | M1670 | | | | 166 |
| | CD3 | CD19 | - | CD45 | - | - | M1671 | | | | 166 |
| | CD14 | CD13 | CD45 | - | - | - | | | A07722 | | 163 |
| | CD14 | CD16 | CD45 | - | - | - | | | A07715 | | 163 |
| | CD15 | CD33 | CD45 | - | - | - | | | A07721 | | 163 |
| | CD19 | CD10 | CD45 | - | - | - | | | A07713 | | 164 |
| | CD34 | CD33 | CD45 | - | - | - | | | A07717 | | 164 |
| | CD34 | CD117 | CD45 | - | - | - | | | A07718 | | 164 |
| | CD38 | CD56 | CD45 | - | - | - | | | A07714 | | 164 |
| | CD41 | CD235a | CD45 | - | - | - | | | A07723 | | 164 |
| | CD45 | CD4 | - | CD3 | - | - | | | | 6607015 | 157 |
| | CD45 | CD8 | - | CD3 | - | - | | | | 6607017 | 157 |
| | CD45 | CD19 | - | CD3 | - | - | | | | 6607072 | 158 |
| | CD45 | CD56 | - | CD3 | - | - | | | | 6607071 | 158 |
| | CD45 | IgG1 | - | IgG1 | - | - | | | | 6607019 | 158 |
| | CD71 | CD33 | CD45 | - | - | - | | | A07716 | | 165 |
| | HLA-DR | CD13 | CD45 | - | - | - | | | A07720 | | 165 |
| | HLA-DR | CD34 | CD45 | - | - | - | | | A07719 | | 165 |
| | HLA-DR | CD7 | CD45 | - | - | - | | | A07724 | | 165 |
| | IgG1 | IgG1 | - | CD45 | - | - | M1673 | | | | 167 |
| | Neg. Ctrl. | Neg. Ctrl. | CD45 | - | - | - | | | A07729 | | 166 |
| 2-color | | | | | | | | | | | |
| | CD45 | CD14 | - | - | - | - | | | A07738 | | 161 |
| | CD45 | CD14 | - | - | - | - | M1387 | | | | 167 |
| | CD45 | CD14 | - | - | - | - | | | | 6603909 | 159 |
| | CD45 | CD235a | - | - | - | - | M2280U | | | | 161 |
| CD45RA | | | | | | | | | | | |
| 2-color | | | | | | | | | | | |
| | CD4 | CD45RA | - | - | - | - | | | 6603800 | | 159 |
| | CD45RA | CD4 | - | - | - | - | M2762 | | | | 162 |
| CD56 | | | | | | | | | | | |
| 4-color | | | | | | | | | | | |
| | CD45 | CD56 | CD19 | CD3 | - | - | | | | 6607073 | 157, 197, 198 |
| 3-color | | | | | | | | | | | |
| | CD16 | CD56 | CD3 | - | - | - | | | A07728 | | 163 |
| | CD38 | CD56 | CD45 | - | - | - | | | A07714 | | 164 |
| | CD45 | CD56 | - | CD3 | - | - | | | | 6607071 | 158 |
| 2-color | | | | | | | | | | | |
| | CD3 | CD56 | - | - | - | - | | | | 6607068 | 158 |
| | CD3 | - | - | CD56 | - | - | A07415 | | | | 161 |
| | CD8 | CD56 | - | - | - | - | | | 6603798 | | 159 |

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| | | | | | | | RUO | ASR | CE | IVD & CE | |
| CD57 | | | | | | | | | | | |
| 2-color | | | | | | | | | | | |
| | CD57 | CD8 | - | - | - | - | M198 | | | | 162 |
| CD71 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD71 | CD33 | CD45 | - | - | - | | | A07716 | | 165 |
| CD79a | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | MPO | CD79a | CD3 | - | - | - | | | A07705 | | 165 |
| CD85k | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD(14+16) | CD85k | - | CD33 | - | - | | | A23413 | | 160 |
| | CD(14+16) | CD85k | - | CD123 | - | - | | | A23416 | | 160 |
| CD103 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD103 | CD11c | CD19 | - | - | - | | | A07712 | | 165 |
| CD117 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD34 | CD117 | CD45 | - | - | - | | | A07718 | | 164 |
| CD123 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD(14+16) | CD85k | - | CD123 | - | - | | | A23416 | | 160 |
| CD235a | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD41 | CD235a | CD45 | - | - | - | | | A07723 | | 164 |
| 2-color | | | | | | | | | | | |
| | CD36 | CD235a | - | - | - | - | M2279U | | | | 161 |
| | CD45 | CD235a | - | - | - | - | M2280U | | | | 161 |
| FMC7 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | FMC7 | CD23 | CD19 | - | - | - | | | A07709 | | 165 |
| HLA-B7 | | | | | | | | | | | |
| 2-color | | | | | | | | | | | |
| | HLA-B27 | HLA-B7 | - | - | - | - | M1502 | | A07739 | | 162 |
| HLA-B27 | | | | | | | | | | | |
| 2-color | | | | | | | | | | | |
| | HLA-B27 | HLA-B7 | - | - | - | - | M1502 | | A07739 | | 162 |

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| | | | | | | | RUO | ASR | CE | IVD & CE | |
| HLA-DR | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | HLA-DR | CD13 | CD45 | - | - | - | | | | A07720 | 165 |
| | HLA-DR | CD34 | CD45 | - | - | - | | | | A07719 | 165 |
| | HLA-DR | CD7 | CD45 | - | - | - | | | | A07724 | 165 |
| 2-color | | | | | | | | | | | |
| | CD3 | HLA-DR | - | - | - | - | IM295U | | | | 161 |
| | CD3 | HLA-DR | - | - | - | - | | | | A07737 | 161 |
| | HLA-DR | CD3 | - | - | - | - | IM300 | | | | 162 |
| | HLA-DR | CD8 | - | - | - | - | IM199U | | | | 162 |
| Kappa | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | Kappa | Lambda | CD19 | - | - | - | | | | A07706 | 165 |
| Lactoferrin | | | | | | | | | | | |
| 2-color | | | | | | | | | | | |
| | MPO | Lactoferrin | - | - | - | - | IM2743 | | | | 162 |
| Lambda | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | Kappa | Lambda | CD19 | - | - | - | | | | A07706 | 165 |
| MPO | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | MPO | CD79a | CD3 | - | - | - | | | | A07705 | 165 |
| 2-color | | | | | | | | | | | |
| | MPO | Lactoferrin | - | - | - | - | IM2743 | | | | 162 |
| Neg. Ctrl. | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | Neg. Ctrl. | Neg. Ctrl. | CD3 | - | - | - | | | | A07731 | 166 |
| | Neg. Ctrl. | Neg. Ctrl. | CD19 | - | - | - | | | | A07730 | 166 |
| | Neg. Ctrl. | Neg. Ctrl. | CD45 | - | - | - | | | | A07729 | 166 |
| | Neg. Ctrl. | Neg. Ctrl. | Neg. Ctrl. | - | - | - | | | | A07732 | 166 |
| IgG1 | | | | | | | | | | | |
| 3-color | | | | | | | | | | | |
| | CD45 | IgG1 | - | IgG1 | - | - | | | | 6607019 | 158 |
| | IgG1 | IgG1 | - | CD45 | - | - | IM673 | | | | 167 |
| | IgG1 | IgG1 | - | IgG1 | - | - | IM672 | | | | 167 |
| | IgG1 | IgG1 | - | IgG1 | - | - | | | | 6607054 | 158 |
| 2-color | | | | | | | | | | | |
| | IgG1 | IgG1 | - | - | - | - | | | | A07794 | 162 |
| | IgG1 | IgG1 | - | - | - | - | IM388 | | | | 167 |
| | IgG1 | IgG1 | - | - | - | - | | | | 6603796 | 159 |
| | IgG1 | IgG2a | - | - | - | - | A10974 | | | | 162 |
| | IgG1 | IgG2a | - | - | - | - | A17599 | | | B49179 | 167 |
| | IgG2a | IgG1 | - | - | - | - | | | | 6603795 | 159 |
| | IgG2a | IgG1 | - | - | - | - | B09961 | | | | 162 |
| IgG2a | | | | | | | | | | | |
| 2-color | | | | | | | | | | | |
| | IgG1 | IgG2a | - | - | - | - | A10974 | | | | 162 |
| | IgG1 | IgG2a | - | - | - | - | A17599 | | | B49179 | 167 |
| | IgG2a | IgG1 | - | - | - | - | | | | 6603795 | 159 |
| | IgG2a | IgG1 | - | - | - | - | B09961 | | | | 162 |

For abbreviations and product regulatory status see Information section p.5-16

Multi-Color Antibody Cocktails



Our wide range of pre-formulated 2 to 4-color antibody combinations ensures reliable flow cytometry results and workflow efficiency for your clinical or research laboratories. The multi-color cocktails combine a state-of-the-art selection of antibody clones with proven dye combinations such as FITC/PE/ECD or FITC/PE/PC5. The elimination of manual antibody cocktailing enables higher productivity and reduces assay repeats caused by possible cocktailing failures. Using our multi-color antibody panels you can rely on the same lot-to-lot consistency known from Beckman Coulter single-color antibodies following our high quality standards. The pre-formulated and calibrated cocktails are optimized for use with Beckman Coulter Flow Cytometers.

Multi-Color Antibody Cocktails at a glance:

- Large portfolio of clinical grade 2 to 4-color antibody cocktails.
- Time saving and reduction of pipetting errors with premixed antibody cocktails.
- Optimized for use with Beckman Coulter Flow Cytometers.

CYTO-STAT

4 color

CD45-FITC/CD4-PE/CD8-ECD/CD3-PC5

| Combination | Clone | Isotype | | |
|------------------|--------------|---------------|----------|---------|
| CD45-FITC | B3821F4A | IgG2b (mouse) | | |
| CD4-RD1 | SFC112T4D11 | IgG1 (mouse) | | |
| CD8-ECD | SFC121Thy2D3 | IgG1 (mouse) | | |
| CD3-PC5 | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6607013 |

CD45-FITC/CD56-PE/CD19-ECD/CD3-PC5

| Combination | Clone | Isotype | | |
|------------------|----------|---------------|----------|---------|
| CD45-FITC | B3821F4A | IgG2b (mouse) | | |
| CD56-RD1 | N901 | IgG1 (mouse) | | |
| CD19-ECD | J3-119 | IgG1 (mouse) | | |
| CD3-PC5 | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6607073 |

3 color

CD8-FITC/CD4-PE/CD3-PC5

| Combination | Clone | Isotype | | |
|-----------------|--------------|--------------|----------|---------|
| CD8-FITC | SFC121Thy2D3 | IgG1 (mouse) | | |
| CD4-RD1 | SFC112T4D11 | IgG1 (mouse) | | |
| CD3-PC5 | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6607053 |

CD45-FITC/CD4-PE/CD3-PC5

| Combination | Clone | Isotype | | |
|------------------|-------------|---------------|----------|---------|
| CD45-FITC | B3821F4A | IgG2b (mouse) | | |
| CD4-RD1 | SFC112T4D11 | IgG1 (mouse) | | |
| CD3-PC5 | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6607015 |

CD45-FITC/CD8-PE/CD3-PC5




| Combination | Clone | Isotype | | |
|------------------|--------------|---------------|----------|---------|
| CD45-FITC | B3821F4A | IgG2b (mouse) | | |
| CD8-RD1 | SFC121Thy2D3 | IgG1 (mouse) | | |
| CD3-PC5 | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6607017 |

For abbreviations, product line and product regulatory status see Information section




Multi-Color Antibody Cocktails






CD45-FITC/CD19-PE/CD3-PC5

| Combination | | Clone | Isotype | | |
|---|------------------|-----------|---------------|---------|--|
|  | CD45-FITC | B3821F4A | IgG2b (mouse) | | |
|  | CD19-RD1 | J3-119 | IgG1 (mouse) | | |
|  | CD3-PC5 | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6607072 | |




CD45-FITC/CD56-PE/CD3-PC5

| Combination | | Clone | Isotype | | |
|---|------------------|-----------|---------------|---------|--|
|  | CD45-FITC | B3821F4A | IgG2b (mouse) | | |
|  | CD56-RD1 | N901 | IgG1 (mouse) | | |
|  | CD3-PC5 | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6607071 | |

CD45-FITC/IgG1-PE/IgG1-PC5



| Combination | | Clone | Isotype | | |
|---|------------------|-----------|---------------|---------|--|
|  | CD45-FITC | B3821F4A | IgG2b (mouse) | | |
|  | IgG1-RD1 | 2T8-2F5 | IgG1 (mouse) | | |
|  | IgG1-PC5 | 2T8-2F5 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6607019 | |

IgG1-FITC/IgG1-PE/IgG1-PC5



| Combination | | Clone | Isotype | | |
|---|------------------|-----------|--------------|---------|--|
|  | IgG1-FITC | 2T8-2F5 | IgG1 (mouse) | | |
|  | IgG1-RD1 | 2T8-2F5 | IgG1 (mouse) | | |
|  | IgG1-PC5 | 2T8-2F5 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6607054 | |

2 color



CD2-FITC/CD7-PE

| Combination | | Clone | Isotype | | |
|---|-----------------|------------|---------------|---------|--|
|  | CD2-FITC | SFCI3Pt2H9 | IgG1 (mouse) | | |
|  | CD7-RD1 | 3A1E-12H7 | IgG2b (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 0.5 mL | Liquid | CYTO-STAT | ASR | 6604239 | |



CD3-FITC/CD4-PE

| Combination | | Clone | Isotype | | |
|---|-----------------|-------------|--------------|---------|--|
|  | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
|  | CD4-RD1 | SFCI12T4D11 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6604929 | |



CD3-FITC/CD8-PE

| Combination | | Clone | Isotype | | |
|---|-----------------|--------------|--------------|---------|--|
|  | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
|  | CD8-RD1 | SFCI21Thy2D3 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6604930 | |

CD3-FITC/CD19-PE

| Combination | | Clone | Isotype | | |
|---|-----------------|-----------|--------------|---------|--|
|  | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
|  | CD19-RD1 | 89B | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6605015 | |

CD3-FITC/CD56-PE

| Combination | | Clone | Isotype | | |
|---|-----------------|-----------|--------------|---------|--|
|  | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
|  | CD56-RD1 | N901 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6607068 | |

For abbreviations, product line and product regulatory status see Information section

Multi-Color Antibody Cocktails



CD4-FITC/CD8-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------------|--------------|---------|--|
| ■ | CD4-FITC | SFC112T4D11 | IgG1 (mouse) | | |
| ■ | CD8-RD1 | SFC121Thy2D3 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6604614 | |

CD10-FITC/CD19-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|-----------|---------------|---------|--|
| ■ | CD10-FITC | J5 | IgG2a (mouse) | | |
| ■ | CD19-RD1 | HD237 | IgG2b (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 0.5 mL | Liquid | CYTO-STAT | ASR | 6604241 | |

CD4-FITC/CD29-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|-------------|--------------|---------|--|
| ■ | CD4-FITC | SFC112T4D11 | IgG1 (mouse) | | |
| ■ | CD29-RD1 | 4B4LDC9LDH8 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 0.5 mL | Liquid | CYTO-STAT | ASR | 6603799 | |

CD19-FITC/CD2-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|------------|--------------|---------|--|
| ■ | CD19-FITC | 89B | IgG1 (mouse) | | |
| ■ | CD2-RD1 | SFC13Pt2H9 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6603801 | |

CD4-FITC/CD45RA-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-------------------|--------------|--------------|---------|--|
| ■ | CD4-FITC | SFC112T4D11 | IgG1 (mouse) | | |
| ■ | CD45RA-RD1 | 2H4LDH11LDB9 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 0.5 mL | Liquid | CYTO-STAT | ASR | 6603800 | |

CD45-FITC/CD14-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|-----------|--------------|---------|--|
| ■ | CD45-FITC | KC56 | IgG1 (mouse) | | |
| ■ | CD14-RD1 | 116 | IgM (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6603909 | |

CD8-FITC/CD4-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------------|--------------|---------|--|
| ■ | CD8-FITC | SFC121Thy2D3 | IgG1 (mouse) | | |
| ■ | CD4-RD1 | SFC112T4D11 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6603802 | |

IgG1-FITC/IgG1-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|-----------|--------------|---------|--|
| ■ | IgG1-FITC | 2T8-2F5 | IgG1 (mouse) | | |
| ■ | IgG1-RD1 | 2T8-2F5 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6603796 | |

CD8-FITC/CD56-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------------|--------------|---------|--|
| ■ | CD8-FITC | SFC121Thy2D3 | IgG1 (mouse) | | |
| ■ | CD56-RD1 | N901 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 0.5 mL | Liquid | CYTO-STAT | ASR | 6603798 | |

IgG2a-FITC/IgG1-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-------------------|-----------|---------------|---------|--|
| ■ | IgG2a-FITC | 7T4-1F5 | IgG2a (mouse) | | |
| ■ | IgG1-RD1 | 2T8-2F5 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | CYTO-STAT | IVD & CE | 6603795 | |

For abbreviations, product line and product regulatory status see Information section

Multi-Color Antibody Cocktails

IOTest

3 color

CD8-FITC/CD4-PE/CD3-PC7

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------------|--------------|---------|--|
| ■ | CD8-FITC | SFC121Thy2D3 | IgG1 (mouse) | | |
| ■ | CD4-PE | SFC112T4D11 | IgG1 (mouse) | | |
| ■ | CD3-PC7 | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | 6607103 | |

CD(14+16)-FITC/CD85k-PE/CD33-PC5

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------------|------------|--------------------|--------|--|
| ■ | CD(14+16)-FITC | RMO52+3G8 | IgG2a+IgG1 (mouse) | | |
| ■ | CD85k-PE | ZM3.8 | IgG1 (mouse) | | |
| ■ | CD33-PC5 | D3HL60.251 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | CE | A23413 | |

CD(14+16)-FITC/CD85k-PE/CD123-PC5

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------------|-------------|--------------------|--------|--|
| ■ | CD(14+16)-FITC | RMO52+3G8 | IgG2a+IgG1 (mouse) | | |
| ■ | CD85k-PE | ZM3.8 | IgG1 (mouse) | | |
| ■ | CD123-PC5 | SSDCLY107D2 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | CE | A23416 | |

2 color

CD2-FITC/CD19-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------|--------------|---------|--|
| ■ | CD2-FITC | 39C1.5 | IgG2a (rat) | | |
| ■ | CD19-PE | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM1289U | |

CD3-FITC/CD4-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------|--------------|--------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | CD4-PE | 13B8.2 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | CE | A07733 | |

CD3-FITC/CD8-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------|--------------|--------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | CD8-PE | B9.11 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | CE | A07734 | |

CD3-FITC/CD(16+56)-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|---------------------|----------|--------------|--------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | CD(16+56)-PE | 3G8+N901 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | CE | A07735 | |
| 50 tests | Liquid | IOTest | RUO GMP | IM2076 | |

CD3-FITC/CD19-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------|--------------|--------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | CD19-PE | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | CE | A07736 | |

CD3-FITC/CD25-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|---------|---------------|---------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | CD25-PE | B1.49.9 | IgG2a (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM2667U | |

For abbreviations, product line and product regulatory status see Information section

Multi-Color Antibody Cocktails



CD3-FITC/CD56-PC5

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------|--------------|--------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | CD56-PC5 | N901 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | A07415 | |

CD8-FITC/CD38-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|-----------|--------------|---------|--|
| ■ | CD8-FITC | B9.11 | IgG1 (mouse) | | |
| ■ | CD38-PE | LS198-4-3 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM2695U | |

CD3-FITC/HLA-DR-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|---------|---------------|---------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | HLA-DR-PE | B8.12.2 | IgG2b (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM1295U | |

CD19-FITC/CD5-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|--------|---------------|---------|--|
| ■ | CD19-FITC | J3-119 | IgG1 (mouse) | | |
| ■ | CD5-PE | BL1a | IgG2a (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM1346U | |

CD3-FITC/HLA-DR-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|----------|--------------|--------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | HLA-DR-PE | Immu-357 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | CE | A07737 | |

CD36-FITC/CD235a-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|-----------|--------------|---------|--|
| ■ | CD36-FITC | FA6.152 | IgG1 (mouse) | | |
| ■ | CD235a-PE | 11E4B-7-6 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM2279U | |

CD4-FITC/CD8-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------|--------------|---------|--|
| ■ | CD4-FITC | 13B8.2 | IgG1 (mouse) | | |
| ■ | CD8-PE | B9.11 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 1 mL | Liquid | IOTest | ASR | IM0747U | |

CD45-FITC/CD14-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|----------|---------------|--------|--|
| ■ | CD45-FITC | Immu19.2 | IgG1 (mouse) | | |
| ■ | CD14-PE | RMO52 | IgG2a (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | CE | A07738 | |

CD8-FITC/CD4-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|--------|--------------|---------|--|
| ■ | CD8-FITC | B9.11 | IgG1 (mouse) | | |
| ■ | CD4-PE | 13B8.2 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 1 mL | Liquid | IOTest | ASR | IM1379U | |

CD45-FITC/CD235a-PE



| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|-----------|--------------|---------|--|
| ■ | CD45-FITC | J.33 | IgG1 (mouse) | | |
| ■ | CD235a-PE | 11E4B-7-6 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM2280U | |

For abbreviations, product line and product regulatory status see Information section



Multi-Color Antibody Cocktails





CD45RA-FITC/CD4-PE

| Combination | | Clone | Isotype | | |
|---|--------------------|--------|--------------|--------|--|
|  | CD45RA-FITC | ALB11 | IgG1 (mouse) | | |
|  | CD4-PE | 13B8.2 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM2762 | |



CD57-FITC/CD8-PE

| Combination | | Clone | Isotype | | |
|---|------------------|--------|--------------|--------|--|
|  | CD57-FITC | NC1 | IgM (mouse) | | |
|  | CD8-PE | B9.11 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM1198 | |



HLA-B27-FITC/HLA-B7-PE

| Combination | | Clone | Isotype | | |
|---|---------------------|------------|---------------|--------|--|
|  | HLA-B27-FITC | HLA-ABC-m3 | IgG2a (mouse) | | |
|  | HLA-B7-PE | BB7.1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | CE | A07739 | |
| 50 tests | Liquid | IOTest | RUO GMP | IM1502 | |



HLA-DR-FITC/CD3-PE

| Combination | | Clone | Isotype | | |
|---|--------------------|---------|---------------|--------|--|
|  | HLA-DR-FITC | B8.12.2 | IgG2b (mouse) | | |
|  | CD3-PE | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM1300 | |




HLA-DR-FITC/CD8-PE

| Combination | | Clone | Isotype | | |
|---|--------------------|---------|---------------|---------|--|
|  | HLA-DR-FITC | B8.12.2 | IgG2b (mouse) | | |
|  | CD8-PE | B9.11 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM1199U | |



IgG1-FITC/IgG1-PE

| Combination | | Clone | Isotype | | |
|---|------------------|----------|--------------|--------|--|
|  | IgG1-FITC | 679.1Mc7 | IgG1 (mouse) | | |
|  | IgG1-PE | 679.1Mc7 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | CE | A07794 | |



IgG1-FITC/IgG2a-PE

| Combination | | Clone | Isotype | | |
|---|------------------|----------|---------------|--------|--------|
|  | IgG1-FITC | 679.1Mc7 | IgG1 (mouse) | | |
|  | IgG2a-PE | 7T4-1F5 | IgG2a (mouse) | | |
| Size | Format | Line | Status | Part # | |
|  | 50 tests | Liquid | IOTest | CE | B49179 |
| 50 tests | Liquid | IOTest | RUO GMP | A10974 | |

IgG2a-FITC/IgG1-PE

| Combination | | Clone | Isotype | | |
|---|-------------------|----------|---------------|--------|--|
|  | IgG2a-FITC | 7T4-1F5 | IgG2a (mouse) | | |
|  | IgG1-PE | 679.1Mc7 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | B09981 | |

MPO-FITC/Lactoferrin-PE

| Combination | | Clone | Isotype | | |
|---|-----------------------|-----------|---------------|--------|--|
|  | MPO-FITC | CLB-MPO-1 | IgG2a (mouse) | | |
|  | Lactoferrin-PE | CLB13.17 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | IOTest | RUO GMP | IM2743 | |




For abbreviations, product line and product regulatory status see Information section

Multi-Color Antibody Cocktails




IOTest 3

3 color




CD5-FITC/CD7-PE/CD3-ECD

| Combination | Clone | Isotype | | |
|---|--------|---------------|--------|--------|
|  CD5-FITC | BL1a | IgG2a (mouse) | | |
|  CD7-PE | 8H8.1 | IgG2a (mouse) | | |
|  CD3-ECD | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 25 tests | Liquid | IOTest 3 | CE | A07725 |




CD5-FITC/CD10-PE/CD19-ECD

| Combination | Clone | Isotype | | |
|---|--------|---------------|--------|--------|
|  CD5-FITC | BL1a | IgG2a (mouse) | | |
|  CD10-PE | ALB1 | IgG1 (mouse) | | |
|  CD19-ECD | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 25 tests | Liquid | IOTest 3 | CE | A07707 |




CD5-FITC/CD23-PE/CD19-ECD

| Combination | Clone | Isotype | | |
|---|--------|---------------|--------|--------|
|  CD5-FITC | BL1a | IgG2a (mouse) | | |
|  CD23-PE | 9P25 | IgG1 (mouse) | | |
|  CD19-ECD | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 25 tests | Liquid | IOTest 3 | CE | A07710 |




CD8-FITC/CD4-PE/CD3-ECD

| Combination | Clone | Isotype | | |
|---|--------|--------------|--------|--------|
|  CD8-FITC | B9.11 | IgG1 (mouse) | | |
|  CD4-PE | 13B8.2 | IgG1 (mouse) | | |
|  CD3-ECD | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 25 tests | Liquid | IOTest 3 | CE | A07726 |




CD14-FITC/CD13-PE/CD45-ECD

| Combination | Clone | Isotype | | |
|--|--------|---------------|--------|--------|
|  CD14-FITC | RMO52 | IgG2a (mouse) | | |
|  CD13-PE | SJ1D1 | IgG1 (mouse) | | |
|  CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 25 tests | Liquid | IOTest 3 | CE | A07722 |




CD14-FITC/CD16-PE/CD45-ECD

| Combination | Clone | Isotype | | |
|--|--------|---------------|--------|--------|
|  CD14-FITC | RMO52 | IgG2a (mouse) | | |
|  CD16-PE | 3G8 | IgG1 (mouse) | | |
|  CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 25 tests | Liquid | IOTest 3 | CE | A07715 |

CD15-FITC/CD33-PE/CD45-ECD

| Combination | Clone | Isotype | | |
|--|------------|--------------|--------|--------|
|  CD15-FITC | 80H5 | IgM (mouse) | | |
|  CD33-PE | D3HL60.251 | IgG1 (mouse) | | |
|  CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 25 tests | Liquid | IOTest 3 | CE | A07721 |

CD16-FITC/CD56-PE/CD3-ECD




| Combination | Clone | Isotype | | |
|--|--------|--------------|--------|--------|
|  CD16-FITC | 3G8 | IgG1 (mouse) | | |
|  CD56-PE | N901 | IgG1 (mouse) | | |
|  CD3-ECD | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # |
| 25 tests | Liquid | IOTest 3 | CE | A07728 |

For abbreviations, product line and product regulatory status see Information section




Multi-Color Antibody Cocktails






CD19-FITC/CD10-PE/CD45-ECD

| Combination | | Clone | Isotype | | |
|---|------------------|----------|--------------|--------|--|
|  | CD19-FITC | J3-119 | IgG1 (mouse) | | |
|  | CD10-PE | ALB1 | IgG1 (mouse) | | |
|  | CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07713 | |




CD34-FITC/CD33-PE/CD45-ECD

| Combination | | Clone | Isotype | | |
|---|------------------|------------|--------------|--------|--|
|  | CD34-FITC | 581 | IgG1 (mouse) | | |
|  | CD33-PE | D3HL60.251 | IgG1 (mouse) | | |
|  | CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07717 | |




CD20-FITC/CD10-PE/CD19-ECD

| Combination | | Clone | Isotype | | |
|---|------------------|----------|---------------|--------|--|
|  | CD20-FITC | B9E9 | IgG2a (mouse) | | |
|  | CD10-PE | ALB1 | IgG1 (mouse) | | |
|  | CD19-ECD | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07708 | |




CD34-FITC/CD117-PE/CD45-ECD

| Combination | | Clone | Isotype | | |
|---|------------------|----------|--------------|--------|--|
|  | CD34-FITC | 581 | IgG1 (mouse) | | |
|  | CD117-PE | 104D2D1 | IgG1 (mouse) | | |
|  | CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07718 | |




CD25-FITC/CD4-PE/CD3-ECD

| Combination | | Clone | Isotype | | |
|---|------------------|----------|---------------|--------|--|
|  | CD25-FITC | B1.49.9 | IgG2a (mouse) | | |
|  | CD4-PE | 13B8.2 | IgG1 (mouse) | | |
|  | CD3-ECD | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07727 | |




CD38-FITC/CD56-PE/CD45-ECD

| Combination | | Clone | Isotype | | |
|---|------------------|----------|--------------|--------|--|
|  | CD38-FITC | T16 | IgG1 (mouse) | | |
|  | CD56-PE | N901 | IgG1 (mouse) | | |
|  | CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07714 | |

CD25-FITC/CD11c-PE/CD19-ECD

| Combination | | Clone | Isotype | | |
|---|------------------|----------|---------------|--------|--|
|  | CD25-FITC | B1.49.9 | IgG2a (mouse) | | |
|  | CD11c-PE | BU15 | IgG1 (mouse) | | |
|  | CD19-ECD | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07711 | |

CD41-FITC/CD235a-PE/CD45-ECD




| Combination | | Clone | Isotype | | |
|---|------------------|-----------|--------------|--------|--|
|  | CD41-FITC | P2 | IgG1 (mouse) | | |
|  | CD235a-PE | 11E4B-7-6 | IgG1 (mouse) | | |
|  | CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07723 | |

For abbreviations, product line and product regulatory status see Information section




Multi-Color Antibody Cocktails






CD71-FITC/CD33-PE/CD45-ECD

| Combination | | Clone | Isotype | | |
|---|------------------|------------|--------------|--------|--|
|  | CD71-FITC | YDJ1.2.2 | IgG1 (mouse) | | |
|  | CD33-PE | D3HL60.251 | IgG1 (mouse) | | |
|  | CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07716 | |




HLA-DR-FITC/CD34-PE/CD45-ECD

| Combination | | Clone | Isotype | | |
|---|--------------------|----------|--------------|--------|--|
|  | HLA-DR-FITC | Immu-357 | IgG1 (mouse) | | |
|  | CD34-PE | 581 | IgG1 (mouse) | | |
|  | CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07719 | |




CD103-FITC/CD11c-PE/CD19-ECD

| Combination | | Clone | Isotype | | |
|---|-------------------|----------|---------------|--------|--|
|  | CD103-FITC | 2G5 | IgG2a (mouse) | | |
|  | CD11c-PE | BU15 | IgG1 (mouse) | | |
|  | CD19-ECD | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07712 | |




HLA-DR-FITC/CD7-PE/CD45-ECD

| Combination | | Clone | Isotype | | |
|---|--------------------|----------|---------------|--------|--|
|  | HLA-DR-FITC | Immu-357 | IgG1 (mouse) | | |
|  | CD7-PE | 8H8.1 | IgG2a (mouse) | | |
|  | CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07724 | |




FMC7-FITC/CD23-PE/CD19-ECD

| Combination | | Clone | Isotype | | |
|---|------------------|----------|--------------|--------|--|
|  | FMC7-FITC | FMC7 | IgM (mouse) | | |
|  | CD23-PE | 9P25 | IgG1 (mouse) | | |
|  | CD19-ECD | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07709 | |




Kappa-FITC/Lambda-PE/CD19-ECD

| Combination | | Clone | Isotype | | |
|---|-------------------|------------|------------------------------|--------|--|
|  | Kappa-FITC | Polyclonal | F(ab') ₂ (rabbit) | | |
|  | Lambda-PE | Polyclonal | F(ab') ₂ (rabbit) | | |
|  | CD19-ECD | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07706 | |

HLA-DR-FITC/CD13-PE/CD45-ECD

| Combination | | Clone | Isotype | | |
|---|--------------------|----------|--------------|--------|--|
|  | HLA-DR-FITC | Immu-357 | IgG1 (mouse) | | |
|  | CD13-PE | SJ1D1 | IgG1 (mouse) | | |
|  | CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07720 | |

cMPO-FITC/cCD79a-PE/cCD3-ECD




| Combination | | Clone | Isotype | | |
|---|-----------------|-----------|---------------|--------|--|
|  | MPO-FITC | CLB-MPO-1 | IgG2a (mouse) | | |
|  | CD79a-PE | HM47 | IgG1 (mouse) | | |
|  | CD3-ECD | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07705 | |

For abbreviations, product line and product regulatory status see Information section




Multi-Color Antibody Cocktails






Neg.Ctrl.-FITC/Neg.Ctrl.-PE/CD3-ECD

| Combination | | Clone | Isotype | | |
|---|-----------------------|----------|--------------|--------|--|
|  | Neg.Ctrl.-FITC | 679.1Mc7 | IgG1 (mouse) | | |
|  | Neg.Ctrl.-PE | 679.1Mc7 | IgG1 (mouse) | | |
|  | CD3-ECD | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07731 | |




Neg.Ctrl.-FITC/Neg.Ctrl.-PE/CD19-ECD

| Combination | | Clone | Isotype | | |
|---|-----------------------|----------|--------------|--------|--|
|  | Neg.Ctrl.-FITC | 679.1Mc7 | IgG1 (mouse) | | |
|  | Neg.Ctrl.-PE | 679.1Mc7 | IgG1 (mouse) | | |
|  | CD19-ECD | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07730 | |

Neg.Ctrl.-FITC/Neg.Ctrl.-PE/CD45-ECD

| Combination | | Clone | Isotype | | |
|---|-----------------------|----------|--------------|--------|--|
|  | Neg.Ctrl.-FITC | 679.1Mc7 | IgG1 (mouse) | | |
|  | Neg.Ctrl.-PE | 679.1Mc7 | IgG1 (mouse) | | |
|  | CD45-ECD | J.33 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07729 | |




Neg.Ctrl.-FITC/Neg.Ctrl.-PE/Neg.Ctrl.-ECD

| Combination | | Clone | Isotype | | |
|---|-----------------------|----------|--------------|--------|--|
|  | Neg.Ctrl.-FITC | 679.1Mc7 | IgG1 (mouse) | | |
|  | Neg.Ctrl.-PE | 679.1Mc7 | IgG1 (mouse) | | |
|  | Neg.Ctrl.-ECD | 679.1Mc7 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 25 tests | Liquid | IOTest 3 | CE | A07732 | |




OptiClone

3 color




CD3-FITC/CD4-PE/CD45-PC5

| Combination | | Clone | Isotype | | |
|---|-----------------|-----------|--------------|--------|--|
|  | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
|  | CD4-PE | 13B8.2 | IgG1 (mouse) | | |
|  | CD45-PC5 | Immu19.2 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1651 | |




CD3-FITC/CD8-PE/CD45-PC5

| Combination | | Clone | Isotype | | |
|---|-----------------|-----------|--------------|--------|--|
|  | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
|  | CD8-PE | B9.11 | IgG1 (mouse) | | |
|  | CD45-PC5 | Immu19.2 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1670 | |

CD3-FITC/CD19-PE/CD45-PC5

| Combination | | Clone | Isotype | | |
|---|-----------------|-----------|--------------|--------|--|
|  | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
|  | CD19-PE | J3-119 | IgG1 (mouse) | | |
|  | CD45-PC5 | Immu19.2 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1671 | |

CD4-FITC/CD8-PE/CD3-PC5

| Combination | | Clone | Isotype | | |
|---|-----------------|-----------|--------------|--------|--|
|  | CD4-FITC | 13B8.2 | IgG1 (mouse) | | |
|  | CD8-PE | B9.11 | IgG1 (mouse) | | |
|  | CD3-PC5 | UCHT1 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1650 | |

For abbreviations, product line and product regulatory status see Information section

Multi-Color Antibody Cocktails



IgG1-FITC/IgG1-PE/CD45-PC5

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|-----------|--------------|--------|--|
| ■ | IgG1-FITC | 679.1Mc7 | IgG1 (mouse) | | |
| ■ | IgG1-PE | 679.1Mc7 | IgG1 (mouse) | | |
| ■ | CD45-PC5 | Immu19.2 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1673 | |

IgG1-FITC/IgG1-PE/IgG1-PC5

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|-----------|--------------|--------|--|
| ■ | IgG1-FITC | 679.1Mc7 | IgG1 (mouse) | | |
| ■ | IgG1-PE | 679.1Mc7 | IgG1 (mouse) | | |
| ■ | IgG1-PC5 | 679.1Mc7 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1672 | |

2 color

CD3-FITC/CD4-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|-----------|--------------|--------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | CD4-PE | 13B8.2 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1382 | |

CD3-FITC/CD8-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|-----------|--------------|--------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | CD8-PE | B9.11 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1383 | |

CD3-FITC/CD19-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|-----------------|-----------|--------------|--------|--|
| ■ | CD3-FITC | UCHT1 | IgG1 (mouse) | | |
| ■ | CD19-PE | J3-119 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1384 | |

CD45-FITC/CD14-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|-----------|---------------|--------|--|
| ■ | CD45-FITC | Immu19.2 | IgG1 (mouse) | | |
| ■ | CD14-PE | RMO52 | IgG2a (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1387 | |

IgG1-FITC/IgG1-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|-----------|--------------|--------|--|
| ■ | IgG1-FITC | 679.1Mc7 | IgG1 (mouse) | | |
| ■ | IgG1-PE | 679.1Mc7 | IgG1 (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | IM1388 | |

IgG1-FITC/IgG2a-PE

| Combination | | Clone | Isotype | | |
|---------------------------------------|------------------|-----------|---------------|--------|--|
| ■ | IgG1-FITC | 679.1Mc7 | IgG1 (mouse) | | |
| ■ | IgG2a-PE | 7T4-1F5 | IgG2a (mouse) | | |
| Size | Format | Line | Status | Part # | |
| 50 tests | Liquid | OptiClone | RUO GMP | A17599 | |

For abbreviations, product line and product regulatory status see Information section



DuraClone IM Panels are premixed, dried reagent cocktails to standardize and streamline flow cytometry workflow for clinical research studies of the human immune system.

DuraClone IM panels are provided with a robust compensation solution which delivers the level of standardization and workflow efficiency required for clinical research studies.

Three dried reagent **single color compensation kits** are provided with each package of 25 assay tubes. DuraClone IM single color conjugate compensation tubes are color-coded with lot-matched dyes, specific for each panel.

- Simplified detection of immune sub-populations
- Standardized for use in clinical research studies
- Designed and optimized by expert labs from The ONE Study.



| Size | Status | Part # |
|----------|--------|--------|
| 25 tests | RUO | B53309 |

DuraClone IM Phenotyping BASIC Tube

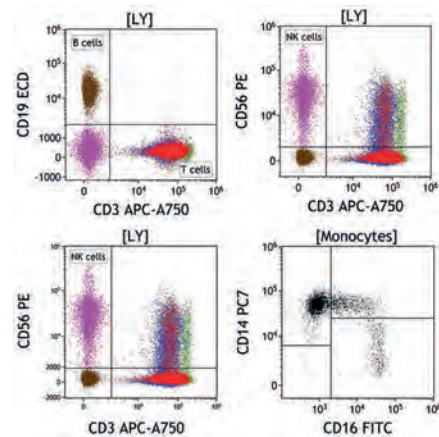
Lymphocytes constitute a part of the human immune system that is referred to as adaptive due to their ability to acquire cognition and memory of foreign antigens. B cells (CD45+CD19+) represent the principal part of the humoral branch of adaptive immunity producing antibodies upon terminal differentiation. The cell-mediated adaptive immune response is mainly due to T cells (CD45+CD3+) that comprise a large number of functionally diverse entities with the highest level of discrimination - though not encompassing all T cells - being either CD4+ or CD8+. While CD4+ T cells play a key role in balancing humoral, cell-mediated as well as innate immune responses, e.g. by means of cytokine secretion; CD8+ T cells are mainly responsible for Major Histocompatibility Complex (MHC) - mediated recognition and killing of tumor and virus infected cells. The CD45+CD3-CD56+ phenotype identifies Natural Killer (NK) cells that complement the specificity of T cell receptors and immunoglobulins by the recognition of the "missing self", i.e. the absence of host matched MHC molecules presenting processed antigens on the membrane surface.

Being a part of the innate human immune system, monocytes (CD45+ CD14+) play a key role in bacterial defense. Expression of the Lipopolysaccharide (LPS, endotoxin) receptor CD14 is dense on the majority of monocytes bearing a classical phenotype.

The IM Phenotyping BASIC Tube is an 8-color, 8-monoclonal antibody reagent that allows the identification of common extracellular markers of different subpopulations of lymphocytes, present in whole blood specimens.

It contains 3 Compensation Kits, each kit containing eight tubes, each of a single color: CD4-FITC; CD4-PE; CD19-ECD; CD14-PC7; CD4-APC; CD8-A700; CD3-APC-A750; CD8-Krome Orange. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|-------------|----------------------|---------------------|
| CD16 | FITC | 3G8 (IgG1 Mouse) |
| CD56 | PE | N901 (IgG1 Mouse) |
| CD19 | ECD | J3-119 (IgG1 Mouse) |
| CD14 | PC7 | RM052 (IgG2a Mouse) |
| CD4 | APC | 13B8.2 (IgG1 Mouse) |
| CD8 | Alexa Fluor* 700 | B9.11 (IgG1 Mouse) |
| CD3 | APC-Alexa Fluor* 750 | UCHT1 (IgG1 Mouse) |
| CD45 | Krome Orange | J33 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DuraClone IM Panels



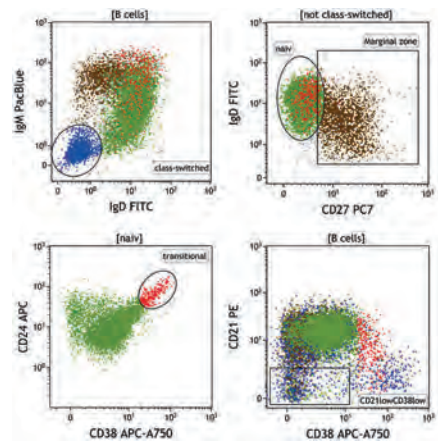
| | Size | Status | Part # |
|---------------------------------|----------|--------|--------|
| DuraClone IM B cell Tube | 25 tests | RUO | B53318 |

The major function of B cells (CD45+CD19+) in the human immune system is to recognize and memorize immunogenic structures and to terminally differentiate into plasma cells that produce antibodies against these recognized or memorized antigens. Late maturation stages of B cells are confined to peripheral compartments and can be described based on a previously published classification. The passage from bone marrow into peripheral compartments is associated with surface expression of immunoglobulin of the isotype classes M and D (IgM, IgD). Among IgM+ B cells high expression of CD24 along with absence of CD27 identifies transitional B cells, the earliest stage of maturation in peripheral compartments. Acquisition of CD27 expression identifies transition from a naïve to a marginal zone phenotype, further acquisition of low CD38 expression reveals memory identity (non-class switched). Loss of IgM and IgD surface expression is indicative of immunoglobulin isotype class switching giving rise to CD27+CD38- class-switched memory cells or CD27+CD38++ plasmablasts.

The DuraClone IM B cells Tube is an 8-color, 8- monoclonal antibody reagent that allows the characterization of B lymphocyte subpopulations present in whole blood samples.

It contains 3 compensation kits; each kit containing eight tubes, each containing a single color: CD4-FITC; CD4-PE; CD19-ECD; CD27-PC7; CD4-APC; CD38-APC-A750; CD4-Pacific Blue; CD8-Krome Orange. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|-------------|----------------------|------------------------|
| IgD | FITC | IA6-2 (IgG2a Mouse) |
| CD21 | PE | BL13 (IgG1 Mouse) |
| CD19 | ECD | J3-119 (IgG1 Mouse) |
| CD27 | PC7 | 1A4CD27 (IgG1 Mouse) |
| CD24 | APC | ALB9 (IgG1 Mouse) |
| CD38 | APC-Alexa Fluor* 750 | LS198-4-3 (IgG1 Mouse) |
| IgM | Pacific Blue* | SA-DA4 (IgG1 Mouse) |
| CD45 | Krome Orange | J33 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DuraClone IM Panels



| Size | Status | Part # |
|----------|--------|--------|
| 25 tests | RUO | B53328 |

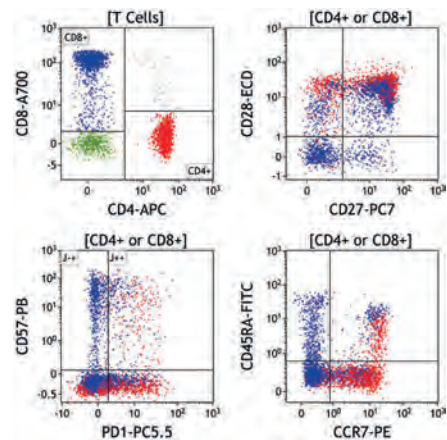
DuraClone IM T cell subsets Tube

When studying the immune response, T cell-mediated immunity is the central component. After their maturation in the thymus, T cells circulate in blood and in the lymphatic system as naive T cells expressing lymph node homing antigens such as CD197/ CCR7. Upon exposure to foreign antigens through encounter with specialized, antigen-presenting cells in secondary lymphoid tissues, T cells become antigen-specific effector cells associated with loss of CD27 and CD28 expression. Along with the effector cells, long-living central memory (CD45RA-CCR7+) and effector memory T cells (CD45RACCR7-) are generated to achieve and preserve the ability of rapid antigen-specific immune response. Terminal effector stages of T cell differentiation are indicated by upregulation of CD57 (effector phenotype) and CD279/PD-1 (co-inhibitory molecule, exhausted phenotype) expression.

The IM T cell subsets Tube is a 10-color, 10-monoclonal antibody reagent that allows the identification of common extracellular markers of different cell subsets, present in whole blood specimens.

It contains 3 Compensation Kits, each kit containing ten tubes, each of a single color: CD4-FITC, CD4-PE, CD28-ECD, CD279-PC5.5, CD27-PC7, CD4-APC, CD8-A700, CD3-APC-A750, CD4-Pacific Blue, CD8-Krome Orange. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|-------------|----------------------|---------------------------|
| CD45RA | FITC | 2H4LDH11LDB9 (IgG1 Mouse) |
| CD197 | PE | G043H7 (IgG2a Mouse) |
| CD28 | ECD | CD28.2 (IgG1 Mouse) |
| CD279 | PC5.5 | PD1.3 (IgG2b Mouse) |
| CD27 | PC7 | 1A4CD27 (IgG1 Mouse) |
| CD4 | APC | 13B8.2 (IgG1 Mouse) |
| CD8 | Alexa Fluor* 700 | B9.11 (IgG1 Mouse) |
| CD3 | APC-Alexa Fluor* 750 | UCHT1 (IgG1 Mouse) |
| CD57 | Pacific Blue* | NC1 (IgM Mouse) |
| CD45 | Krome Orange | J33 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DuraClone IM Panels



| | Size | Status | Part # |
|---|----------|--------|--------|
| DuraClone IM Dendritic cell Tube | 25 tests | RUO | B53351 |

In human blood, DC can be separated in two main subsets, namely the myeloid DCs (mDCs) and the plasmacytoid DCs (pDCs). Both subsets share the lack of expression of classical mature lymphocytes lineage markers, CD3, CD19, CD20 and CD56 as well as the monocytic CD14 and a high expression level of HLA-DR.

mDCs and pDCs differ by their CD11c expression, with mDCs expressing high level of CD11c while pDCs do not express CD11c. pDCs, which are distinguished by the expression of CD123, are less potent to present antigen but constitute the 1st barrier in anti-viral immunity. Upon virus exposure, pDCs produce large amount of Type I interferons.

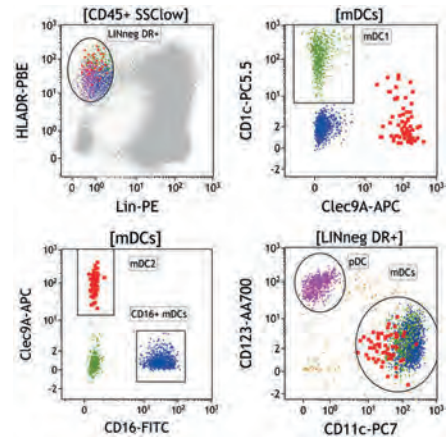
mDCs are highly efficient in antigen presentation. In blood, 3 subsets of mDCs are identified: CD1c+ mDCs (MDC1), CD141+ mDCs (MDC2), and CD16+ mDCs. MDC1 have been described as key players in the induction of immunity towards extracellular pathogens. MDC2 are suggested to drive the CD8+ T cell-mediated immune response. Recently, it has been shown that MDC2 express CLEC9A, a C-type lectin domain family. As opposed to CD141, CLEC9A presents the advantage of being expressed in both human and mouse DCs. Thus, it can serve as a DC marker crossing species barriers and may help in the translation from the mouse DC system to human immunobiology. CD16+ mDCs have been described as inflammatory dendritic cells.

The DuraClone IM Dendritic cells Tube is an 8-color, 12-monoclonal antibody reagent that allows the identification of common extracellular markers of different DC Subsets, present in whole blood specimens.

It contains 3 Compensation Kits, each kit containing eight tubes, each of a single color:

CD4-FITC; CD4-PE; CD1c-PC5.5; CD11c-PC7; CD4-APC; CD123-APCA700; CD4-Pacific Blue; CD8-Krome Orange. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|-----------------------------------|----------------------|--|
| CD16 | FITC | 3G8 (IgG1 Mouse) |
| Lineage (CD3/CD14/CD19/CD20/CD56) | PE | UCHT1 (IgG1 mouse)/RMO52 (IgG2a mouse)/J3-119 (IgG1 mouse)/ B9E9 (IgG2a mouse)/N901 (IgG1 mouse) |
| CD1c | PC5.5 | L161 (IgG1 Mouse) |
| CD11c | PC7 | BU15 (IgG1 Mouse) |
| Clec9A | APC | 8F9 (IgG2a Mouse) |
| CD123 | APC-Alexa Fluor* 700 | SSDCLY107D2 (IgG1 Mouse) |
| HLA-DR | Pacific Blue* | Immu-357 (IgG1 Mouse) |
| CD45 | Krome Orange | J33 (IgG1 Mouse) |



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DuraClone IM Panels



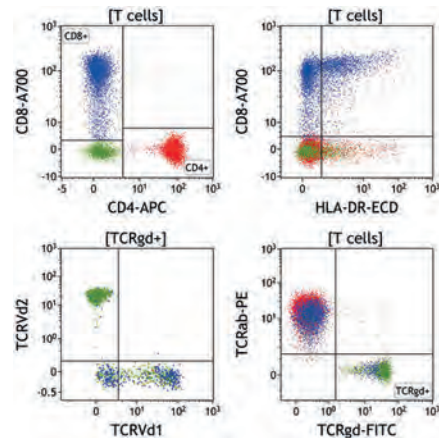
| | Size | Status | Part # |
|-------------------------------|----------|--------|--------|
| DuraClone IM TCRs Tube | 25 tests | RUO | B53340 |

Mature T cells - as identified by positive surface CD3 staining - express T cell receptors (TCRs) that enable low affinity-recognition of antigens bound to major histocompatibility complex (MHC) molecules. MHC co-binding of either CD4 (MHC class II) or CD8 (MHC class I) enhances and prolongs the engagement with the antigen-presenting cells. Two forms of TCRs are known either consisting of heterodimers of variable α and β protein chains or γ and δ protein chains. Proportions of 95% $\alpha\beta$ T cells and 5% $\gamma\delta$ T cells are commonly found in blood. The largest subset of $\gamma\delta$ T cells can be identified by the IMMU 389 antibody clone recognizing the $\gamma\delta$ complex from the V δ 2+ T cell receptor (TCR $\gamma\delta$ V δ 2+), being mostly associated with V γ 9. A smaller subset of $\gamma\delta$ T cells is staining positive with the R9.12 antibody clone that binds to the V δ 1 segment of $\gamma\delta$ T cells (TCR $\gamma\delta$ V δ 1+). The relative sizes of these two subsets have been assigned a role in feto-maternal and allograft tolerance.

The DuraClone IM TCRs Tube is a 9-color, 9-monoclonal antibody reagent that allows the identification of the TCR subtypes on the surface of mature T cells.

It contains 3 Compensation Kits, each kit containing 9 tubes, each of a single color: CD4-FITC, CD4-PE, HLA DR-ECD, V δ 1-PC7, CD4-APC, CD8-A700, CD3-APC-A750, CD4-Pacific Blue, CD8-Krome Orange. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|--------------------|----------------------|-----------------------|
| TCR $\gamma\delta$ | FITC | IMMU510 (IgG1 Mouse) |
| TCR $\alpha\beta$ | PE | IP26A (IgG1 Mouse) |
| HLA-DR | ECD | Immu-357 (IgG1 Mouse) |
| TCRV δ 1 | PC7 | R9.12 (IgG1 Mouse) |
| CD4 | APC | 13B8.2 (IgG1 Mouse) |
| CD8 | Alexa Fluor* 700 | B9.11 (IgG1 Mouse) |
| CD3 | APC-Alexa Fluor* 750 | UCHT1 (IgG1 Mouse) |
| TCRV δ 2 | Pacific Blue* | IMMU 389 (IgG1 Mouse) |
| CD45 | Krome Orange | J33 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DuraClone IM Panels



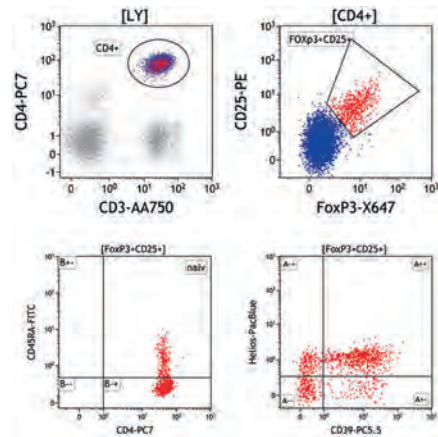
| | Size | Status | Part # |
|-------------------------------|----------|--------|--------|
| DuraClone IM Treg Tube | 25 tests | RUO | B53346 |

Regulatory T cells (Tregs) play a crucial role in the induction and maintenance of immunological tolerance. Together with CD4 and CD25, the expression of the transcription factor FoxP3 is considered the hallmark of human regulatory T cells (CD3+ CD4+ CD25+ FoxP3+). Helios, a transcription factor of the Ikaros family, has been described as a marker identifying thymus-derived nTregs - as opposed to Tregs induced in peripheral tissues (iTregs). Additionally, Helios acts as an enhancer of regulatory function. Surface expression of ectoenzyme CD39 exerts a suppressive function by its ATPase activity and is restricted to an effector/memory-like subpopulation of Tregs. CD45RA surface expression indicates a naïve or unprimed subpopulation of Tregs.

The DuraClone IM Treg Tube is an 8-color, 8-monoclonal antibody reagent that allows the identification of subpopulations of regulatory T cells in human whole blood samples by eight color flow cytometry.

It contains 3 Compensation Kits, each kit containing eight tubes, each of a single color: CD4-FITC; CD4-PE; CD39-PC5.5; CD4-PC7; FoxP3-A647; CD3-APC-A750; CD4-Pacific Blue; CD8-Krome Orange. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|-------------|----------------------|---------------------------|
| CD45RA | FITC | 2H4LDH11LDB9 (IgG1 Mouse) |
| CD25 | PE | B1.49.9 (IgG2a Mouse) |
| CD39 | PC5.5 | BA54 (IgG1 Mouse) |
| CD4 | PC7 | SFC112T4D11 (IgG1 Mouse) |
| FoxP3 | Alexa Fluor* 647 | 259D (IgG1 Mouse) |
| CD3 | APC-Alexa Fluor* 750 | UCHT1 (IgG1 Mouse) |
| Helios | Pacific Blue* | 22F6 (IgG Hamster) |
| CD45 | Krome Orange | J33 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DuraClone IM Panels



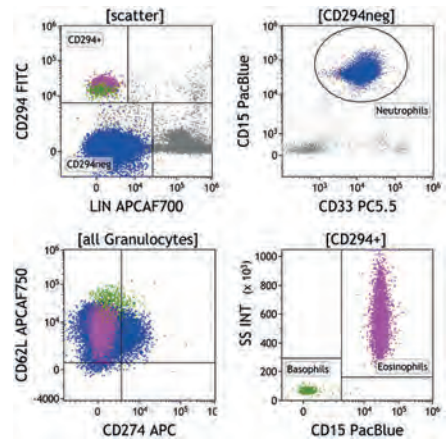
| | Size | Status | Part # |
|---------------------------------------|----------|--------|--------|
| DuraClone IM Granulocytes Tube | 25 tests | RUO | B88651 |

Granulocytes are part of the human innate immune system. Recent findings suggest that granulocytes, besides providing anti-microbial host defense, may play an important immune-modulatory role leading to an increasing interest in studying granulocytes in the context of autoimmunity and tolerance.

The DuraClone IM Granulocytes Tube is a 9-color antibody reagent that allows the identification of major granulocyte subpopulations including assessment of CD11b, CD16, CD62L and PD-1L (CD274) co-expression.

It contains 3 Compensation Kits, each kit containing 9 tubes, each of a single color: CD4-FITC; CD16-ECD; CD33-PC5.5; CD11b-PC7; CD4-APC; CD19-APC-A700; CD62L-APC-A750; CD4-Pacific Blue; CD8-Krome Orange. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|----------------------------------|----------------------|---|
| CD15 | Pacific Blue* | 80H5 (IgM Mouse) |
| CD45 | Krome Orange | J33 (IgG1 Mouse) |
| CD294 | FITC | BM16 (IgG2a Rat) |
| CD16 | ECD | 3G8 (IgG1 Mouse) |
| CD33 | PC5.5 | D3HL60.251 (IgG1 Mouse) |
| CD11b | PC7 | Bear1 (IgG1 Mouse) |
| CD274 | APC | PD-L1 (IgG1 Mouse) |
| Lineage (CD3/CD14/ CD19/CD56) | APC-Alexa Fluor* 700 | UCHT1 (IgG1 mouse)/RMO52 (IgG2a mouse)/B9E9 (IgG2a mouse)/N901 (IgG1 mouse) |
| CD62L | APC-Alexa Fluor* 750 | DREG56 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DuraClone IM Panels



| Size | Status | Part # |
|----------|--------|--------|
| 25 tests | RUO | C00162 |

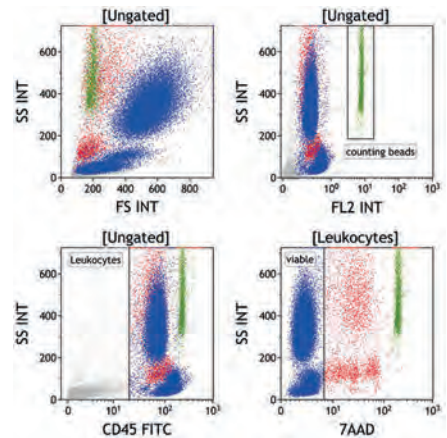
DuraClone IM Count

Although flow cytometry only provides relative quantitation of cell number, it is possible to determine the absolute cell number using reference beads of known concentration mixed with the human whole blood sample of interest.

This test is based on the ability of specific monoclonal antibodies to bind to the antigenic determinants expressed by lineage committed cells and the binding of membrane-impermeant 7-aminoactinomycin D to the DNA of dead cells due to their lost membrane integrity. Additionally, the mixing of a known number of beads with a known volume of a whole blood can be used to determine the number of cells in the whole blood per unit volume.

The DuraClone IM Count is used for enumeration of CD45+ cells in whole blood while simultaneously differentiating live and dead cells.

| Specificity | Fluorochrome | Clone (Isotype) |
|-------------------|--------------|------------------|
| CD45 | FITC | J33 (IgG1 Mouse) |
| 7-AAD | - | - |
| Fluorescent Beads | - | - |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.



The dry DuraClone RE panels enable sensitive detection of rare abnormal cell populations in blood or bone marrow using carefully optimized and highly dosed antibody combinations.

DuraClone tubes contain a coating of dry ready-to-use antibody panel stable at room temperature for worry-free storage and shipping. The complete elimination of antibody pipetting minimizes human error sources and purges the workflow from repetitive actions that are expensive to automate. Reagent inventory management and cumbersome lot-to-lot equivalence testing are reduced to a minimum.

Three dried reagent **single color compensation kits** are provided with each package of 25 assay tubes.

- Solutions for rare event cytometry.
- Designed and optimized together with key experts.
- Standardized for use in clinical research studies.



| | Size | Status | Part # |
|------------------------------|----------|--------|--------|
| DuraClone RE CLB Tube | 25 tests | RUO | B80393 |

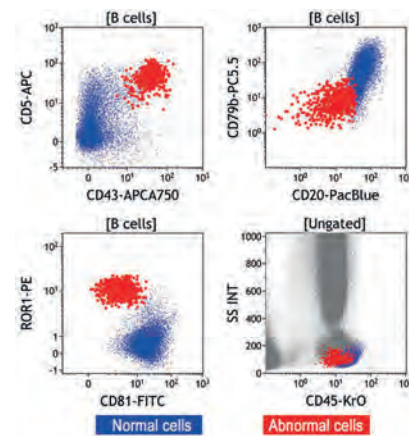
Detection of CD45⁺CD19⁺ROR1⁺CD5⁺CD43⁺CD81⁺CD20⁻CD79b⁻ B cells.

Mature human peripheral B cells (CD45+CD19+ lymphocytes) express high density levels of the antigens CD20, CD79b and CD81 on their surface. In contrast, the antigens CD5, CD43 and ROR1 are expressed at low density levels limited to a small fraction of these cells. Deviation from these patterns involving high expression of CD5, CD43 and ROR1 accompanied by reduced expression densities of CD20, CD79b, and CD81 can be utilized to identify abnormal B cells even at very low frequencies.

The DuraClone RE CLB tube is an 8-color, 8-monoclonal antibody reagent that allows the identification of abnormal B cells in human whole blood samples by eight color flow cytometry.

It contains 3 Compensation Kits, each kit containing eight tubes, each of a single color: CD4-FITC; CD4-PE; CD79b-PC5.5; CD19-PC7; CD4-APC; CD43-APC-A750; CD4-PB; CD8-Krome Orange. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|-------------|----------------------|-----------------------|
| CD20 | Pacific Blue* | B9E9 (IgG2a Mouse) |
| CD45 | Krome Orange | J33 (IgG1 Mouse) |
| CD81 | FITC | JS64 (IgG2a Mouse) |
| ROR1 | PE | 2A2 (IgG1 Mouse) |
| CD79b | PC5.5 | CB3-1 (IgG1 Mouse) |
| CD19 | PC7 | J3-119 (IgG1 Mouse) |
| CD5 | APC | CLB-T1/1 (IgG1 Mouse) |
| CD43 | APC-Alexa Fluor* 750 | DFT1 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DuraClone RE Panels



| | Size | Status | Part # |
|-----------------------------|----------|--------|--------|
| DuraClone RE PC Tube | 25 tests | RUO | B80394 |

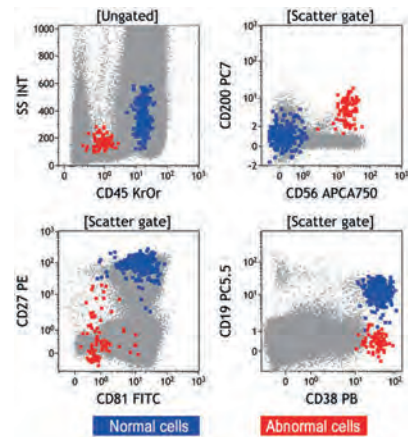
Detection of CD45⁺CD38⁺CD138⁺CD56⁺CD200⁺CD19⁺CD27⁺CD81⁺ plasma cells.

Human plasma cells (CD45+CD38+CD138+) express high density levels of the antigens CD19, CD27 and CD81 on their surface. In contrast, the antigens CD56 and CD200 are expressed at low density levels or are even completely absent. Deviation from these patterns involving high expression of CD56 and/or elevated expression of CD200 often accompanied by reduced expression densities or even absence of CD19 and/or CD27 and/or CD81 and/or CD45 can be utilized to identify abnormal plasma cells even at very low frequencies.

The DuraClone RE PC tube is an 8-color, 8-monoclonal antibody reagent that allows the identification of abnormal plasma cells in human bone marrow samples post red blood cell lysis.

It contains 3 Compensation Kits, each kit containing eight tubes, each of a single color: CD4-FITC; CD4-PE; CD19-PC5.5; CD200-PC7; CD4-APC; CD56-APC-A750; CD4-PB; CD8-Krome Orange. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|-------------|----------------------|------------------------|
| CD38 | Pacific Blue* | LS198-4-3 (IgG1 Mouse) |
| CD45 | Krome Orange | J33 (IgG1 Mouse) |
| CD81 | FITC | JS64 (IgG2a Mouse) |
| CD27 | PE | 1A4CD27 (IgG1 Mouse) |
| CD19 | PC5.5 | J3-119 (IgG1 Mouse) |
| CD200 | PC7 | OX-104 (IgG1 Mouse) |
| CD138 | APC | B-A38 (IgG1 Mouse) |
| CD56 | APC-Alexa Fluor* 750 | N901 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DuraClone RE Panels



| | Size | Status | Part # |
|------------------------------|----------|--------|--------|
| DuraClone RE ALB Tube | 25 tests | RUO | C00163 |

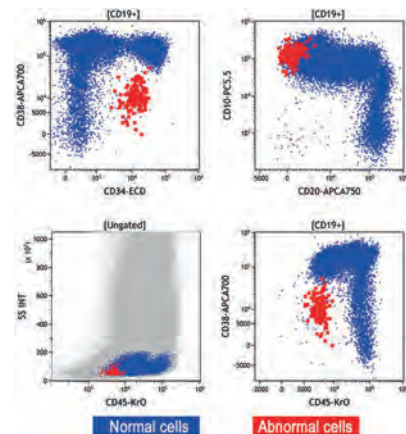
Detection of immature B cells with anomalous pattern of CD10, CD20, CD34, CD38, CD58.

Discrimination of abnormal from normal B cells during early stages of B cell development in human bone marrow can be realized through precise assessment of B cell surface antigen expression patterns. Normal and abnormal patterns in B cells can be defined by differential densities of CD10, CD19, CD20, CD34, CD38, CD45 and CD58 expression on the surface of B cells.

The DuraClone RE ALB Tube is a 7-color, 7 monoclonal antibody reagent that allows the identification of abnormal precursor B cells in human bone marrow samples post red blood cell lysis.

It contains 3 Compensation Kits, each kit containing seven tubes, each of a single color: CD4-FITC; CD34-ECD; CD10-PC5.5; CD19-PC7; CD38-APC-A700; CD20-APC-A750; CD8-Krome Orange. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|-------------|----------------------|------------------------|
| CD58 | FITC | AICD58 (IgG2a Mouse) |
| CD34 | ECD | 581 (IgG1 Mouse) |
| CD10 | PC5.5 | ALB1 (IgG1 Mouse) |
| CD19 | PC7 | J3-119 (IgG1 Mouse) |
| CD38 | APC-Alexa Fluor* 700 | LS198-4-3 (IgG1 Mouse) |
| CD20 | APC-Alexa Fluor* 750 | B9E9 (IgG2a Mouse) |
| CD45 | Krome Orange | J33 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.



The DuraClone IF panels reveal immune function utilizing a streamlined and simplified intracellular staining workflow.

The sensitive and specific characterization of a cytokine response at the single cell level demonstrates the unique strength of cytometry. When using dry pre-formulated DuraClone IF antibody panels you can be certain that the detection of cellular responses is not biased by antibody pipetting variability or suboptimal panel design.

Three dried reagent **single color compensation kits** are provided with each package of 25 assay tubes.

- Pre-formulated 5-6 color antibody panels
- Unitized dry Beckman Coulter proprietary format
- Expert-proven marker combinations
- Open slots for additional drop-in markers
- Designed for minimal spillover into detectors for functional read-out parameters
- Standardized for use in clinical research studies



See pages 183-184 for DurActive dry stimulation kits

| | Size | Status | Part # |
|---------------------------------------|----------|--------|--------|
| DuraClone IF T Activation Tube | 25 tests | RUO | B88649 |

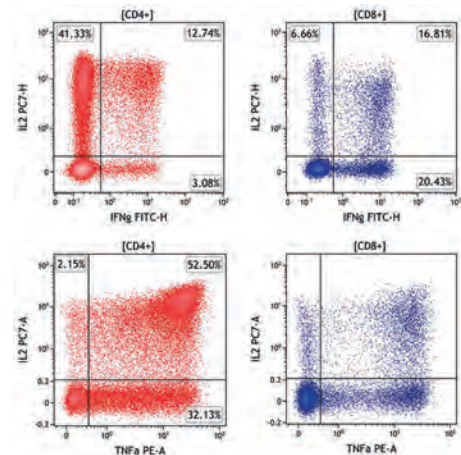
Detection of proinflammatory cytokines in T cells

T cells represent a central subset of the adaptive immune system. Upon recognition of specific antigens T cells - among other responses - secrete inflammatory cytokines such as IFN- γ , TNF- α and IL-2 which stimulate complementary parts of the immune system to defend the host against the provoking pathogens. Identification of cytokine-secreting T cells subsets is an important tool in studying and understanding T cell function in immune activation and suppression.

The DuraClone IT T Activation tube is a 6-color reagent that allows the identification of IFN γ , TNF α and IL2 secreting CD4⁺ and CD8⁺ T cells.

It contains 3 compensation Kits, each kit containing six tubes, each of a single color: CD4-FITC; CD4-PE; IL2-PC7; CD8-AF700; CD3-AF750; CD4-PB. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|---------------|------------------|-----------------------|
| CD4 | Pacific Blue* | 13B8.2 (IgG1 Mouse) |
| IFN- γ | FITC | 45.15 (IgG1 Mouse) |
| TNF α | PE | IPM2 (IgG1 Mouse) |
| IL-2 | PC7 | MQ1-17H12 (IgG2a Rat) |
| CD8 | Alexa Fluor* 700 | B9.11 (IgG1 Mouse) |
| CD3 | Alexa Fluor* 750 | UCHT1 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DuraClone IF Panels



| | Size | Status | Part # |
|-----------------------------------|----------|--------|--------|
| DuraClone IF T Helper Cell | 25 tests | RUO | C04666 |

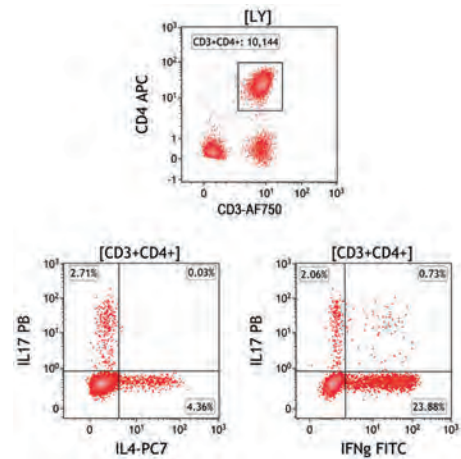
Detection of Th1/Th2/Th17 signature cytokines in T helper cells

CD4⁺ T cells represent the majority of T lymphocytes in the secondary lymphoid organs. They preferentially recognize HLA Class II and their activation leads to their differentiation into subsets depending on the context of the stimuli. Activated CD4⁺ T cell subsets can be identified by their signature cytokines like IL-4, IL-17A and/or IFN- γ which are important for their helper cell functions.

The DuraClone IF T Helper Cell tube is a 5-color reagent that allows to identify IFN γ -, IL-4- and IL-17A-secreting CD4⁺ T helper cell subsets (Th1, Th2, Th17).

It contains 3 compensation Kits, each containing five tubes, each of a single color: CD4-FITC; IL4-PC7; CD4-APC; CD3-AF750; CD4-PB. All tandem dye-labeled antibodies are lot-matched.

| Specificity | Fluorochrome | Clone (Isotype) |
|---------------|------------------|---------------------|
| IL-17A | Pacific Blue* | BL168 (IgG1 Mouse) |
| IFN- γ | FITC | 45.15 (IgG1 Mouse) |
| IL-4 | PC7 | MP4-25D2 (IgG1 Rat) |
| CD4 | APC | 13B8.2 (IgG1 Mouse) |
| CD3 | Alexa Fluor* 750 | UCHT1 (IgG1 Mouse) |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DurActive Panels



The DurActive dry stimulation kits ensure reliability of the first crucial step in cellular activation assays before a precisely coordinated signaling cascade can yield its response.

Functional assays such as induction of cytokine expression typically involve time-critical thawing of frozen stimulation cocktails and liquid handling of resulting small volumes. The DurActive stimulation kits eliminate freeze-storage and error-prone liquid handling as they are dry ready-to-use stimulation mixes in unitized 1-test-format, stable at room temperature.

The DurActive stimulation kits contain optimally dosed physiologically active compounds provided as unitized single tests in 12x75 mm tube format.

- Unitized dry Beckman Coulter proprietary format avoids freezing, thawing, diluting and pipetting
- Pre-formulated mixes containing 2-3 active compounds at expert-proven optimal dose
- Safe handling of dry stimulation mixes due to sub-hazardous amounts of stimulating agents without organic solvents
- Convenient 25 tests / package



DurActive 1

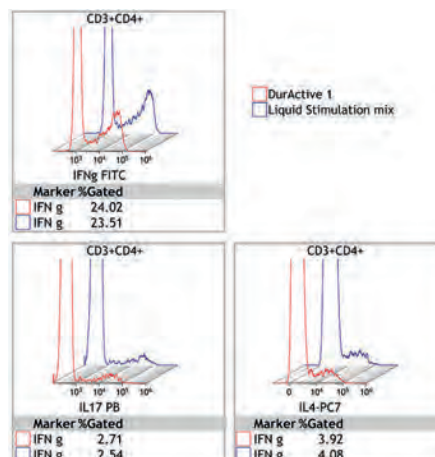
| Size | Status | Part # |
|----------|--------|--------|
| 25 tests | RUO | C11101 |

Dry Stimulation Mixes for Immune Functional Assays

Phorbol-Myristate-acetate (PMA) and Ionomycin are broad cellular activators of human leukocytes. Brefeldin A blocks Golgi-apparatus-mediated secretion. A mix of these 3 compounds strongly activates leukocytes and traps newly synthesized biomolecules (e.g. cytokines) inside the cell, hence it can serve e.g. as positive control for leukocyte (ligand-specific) functional assays and as a nonspecific activator in leukocyte functional subtyping experiments.

The DurActive stimulation kits contain optimally dosed physiologically active compounds provided as unitized single tests in 12x75 mm tube format.

| Components |
|--|
| Phorbol 12-myristate 13 acetate (PMA) |
| Ionomycin calcium salt from Streptomyces conglobatus |
| Brefeldin A |



Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DurActive Panels



| | Size | Status | Part # |
|--------------------|----------|--------|--------|
| DurActive 2 | 25 tests | RUO | C11102 |

Dry Stimulation Mixes for Immune Functional Assays

Phorbol-Myristate-acetate (PMA) and Ionomycin are broad cellular activators of human leukocytes. A mix of these 2 compounds strongly activates leukocytes, hence it can serve e.g.: As a positive control in leukocyte (ligand-specific) functional assays or as a nonspecific activator in leukocyte functional subtyping experiments (e.g. for inducing NET formation and NADPH -oxidase activity in Neutrophils).

The DurActive stimulation kits contain optimally dosed physiologically active compounds provided as unitized single tests in 12x75 mm tube format.

| Components |
|---|
| Phorbol 12-myristate 13 acetate (PMA) |
| Ionomycin calcium salt from <i>Streptomyces conglobatus</i> |

Not available in all geographies. DuraClone IM Panels are available for Research Use Only. Not for use in diagnostics procedures.

DuraClone Panels

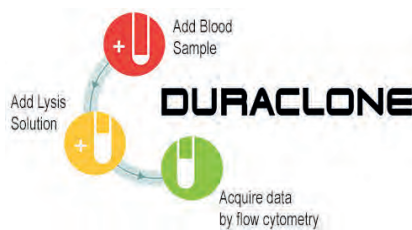


Beckman Coulter takes flow cytometry innovation to the next level with the DuraClone line of dry reagents. DuraClone Reagents simplify your workflow and minimize your hands-on time.

DuraClone Dry Reagents come in a format that ensures stability for long periods of time without the need for refrigerated shipping or storage. Beckman Coulter new DuraClone line of dry reagents enables you to simplify and expedite sample preparation and handling while delivering the same performance as liquid reagents.



The DuraLyse solution is provided with DuraClone products (except where indicated). It is a lysing solution which results in simultaneous lysis of red blood cells under gentle hypotonic conditions and fixation of the leukocytes resulting in a leukocyte suspension substantially free of red blood cells and suitable for flow cytometric analysis.



ACCURATE AND REPRODUCIBLE

- Clones have been studied and clustered during an International Workshop on Human Leucocyte Differentiation Antigens (HLDA)
- No titration of antibodies
- No risk of aggregation in dried form

STABLE AND CONVENIENT

- Stable at room temperature
- Pre-dispensed reagents in unitized form standardizes testing, reduces hands-on time
- Dried down reagents - No refrigeration

Size Status Part #

DuraClone Tri T-STAT CD3/CD4/CD8 Reagent Kit

50 tests

CE

B39492

The DuraClone Tri T-STAT CD3/CD4/CD8 Reagent Kit is a three color immunofluorescence stain for the identification and enumeration of helper/inducer (CD4⁺) cytotoxic/suppressor (CD8⁺) and total T-lymphocytes (CD3⁺) combined with a precise number of fluorescent counting beads for absolute CD3⁺, CD4⁺, CD8⁺, T-Cells counts. This reagent is intended for flow cytometry based analysis in lysed human whole blood samples.

The reagent contains fluorescently labeled antibodies that bind to CD3, CD4 and CD8 antigens found on the surface of circulating leukocytes. The CD3 antigen is a complex of at least six proteins, known collectively as the T-cell receptor (TCR) complex. The antibody used in this reagent binds to the 20 kDa ϵ chain of this complex.

The CD4 antigen is a 59 kDa protein which interacts with class II molecules of the major histocompatibility complex and is the primary receptor for the Human Immunodeficiency Virus (HIV). The CD8 antigen is a complex consisting of two disulfide linked subunits. The antibody used in this reagent binds to the 32 kDa α subunit of the complex. CD8 interacts with class I major histocompatibility complex molecules.

| Components | Size | Specificity | Fluorochrome | Clone (Isotype) |
|---------------------------------|-----------|-------------|--------------|---------------------|
| CD4-Atto488/CD8-PE/CD3-PE-Dy649 | 50 tubes | CD4 | Atto488 | RPA-T4 (IgG1 Mouse) |
| | | CD8 | PE | LT8 (IgG Mouse) |
| | | CD3 | PE-Dy649 | UCHT1 (IgG1 Mouse) |
| DuraLyse Solution | 1 x 25 mL | - | - | - |

Not available in all geographies. DuraClone Dry Reagents are available for IVD use only in those markets for which they have been registered per applicable regulations.

DuraClone Panels



| | Size | Status | Part # |
|------------------------------------|----------|--------|---------------|
| DuraClone 34845 Reagent Kit | 50 tests | CE | B36855 |

The DuraClone 34845 Reagent Kit is a four color immunofluorescence stain for the identification and enumeration of helper/inducer (CD4⁺) cytotoxic/suppressor (CD8⁺) and total T-lymphocytes (CD3⁺) combined with a precise number of fluorescent counting beads for absolute CD3⁺, CD4⁺, CD8⁺, T-Cells and absolute lymphocyte counts. This reagent is intended for flow cytometry based analysis in lysed human whole blood samples.

The reagent contains fluorescently labeled antibodies that bind to CD45, CD3, CD4 and CD8 antigens found on the surface of circulating leukocytes. The CD3 antigen is a complex of at least six proteins, known collectively as the T-cell receptor (TCR) complex. The antibody used in this reagent binds to the 20 kDa ϵ chain of this complex. The CD4 antigen is a 59 kDa protein which interacts with class II molecules of the major histocompatibility complex and is the primary receptor for the Human Immunodeficiency Virus (HIV). The CD8 antigen is a complex consisting of two disulfide linked subunits. The antibody used in this reagent binds to the 32 kDa α subunit of the complex. CD8 interacts with class I major histocompatibility complex molecules. The CD45 antigen is a complex 180-220 kDa transmembrane glycoprotein which is expressed in high levels on leukocyte cell surfaces and its presence distinguishes leukocytes from non-haematopoietic cells.

| Components | Size | Specificity | Fluorochrome | Clone (Isotype) |
|---------------------------------------|-----------|-------------|--------------|---------------------|
| CD3-Atto488/CD8-PE/CD4-APC/CD45-PerCP | 50 tubes | CD3 | Atto488 | UCHT1 (IgG1 Mouse) |
| | | CD8 | PE | LT8 (IgG Mouse) |
| | | CD4 | APC | RPA-T4 (IgG1 Mouse) |
| | | CD45 | PerCP | HI30 (IgG1 Mouse) |
| DuraLyse Solution | 1 x 25 mL | - | - | - |

| | Size | Status | Part # |
|----------------------------------|----------|--------|---------------|
| DuraClone B27 Reagent Kit | 50 tests | CE | B36862 |

The DuraClone B27 Reagent Kit comprises a two-color, immunofluorescence stain, suitable for detecting the HLA-B27 antigen expression in erythrocyte-lysed, human whole blood samples (for example, a lyse and no wash protocol), using a flow cytometer. This reagent is not intended to be used to determine the HLA-B27 tissue group.

The Human Leukocyte Antigen (HLA) B27 is a Class I surface antigen encoded by the B locus in the major histocompatibility complex (MHC) that presents microbial antigens to T-lymphocytes. The onset of seronegative spondyloarthropathies that include ankylosing spondylitis, Reiter's disease, psoriatic arthritis and inflammatory bowel disease are associated with the expression of HLA-B27 antigen on T-lymphocytes. Screening for HLA-B27 is thus of clinical relevance in conjunction with the symptomatic presentation of the disorder. Micro-lymphotoxicity tests are conventionally used in HLA-typing but are time-consuming and expensive. Flow cytometry has gradually evolved into a faster and reliable method for screening samples for HLA-B27 antigen.

T-lymphocytes selected through gating of the CD3⁺ specific population are analyzed for staining by HLA-B27 conjugates. It has been demonstrated that this pre-selection of T-lymphocytes increases the specificity of the test by eliminating the background attributed to other leukocyte populations. Another method of lowering the risk of false-positives is by the addition of an Anti-B7 antibody to the reagent cocktail. The Anti-B7 antibody competes with the Anti-B27 antibody for the B7 antigen and in this manner, suppressing the incidence of cross-reactivity of Anti-B27 antibodies to B7 antigens.

The DuraClone B27 Reagent Kit contains two clones of the Anti-HLA-B27 antibody and an Anti-B7 antibody. The presence of these antibodies improves the specificity of the reagent. The Anti-B7 antibody binds preferentially to the B7 antigen, thus reducing cross-reactivity.

The test result is a direct extrapolation of the fluorescent staining intensity of the HLA-B27 conjugates with respect to a cutoff value. A protocol, specific to BD Biosciences* instruments, is detailed in the B27 Reagent Kit IFU (Instruction for Use).

| Components | Size | Specificity | Fluorochrome | Clone (Isotype) |
|--------------------------------|-----------|-------------|--------------|--------------------------|
| CD3-PE-Dy649/HLA-B27-PE/HLA-B7 | 50 tubes | CD3 | PE-Dy649 | UCHT1 (IgG1 Mouse) |
| | | HLA-B27 | PE | HLA-ABC-m3 (IgG2a Mouse) |
| | | HLA-B27 | PE | FD705 (IgG2b Mouse) |
| | | HLA-B7 | - | BB7.1 (IgG1 Mouse) |
| DuraLyse Solution | 1 x 25 mL | - | - | - |

Not available in all geographies. DuraClone Dry Reagents are available for IVD use only in those markets for which they have been registered per applicable regulations.

ClearLLab Antibody Solutions

The ClearLLab reagents are intended for in vitro diagnostic use as a screening panel for identification of various cell populations by immunophenotyping on an FC 500 flow cytometer. These reagents are used as an aid in the differential diagnosis of hematologically abnormal patients having, or suspected of having hematopoietic neoplasia including chronic leukemia, acute leukemia, non-Hodgkin lymphoma, myeloma, myelodysplastic syndrome (MDS), and/or myeloproliferative neoplasms (MPN). The reagents can be used with peripheral whole blood (collected in K2EDTA, ACD or Heparin), bone marrow (collected in K2EDTA, ACD or Heparin) and lymph node specimens for immunophenotyping. The results should be interpreted along with additional clinical and laboratory findings.

These reagents provide qualitative results for the parameters listed below:

- ClearLLab B1: Kappa, Lambda, CD19, CD5, CD45
- ClearLLab B2: CD20, CD10, CD19, CD38, CD45
- ClearLLab M: CD7, CD13, CD34, CD33, CD45
- ClearLLab T1: CD2, CD56, CD7, CD5, CD45
- ClearLLab T2: CD8, CD4, CD3, CD45

- CE marked and FDA cleared: Minimize your lab's validation work.
- Enhanced workflow: No manual antibody cocktail preparation.
- Consensus aligned: Ensures you work according to international guidelines.
- Small kit size: Adapt your inventory to actual demand with the 25 tests/vial.
- Versatile: ClearLLab can be used with peripheral blood, bone marrow and lymph node specimens.
- Identify major cell populations with ClearLLab's 5-combination, 18-marker panels.



A casebook has been designed to present examples of flow cytometric immunophenotyping data and analysis using Beckman Coulter's ClearLLab reagents on the Beckman Coulter FC 500 flow cytometer.






Cases with characteristic findings typical of various lymphoid and myeloid neoplasms are included, as are cases from patients with clinical and/or laboratory findings that suggest an underlying neoplastic process, but in which no immunophenotypic abnormality is identified. Specimen types include peripheral blood, bone marrow, and lymph nodes.

Each case includes a clinical vignette that describes the patient demographics and clinical history, case specific listmode data files for reanalysis by the user of this casebook, ClearLLab-specific analysis protocols to be used with the listmode data, and a report showing the analysis with provided protocols. Each case concludes with an Analysis Notes section that highlights the immunophenotypic findings as well as potential pitfalls.

NOTE: Casebook examples are provided for illustrative purposes only, and not all categories of hematomorphoid neoplasms may be represented, nor are all possible immunophenotypic variants described or demonstrated.

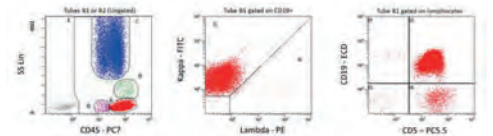
ClearLLab B1

k Chain-FITC/λ Chain-PE/CD19-ECD/CD5-PC5.5/CD45-PC7

| Combination | Clone | Isotype |
|---|------------|------------------------------|
|  Kappa-FITC | Polyclonal | F(ab') ₂ (rabbit) |
|  Lambda-PE | Polyclonal | F(ab') ₂ (rabbit) |
|  CD19-ECD | J3-119 | IgG1 (mouse) |
|  CD5-PC5.5 | BL1a | IgG2a (mouse) |
|  CD45-PC7 | J33 | IgG1 (mouse) |






| Size | Format | Line | Status | Part # |
|----------|--------|-----------|--------|--------|
| 25 tests | Liquid | ClearLLab | CE | B66809 |

Examples of dual parameter histograms from a mature B-cell neoplasm sample for ClearLLab B1 and B2 reagents. Note: not all histograms shown.



ClearLLab B2

CD20-FITC/CD10-PE/CD19-ECD/CD38-PC5.5/CD45-PC7

| Combination | Clone | Isotype |
|---|-----------|---------------|
|  CD20-FITC | B9E9 | IgG2a (mouse) |
|  CD10-PE | ALB1 | IgG1 (mouse) |
|  CD19-ECD | J3-119 | IgG1 (mouse) |
|  CD38-PC5.5 | LS198-4-3 | IgG1 (mouse) |
|  CD45-PC7 | J33 | IgG1 (mouse) |

| Size | Format | Line | Status | Part # |
|----------|--------|-----------|--------|--------|
| 25 tests | Liquid | ClearLLab | CE | B66810 |

ClearLab Antibody Solutions

ClearLab M

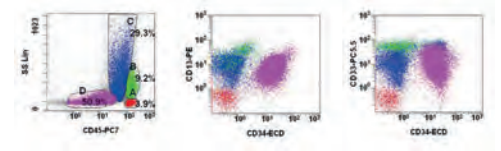
CD7-FITC/CD13-PE/CD34-ECD/CD33-PC5.5/CD45-PC7

Combination *Clone* *Isotype*

| | | | |
|---------------------------------------|-------------------|------------|---------------|
| ■ | CD7-FITC | 8H8.1 | IgG2a (mouse) |
| ■ | CD13-PE | 366 | IgG1 (mouse) |
| ■ | CD34-ECD | 581 | IgG1 (mouse) |
| ■ | CD33-PC5.5 | D3HL60.251 | IgG1 (mouse) |
| ■ | CD45-PC7 | J33 | IgG1 (mouse) |

| Size | Format | Line | Status | Part # |
|----------|--------|----------|--------|--------|
| 25 tests | Liquid | ClearLab | CE | B66812 |

Examples of dual parameter histograms from an acute myeloid leukemia (AML) bone marrow sample for ClearLab Myeloid reagents. Note: not all histograms shown.



ClearLab T1

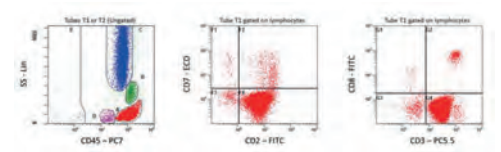
CD2-FITC/CD56-PE/CD7-ECD/CD5-PC5.5/CD45-PC7

Combination *Clone* *Isotype*

| | | | |
|---------------------------------------|------------------|--------|---------------|
| ■ | CD2-FITC | 39C1.5 | IgG2a (rat) |
| ■ | CD56-PE | N901 | IgG1 (mouse) |
| ■ | CD7-ECD | 8H8.1 | IgG2a (mouse) |
| ■ | CD5-PC5.5 | BL1a | IgG2a (mouse) |
| ■ | CD45-PC7 | J33 | IgG1 (mouse) |

| Size | Format | Line | Status | Part # |
|----------|--------|----------|--------|--------|
| 25 tests | Liquid | ClearLab | CE | B66807 |

Examples of dual parameter histograms from a mature T-cell neoplasm peripheral blood sample for ClearLab T1 and T2 reagents. Note: not all histograms shown.



ClearLab T2

CD8-FITC/CD4-PE/CD3-PC5.5/CD45-PC7

Combination *Clone* *Isotype*

| | | | |
|---------------------------------------|------------------|-------------|--------------|
| ■ | CD8-FITC | B9.11 | IgG1 (mouse) |
| ■ | CD4-PE | SFC112T4D11 | IgG1 (mouse) |
| ■ | CD3-PC5.5 | UCHT1 | IgG1 (mouse) |
| ■ | CD45-PC7 | J33 | IgG1 (mouse) |

| Size | Format | Line | Status | Part # |
|----------|--------|----------|--------|--------|
| 25 tests | Liquid | ClearLab | CE | B66808 |

ClearLLab LS Antibody Solutions

ClearLLab LS (Lymphoid Screen)

The ClearLLab LS (Lymphoid Screen) reagent is intended for in vitro diagnostic use as a screening panel for identification of various hematology lymphoid cell populations by immunophenotyping on an Navios flow cytometer. The reagent is used as an aid in the differential diagnosis of patients with signs and/or symptoms of hematology lymphoid malignancies. The reagent can be used with peripheral whole blood (collected in EDTA, ACD and Heparin), bone marrow specimens (collected in EDTA, ACD and Heparin) and lymph node specimens for immunophenotyping. The results should be interpreted along with additional clinical and laboratory findings. The reagents provide qualitative results for B, T, and NK lineages.



The antigen specificity of the CD45, CD3, CD4, CD8, CD56 and CD5 monoclonal antibodies has been previously established by the First (CD4, CD8 and CD3), Third (CD5 and CD45), and Fourth (CD56) International Workshop for Leukocyte Typing.

The antigen specificity of the CD20, CD19, CD10 and CD34 monoclonal antibodies has been previously established by the Human Leukocyte Differentiation Antigen Workshops.

The application of Kappa and Lambda light chain analysis for immunophenotyping B lymphopoietic malignancies has been previously described in the flow cytometric immunophenotyping for hematologic neoplasms.



This casebook has been designed to present examples of flow cytometric immunophenotyping data and analysis using Beckman Coulter's ClearLLab LS Lymphoid Screen reagent on the Beckman Coulter Navios flow cytometer.

Cases with characteristic findings typical of various lymphoid and myeloid neoplasms are included, as are cases from patients with clinical and/or laboratory findings that suggest an underlying neoplastic process, but in which no immunophenotypic abnormality is identified. Specimen types include peripheral blood, bone marrow, and lymph nodes.

Each case includes a clinical vignette that describes the patient demographics and clinical history, case-specific listmode data files for reanalysis by the user of this casebook, ClearLLab LS-specific analysis protocols to be used with the listmode data, and a report showing the analysis with provided protocols. Each report includes analysis notes that highlight the immunophenotypic findings as well as potential pitfalls.

NOTE: Casebook examples are provided for illustrative purposes only, and not all categories of hematology lymphoid neoplasms may be represented, nor are all possible immunophenotypic variants described or demonstrated.












ClearLLab LS (Lymphoid Screen)

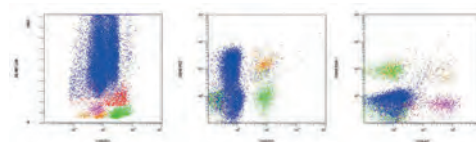
k Chain+CD8-FITC/λ Chain+CD4-PE/CD19-ECD/CD56-PC5.5/CD10-PC7/CD34-APC/CD5-APC-A700/CD20-APC-A750/CD3-PB/CD45Kro

Combination

Clone

Isotype

| | | | |
|---|----------------------|------------|------------------------------|
|  | kappa-FITC | Polyclonal | F(ab') ₂ (rabbit) |
|  | CD8-FITC | B9.11 | IgG1 (mouse) |
|  | lambda-PE | Polyclonal | F(ab') ₂ (rabbit) |
|  | CD4-PE | 13B8.2 | IgG1 (mouse) |
|  | CD19-ECD | J3-119 | IgG1 (mouse) |
|  | CD56-PC5.5 | N901 | IgG1 (mouse) |
|  | CD10-PC7 | ALB1 | IgG1 (mouse) |
|  | CD34-APC | 581 | IgG1 (mouse) |
|  | CD5-AF700 | BL1a | IgG2a (mouse) |
|  | CD20-APC-A750 | B9E9 | IgG2a (mouse) |
|  | CD3-PB | UCHT1 | IgG1 (mouse) |



Normal Bone Marrow . Granulocytes (blue), monocytes (red), lymphocytes (green), myeloblasts (pink) and B-lymphoid progenitors aka "hematogones" (orange).

| Size | Format | Line | Status | Part # |
|----------|--------|-----------|--------|--------|
| 25 tests | Dry | ClearLLab | CE | B74073 |

ClearLLab LS Antibody Solutions



ClearLLab LS Compensation

ClearLLab Compensation Kit

| Size | Format | Line | Status | Part # |
|---------|--------|-----------|--------|--------|
| 5 tests | Dry | ClearLLab | CE | B74074 |

The ClearLLab Compensation kit consists of ten single-color fluorescent reagent tubes comprised of one monoclonal antibody : CD3 or CD4 or CD8. Each antibody is labelled with one of ten fluorochromes: FITC, PE, ECD, PC5.5, PC7, APC, APC A700, APC A750, Pacific Blue and Krome Orange.

The ClearLLab Compensation Kit may be used with the CYTO-COMP Cell Kit or with normal whole blood to adjust color compensation settings on a Navios flow cytometer with standard filter set and equipped with AutoSetup software, prior to multi-color analysis with ClearLLab LS reagent.

AQUIOS Reagents

AQUIOS reagents are optimized for peak performance when used with the AQUIOS CL Flow Cytometer. High reliability with no need to mix your monoclonal antibodies.

The AQUIOS reagents use a unique barcode identity for tracking reagent type, lot number, container number, expiration dates, and remaining reagent levels. The reagent consumption is monitored by the system as the samples are processed.

Samples are stained, incubated and lysed onboard in 96-well microplates.



AQUIOS TETRA





In the clinical management of immune deficiency diseases, accurately counting the absolute cell numbers of leukocyte subsets and measuring the percentage of individual subtypes in blood is critical. The AQUIOS CL flow cytometer in combination with AQUIOS Tetra reagents provides a Single Platform Technology (SPT) for lymphocyte subset analysis and enumeration without the need for counting beads.

AQUIOS Tetra-1 Panel and AQUIOS Tetra-2+ Panel monoclonal antibody reagents are for use on the AQUIOS CL Flow Cytometer with peripheral whole blood for immunophenotyping. These reagents are indicated for use in the immunologic assessment of patients having, or suspected of having, immune deficiency.

AQUIOS Tetra-1 Panel

| Size | Status | Part # |
|----------|----------|---------------|
| 50 tests | IVD & CE | B23533 |

AQUIOS Tetra-1 Panel Monoclonal Antibody Reagents is a four-color monoclonal antibody cocktail consisting of CD45-FITC/CD4-RD1/CD8-ECD/CD3-PC5, and is used in the identification and enumeration of total CD3+, CD3+CD4+, CD3+CD8+, CD3+CD4+/CD3+CD8+ (ratio only) lymphocyte percentages and absolute counts in peripheral whole blood, plus the CD45+ absolute count and CD45+ Low SS (lymphocytes) percentage and absolute count. The formulation is optimized for high performance on the AQUIOS Flow Cytometer system: no experimenting, mixing or other pre-analysis work is necessary. The AQUIOS Tetra-1 Panel is ready to use. AQUIOS monoclonal reagent vials are cap pierce-able so there is no need to uncap and recap the vials every day. The vials are barcoded, which allows the user to load the vials in any random position. LOAD the vial in the carousel onboard the system, and GO. The system does the rest. High volume laboratories may load multiple vials in the reagent carousel and the system will automatically detect their presence and move from one vial to the next as needed.





| Combination | Clone | Isotype |
|--|--------------|---------------|
|  CD45-FITC | B3821F4A | IgG2b (mouse) |
|  CD4-RD1 | SFC112T4D11 | IgG1 (mouse) |
|  CD8-ECD | SFC121Thy2D3 | IgG1 (mouse) |
|  CD3-PC5 | UCHT1 | IgG1 (mouse) |



AQUIOS Tetra-2+ Panel

| Size | Status | Part # |
|----------|----------|---------------|
| 50 tests | IVD & CE | B23534 |

AQUIOS Tetra-2+ Panel Monoclonal Antibody Reagents is a four-color monoclonal antibody cocktail consisting of CD45-FITC/(CD56 + CD16)-RD1/CD19-ECD/CD3-PC5, and is used in the identification and enumeration of total CD3+, CD3-CD19+, CD3-CD56+ and/or CD16+ lymphocyte percentages and absolute counts in peripheral whole blood, plus the CD45+ absolute count and CD45+ Low SS (lymphocytes) percentage and absolute count. The formulation is optimized for high performance on the AQUIOS Flow Cytometer system: no experimenting, mixing or other pre-analysis work is necessary. The AQUIOS Tetra-2+ Panel is ready to use. AQUIOS monoclonal reagent vials are cap pierce-able so there is no need to uncap and recap the vials every day. The vials are barcoded, which allows the user to load the vials in any random position. LOAD the vial in the carousel onboard the system, and GO. The system does the rest. High volume laboratories may load multiple vials in the reagent carousel and the system will automatically detect their presence and move from one vial to the next as needed.

| Combination | Clone | Isotype |
|--|----------|---------------|
|  CD45-FITC | B3821F4A | IgG2b (mouse) |
|  (CD16+CD56)-RD1 | 3G8+N901 | IgG1 (mouse) |
|  CD19-ECD | J3-119 | IgG1 (mouse) |
|  CD3-PC5 | UCHT1 | IgG1 (mouse) |



AQUIOS Reagents

AQUIOS IMMUNO-TROL Cells

| <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|
| 2 x 3 mL | IVD & CE | B23535 |

AQUIOS IMMUNO-TROL Cells are assayed, lysable whole blood quality control product for immunophenotyping analysis using monoclonal antibody reagents and flow cytometry. It provides a positive cell control that is processed in the same manner as a whole blood sample. This allows verification of instrument and reagent performance. It also verifies the methods used for staining targeted cells, lysing erythrocytes, and analyzing samples by the AQUIOS CL Flow Cytometer.



AQUIOS IMMUNO-TROL Low Cells

| <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|
| 2 x 3 mL | IVD & CE | B25700 |

AQUIOS IMMUNO-TROL Low Cells are assayed, lysable whole blood quality control product for immunophenotyping analysis using monoclonal antibody reagents and flow cytometry. It provides a positive cell control that is processed in the same manner as a whole blood sample. This allows verification of instrument and reagent performance. It also verifies the methods used for staining targeted cells, lysing erythrocytes, and analyzing samples by the AQUIOS CL Flow Cytometer.



AQUIOS Lysing Reagent Kit

| <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|
| 100 tests | IVD & CE | B23538 |

AQUIOS Lysing Reagent Kit is used as part of the AQUIOS flow cytometer system. The kit consists of two reagents used by AQUIOS flow cytometers to prepare whole blood samples for analysis of white blood cells.



AQUIOS Reagents

AQUIOS Sheath Solution

| <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|
| 1 x 10 L | IVD & CE | B25697 |

AQUIOS Sheath Solution is a non-fluorescent, azide-free balanced electrolyte solution for use on AQUIOS flow cytometers with light scatter and fluorescent applications.



AQUIOS Cleaning Agent

| <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|
| 500 mL | IVD & CE | B25698 |

AQUIOS Cleaning Agent is a cleaning agent for use on the AQUIOS flow cytometer components that come in contact with blood samples.



AQUIOS Sodium Hypochlorite Solution

| <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|
| 4 x 50 mL | IVD & CE | B23536 |

AQUIOS Sodium Hypochlorite Solution is a cleaning agent used as part of an AQUIOS flow cytometer system. The solution maintains AQUIOS instruments in optimal condition.



AQUIOS Deep Well Plate

| <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|
| Case of 50 | nMD | B23502 |

The AQUIOS Deep Well Plate is a 96-well, conical bottom microplate that optimizes the sample preparation process in the AQUIOS system. The plate is a high quality deep well type, made of polypropylene. Each Deep Well Plate has a unique barcode that is automatically read when placed onboard the system. This enables the system to track sample locations.

AQUIOS Reagents

AQUIOS PLG

By focusing on the most essential parameters for monitoring HIV therapies (CD45 vs CD4), AQUIOS PLG addresses cost, complexity, and the time previously required by labor-intensive processes to provide busy laboratories with an affordable, high-performance monitoring solution that also offers standardization and simplicity. Its efficient operation takes CD4 testing to new places.

AQUIOS PLG Panel

| Size | Status | Part # |
|--------------|--------|---------------|
| 50 tests | CE | B42535 |
| 8 x 50 tests | CE | B43610 |

The AQUIOS PLG Panel is for use on the AQUIOS CL flow cytometer system. The reagent combines two fluorescent-labeled monoclonal antibodies in a single reagent formulation. It is intended "For In Vitro Diagnostic Use" for the identification and enumeration of CD4+ absolute cell count and CD4+ lymphocyte percentage when used in combination with AQUIOS Flow-Count Fluorospheres as a single platform measurement. This reagent is indicated for use in the immunologic assessment of patients having, or suspected of having, immune deficiency.

AQUIOS Flow-Count Fluorospheres

| Size | Status | Part # |
|-----------|--------|---------------|
| 100 tests | CE | B43611 |
| 4 x 100 | CE | B52937 |

AQUIOS Flow-Count Fluorospheres is a fluorescent microsphere reagent for direct determination of leukocyte absolute counts in biological specimens on the AQUIOS CL flow cytometer in combination with AQUIOS Designer Software 2.0 or AQUIOS PLG.

AQUIOS IMMUNO-TROL Cells (PLG/Tetra)

| Size | Status | Part # |
|----------|--------|---------------|
| 2 x 3 mL | CE | B45229 |

AQUIOS IMMUNO-TROL Cells (PLG/Tetra) are assayed, lysable whole blood quality control product for immunophenotyping analysis using monoclonal antibody reagents and flow cytometry. It provides a positive cell control that is processed in the same manner as a whole blood sample. This allows verification of instrument and reagent performance. It also verifies the methods used for staining targeted cells, lysing erythrocytes, and analyzing samples by the AQUIOS CL Flow Cytometer.

AQUIOS IMMUNO-TROL Low Cells (PLG/Tetra)

| Size | Status | Part # |
|----------|--------|---------------|
| 2 x 3 mL | CE | B45230 |

AQUIOS IMMUNO-TROL Low Cells (PLG/Tetra) are assayed, lysable whole blood quality control product for immunophenotyping analysis using monoclonal antibody reagents and flow cytometry. It provides a positive cell control that is processed in the same manner as a whole blood sample. This allows verification of instrument and reagent performance. It also verifies the methods used for staining targeted cells, lysing erythrocytes, and analyzing samples by the AQUIOS CL Flow Cytometer.

AQUIOS VersaFix Lysing Reagent

| Size | Status | Part # |
|--------------|--------|---------------|
| 50 tests | CE | B43019 |
| 8 x 50 tests | CE | B43020 |

The AQUIOS VersaFix Lysing Reagent consists of a ready to use reagent that lyses red blood cells and fixes white blood cells in whole blood samples sufficiently to perform monoclonal antibody panel analysis without interference from red blood cells and without damage to white blood cells, allowing flow cytometry analysis on the AQUIOS CL Flow Cytometer in combination with AQUIOS PLG or AQUIOS Designer Software 2.0.

AQUIOS Reagents

AQUIOS Designer Software

AQUIOS Designer Software is not available in all countries. Please contact your local Beckman Coulter representative for details. For more information on AQUIOS or AQUIOS Designer Software, please visit AquiosCL.com

AQUIOS Designer Software 2.0

| Size | Status | Part # |
|--------|--------|---------------|
| 1 unit | CE | B69476 |
| 1 unit | - | C04893 |

The AQUIOS Designer Software 2.0 (ADS 2.0) is intended as the interface for creating user-defined tests running user-defined components provided by Beckman Coulter that can include up to 5 colors of blue laser excitable dyes for analysis on the AQUIOS CL Flow Cytometer. The user is able to define their own test protocol(s) by adjusting various settings for specimens, sample preparation, reagents, and analysis parameters. These analyses are used for measurement of biological and physical properties of cells to generate multi-parametric results for In Vitro Diagnostic Use.

Flow-Check Fluorospheres

| Size | Status | Part # |
|-----------|----------|----------------|
| 3 x 10 mL | IVD & CE | 6605359 |

Flow-Check Fluorospheres consist of 10 μm (nominal diameter) polystyrene fluorescent microspheres suspended in an aqueous medium containing surfactants and preservatives at 1×10^6 fluorospheres/mL (nominal concentration). The fluorescence emission of the dye contained within the fluorospheres ranges from 525 nm to 700 nm when excited at 488 nm. Flow-Check Fluorospheres are used to verify instrument optical alignment and fluidics.

AQUIOS Flow-Count Fluorospheres

| Size | Status | Part # |
|-----------|--------|---------------|
| 100 tests | RUO | B96656 |
| 100 tests | CE | B43611 |
| 4 x 100 | CE | B52937 |

AQUIOS Flow-Count Fluorospheres is a fluorescent microsphere reagent for direct determination of leukocyte absolute counts in biological specimens on the AQUIOS CL flow cytometer in combination with AQUIOS Designer Software 2.0 or AQUIOS PLG.

AQUIOS VersaFix Lysing Reagent

| Size | Status | Part # |
|--------------|--------|---------------|
| 50 tests | RUO | C02059 |
| 50 tests | CE | B43019 |
| 8 x 50 tests | CE | B43020 |

The AQUIOS VersaFix Lysing Reagent consists of a ready to use reagent that lyses red blood cells and fixes white blood cells in whole blood samples sufficiently to perform monoclonal antibody panel analysis without interference from red blood cells and without damage to white blood cells, allowing flow cytometry analysis on the AQUIOS CL Flow Cytometer in combination with AQUIOS PLG or AQUIOS Designer Software 2.0.

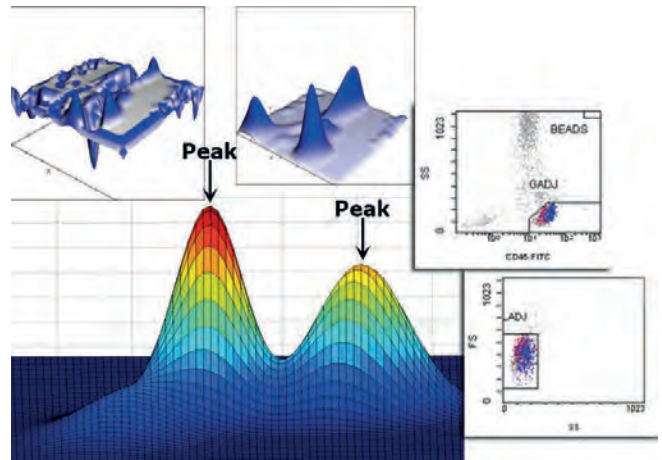
Systems and Kits

Navios tetra System

Get the fast answers you need for timely, confident treatment decisions with the proven reliability and precision of Beckman Coulter's Navios tetra system for simultaneous identification and enumeration of T, B and NK lymphocytes in whole blood. Now available for the Navios flow cytometer, Navios tetra system delivers an easy-to-use solution for multicolor flow cytometric analysis of lymphocyte subsets as well as CD4+ and CD8+ T cell subsets ratios.

Navios tetra system's fully automated instrument set-up, easy sample preparation, innovative cluster tracking, and single platform standardization help streamline your workflow. At the same time, the absolute count robustness and on-board quality control tracking helps you make confident treatment decisions.

Fully automated instrument set-up using our Flow Check Pro and Flow Set Pro Fluorospheres provides fast automated instrument set up. Reduce sample processing time with ready-to-use pre-optimized reagents that make sample preparation easy and reduce sample handling with no wash protocol and improve laboratory safety.



Optional Bi-Directional LIS connectivity with Data Innovations Instrument Manager streamlines data entry and reporting.

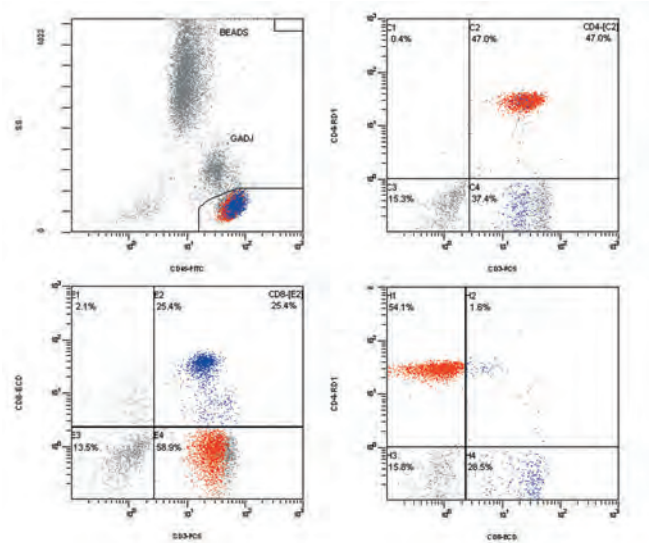
| | Size | Status | Part # |
|---|------------------|----------|-------------|
| Flow-Check Pro Fluorospheres | 3 x 10 mL | IVD & CE | A63493 |
| Fluorospheres (10 µm; 6 µm; 3 µm) | - | 3 vials | 10 mL/vial |
| Flow-Set Pro Fluorospheres | 3 x 10 mL | IVD & CE | A63492 |
| Fluorospheres (3 µm) | - | 3 vials | 10 mL/vial |
| QuickCOMP 4 Kit | 50 tests | IVD & CE | 177017 |
| CD45-FITC | J33 (IgG1 Mouse) | 1 vial | 50 tests |
| CD45-PE | J33 (IgG1 Mouse) | 1 vial | 50 tests |
| CD45-ECD | J33 (IgG1 Mouse) | 1 vial | 50 tests |
| CD45-PC5 | J33 (IgG1 Mouse) | 1 vial | 50 tests |
| CYTO-COMP Cell Kit | 50 tests | IVD & CE | 6607023 |
| Cells (≥ 3.5 x 10 ⁶ cells/vial) | - | 5 vials | Lyophilized |
| Reconstitution buffer | - | 5 vials | 1 mL/vial |
| IMMUNO-TROL Cells | 60 tests | IVD & CE | 6607077 |
| Quality Control Product | - | 2 vials | 3 mL/vial |
| IMMUNO-TROL Low Cells | 60 tests | IVD & CE | 6607098 |
| Quality Control Product | - | 2 vials | 3 mL/vial |
| CYTO-TROL Control Cells | 50 tests | IVD & CE | 6604248 |
| Cells (≥ 3.5 x 10 ⁶ cells/vial) | - | 5 vials | Lyophilized |
| Reconstitution buffer | - | 5 vials | 1 mL/vial |
| tetraCHROME CD45-FITC/CD4-PE/CD8-ECD/CD3-PC5 | 50 tests | IVD & CE | 6607013 |
| tetraCHROME CD45-FITC/CD56-PE/CD19-ECD/CD3-PC5 | 50 tests | IVD & CE | 6607073 |
| Flow-Count Fluorospheres | 200 tests | IVD & CE | 7547053 |
| Fluorospheres (10 µm) | - | 1 vial | 20 mL/vial |
| Navios Tetra Software | | IVD & CE | 775213 |

Systems and Kits

tetraCXP SYSTEM

The tetraCXP SYSTEM provides a fully automated Windows based device for enumeration of CD3⁺CD4⁺ and CD3⁺CD8⁺ lymphocytes from whole blood in a single tube. This system, exclusively available on the FC 500 flow cytometer with CXP Software, consists of a set of reagents and the tetraCXP Software which features:

- all protocols required for cytometer set-up, standardization and verification for 4-color analysis.
- automated algorithm combines information from 4 parameters (Forward Scatter, Side Scatter and CD45 and CD3) to generate a 3 dimensional lymphocyte gate.
- direct display of total CD3⁺, CD3⁺CD4⁺, CD3⁺CD8⁺, CD19⁺ and CD3⁺CD56⁺ percentages and absolute counts as well as CD4/CD8 ratio and percentage of total lymphocytes in real time.
- automated cursor placement allows analysis of lymphocyte components.



| | Size | Status | Part # |
|--|------------------|----------|-------------|
| tetraCHROME CD45-FITC/CD4-PE/CD8-ECD/CD3-PC5 | 50 tests | IVD & CE | 6607013 |
| tetraCHROME CD45-FITC/CD56-PE/CD19-ECD/CD3-PC5 | 50 tests | IVD & CE | 6607073 |
| Flow-Check Fluorospheres | 3 x 10 mL | IVD & CE | 6605359 |
| Fluorospheres (10 µm) | - | 3 vials | 10 mL/vial |
| Flow-Set Fluorospheres | 3 x 10 mL | IVD & CE | 6607007 |
| Fluorospheres (3.6 µm) | - | 3 vials | 10 mL/vial |
| CYTO-COMP Cell Kit | 50 tests | IVD & CE | 6607023 |
| Cells (≥ 3.5 x 10 ⁶ cells/vial) | - | 5 vials | Lyophilized |
| Reconstitution buffer | - | 5 vials | 1 mL/vial |
| QuickCOMP 4 Kit | 50 tests | IVD & CE | 177017 |
| CD45-FITC | J33 (IgG1 Mouse) | 1 vial | 50 tests |
| CD45-PE | J33 (IgG1 Mouse) | 1 vial | 50 tests |
| CD45-ECD | J33 (IgG1 Mouse) | 1 vial | 50 tests |
| CD45-PC5 | J33 (IgG1 Mouse) | 1 vial | 50 tests |
| Flow-Count Fluorospheres | 200 tests | IVD & CE | 7547053 |
| Fluorospheres (10 µm) | - | 1 vial | 20 mL/vial |
| CYTO-TROL Control Cells | 50 tests | IVD & CE | 6604248 |
| Cells (≥ 3.5 x 10 ⁶ cells/vial) | - | 5 vials | Lyophilized |
| Reconstitution buffer | - | 5 vials | 1 mL/vial |
| IMMUNO-TROL Cells | 60 tests | IVD & CE | 6607077 |
| Quality Control Product | - | 2 vials | 3 mL/vial |
| IMMUNO-TROL Low Cells | 60 tests | IVD & CE | 6607098 |
| Quality Control Product | - | 2 vials | 3 mL/vial |
| tetraCXP SYSTEM Software | - | IVD & CE | Please call |

Systems and Kits

Stem-Kit Reagents

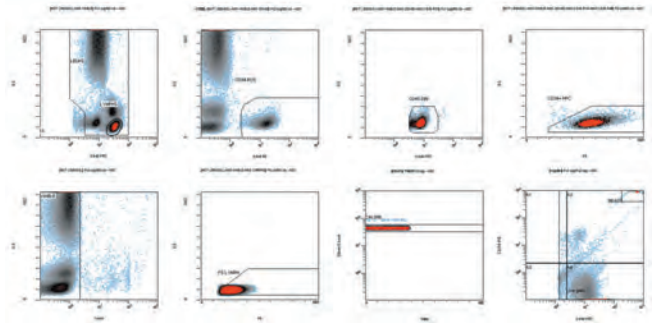
Stem-Kit Reagents is intended for the simultaneous identification and enumeration of CD45+ and dual-positive CD45+ CD34+ cell population percentages and absolute counts in biological specimens by flow cytometry. Biological specimens include fresh normal or mobilized peripheral whole blood, and fresh or thawed apheresis products, cord blood and bone marrow. Cell population measurements may be obtained using either an automated method or a manual method for gating and analysis.

| | Size | Status | Part # |
|--|-----------------|---------------------|---------------|
| Stem-Kit Reagents | 50 tests | IVD & CE | IM3630 |
| CD45-FITC/CD34-PE | - | 1 vial | |
| CD45-FITC/IsoClonic Control-PE | - | 1 vial | |
| 7-AAD Viability Dye | - | 1 vial | |
| 10X NH ₄ Cl Lysing Solution | - | 2 vials | |
| Stem-Count Fluorospheres | - | 1 vial | |

stemCXP SYSTEM

The stemCXP SYSTEM provides the first fully automated Windows-based device for the simultaneous identification and enumeration of CD45+ and CD45+/CD34+ hematopoietic progenitor cell (HPC) populations from fresh peripheral or mobilized peripheral whole blood, fresh bone marrow, fresh and thawed apheresis products and cord blood. The stemCXP SYSTEM follows the ISCT (International Society for Cellular Therapy, formerly ISHAGE) guidelines.

The stemCXP Software provides all protocols required for automated standardization of light scatter and fluorescence intensities, and automated adjustment of color compensation settings.



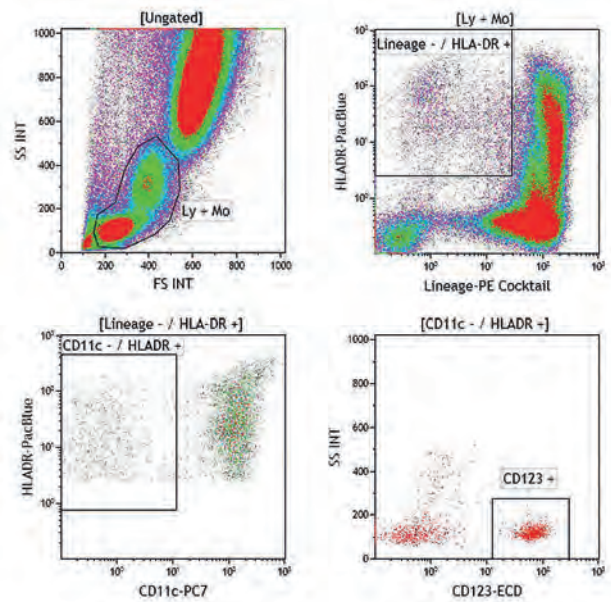
| | Size | Status | Part # |
|--|------------------|---------------------|--------------------|
| Flow-Check Fluorospheres | 3 x 10 mL | IVD & CE | 6605359 |
| Fluorospheres (10 µm) | - | 3 vials | 10 mL/vial |
| Flow-Set Fluorospheres | 3 x 10 mL | IVD & CE | 6607007 |
| Fluorospheres (3.6 µm) | - | 3 vials | 10 mL/vial |
| CYTO-COMP Cell Kit | 50 tests | IVD & CE | 6607023 |
| Cells (≥ 3.5 x 10 ⁶ cells/vial) | - | 5 vials | Lyophilized |
| Reconstitution buffer | - | 5 vials | 1 mL/vial |
| QuickCOMP 2 Kit | 50 tests | IVD & CE | 177018 |
| CD45-FITC | - | 1 vial | 50 tests |
| CD45-PE | - | 1 vial | 50 tests |
| Stem-Kit Reagents | 50 tests | IVD & CE | IM3630 |
| CD45-FITC/CD34-PE | - | 1 vial | |
| CD45-FITC/IsoClonic Control-PE | - | 1 vial | |
| 7-AAD Viability Dye | - | 1 vial | |
| 10X NH ₄ Cl Lysing Solution | - | 2 vials | |
| Stem-Count Fluorospheres | - | 1 vial | |
| Stem-Trol Control Cells | 10 tests | IVD & CE | IM3632 |
| HPC Control Cells 0.2 mL/vial | - | 1 vial | 10 tests |
| stemCXP SYSTEM Software | - | IVD & CE | Please call |

Systems and Kits

Lineage-PE Cocktail

The Lineage-PE Cocktail is comprised of PE-conjugated CD3, CD14, CD19, CD20 and CD56 antibodies. It enables the positive staining of five immune cell populations (T and B Lymphocytes, NK cells Monocytes/Macrophages) together, without distinction, in the PE channel using flow cytometry. When combined with fluorescent-labeled antibodies, other than PE, the gating on PE negative cells allows the phenotypical identification of Dendritic cells.

- The CD3 molecule is expressed only on cells of T lineage such as mature T cells and a subset of thymocytes. Approximately 65-75% of lymphocytes in peripheral blood are CD3+, although the percentage in children is lower and is age-related.
- The CD14 molecule is found on cells of myelomonocytic lineage. It is strongly expressed on monocytes, macrophages, and weakly on neutrophils. CD14 is not expressed on B lymphocytes, T lymphocytes, NK cells, red blood cells and platelets.
- The CD19 molecule is expressed on all B cells, including early progenitor B cells. Expression of CD19 persists during all stages of maturation and is lost only upon terminal differentiation to plasma cells. The CD19 molecule is not expressed on T lymphocytes, NK cells, Monocytes and Granulocytes.



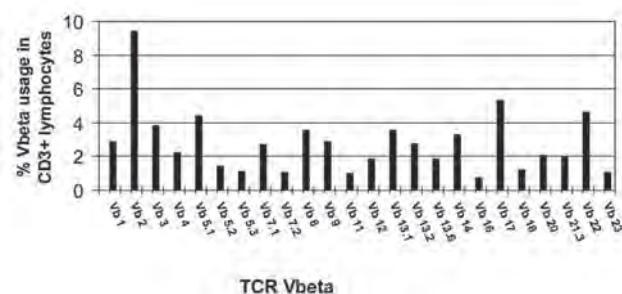
- The CD20 molecule is expressed on B lineage cells. Its CD20 expression occurs early in pre-B lymphocyte development, persists throughout B lymphocyte ontogeny and is lost upon ultimate plasma cells differentiation. The CD20 molecule is present on all B lymphocytes whatever the hematopoietic tissue where they are found (peripheral blood, lymph nodes, spleen, tonsil, or bone marrow). CD20 is also expressed, but at low density, on a subset of peripheral blood T lymphocytes.
- The CD56 molecule, known as NCAM (Neural Cell Adhesion Molecule) antigen, is expressed on a subpopulation of peripheral blood large granular lymphocytes and on all cells with natural killer (NK) activity. It is also expressed by a minor subpopulation of CD3+ T cells that mediates reduced cytotoxic activity. It is not found on monocytes, granulocytes, erythrocytes or B lymphocytes.

| Lineage-PE Cocktail | Size | Status | Part # |
|---------------------|-----------|---------------------|--------|
| | 100 tests | RUO | B29559 |
| CD3 | PE | UCHT1 (IgG1 Mouse) | |
| CD14 | PE | RMO52 (IgG2a Mouse) | |
| CD19 | PE | J3-119 (IgG1 Mouse) | |
| CD20 | PE | B9E9 (IgG2a Mouse) | |
| CD56 | PE | N901 (IgG1 Mouse) | |

Systems and Kits

IOtest Beta Mark TCR Vβ Repertoire Kit

The IOtest Beta Mark Kit is a multi parametric analysis tool designed for quantitative determination of the TCR Vβ repertoire of human T lymphocytes by flow cytometry. Taking advantage of the fact that Vβ specificities may be grouped into mutually exclusive combinations, the detection of 3 Vβ expressions in the same tube is possible with the use of an innovative staining strategy combining three monoclonal antibodies (mAb) with only two fluorophores. A first mAb is FITC-conjugated, a second one is PE-conjugated and a third one is a carefully balanced mixture of a PE- and a FITC-conjugated form. This kit simplifies the TCR Vβ repertoire analysis by reducing the number of tubes to analyze (8 instead of 24) and consequently the time required for obtaining the results. Moreover, this kit makes it possible to study the repertoire on T cell subsets, using additional T-cell markers, such as CD3, CD4, and CD8, conjugated to a third fluorophore. The kit is composed of 8 vials containing mixtures of conjugated TCR Vβ antibodies corresponding to 24 different specificities (about 70% coverage of normal human TCR Vβ repertoire).



The test is intended for use on whole blood samples. The staining protocol includes a one-step procedure with directly conjugated antibody mixes (test volume of 20 μL) and a wash step after staining. A third color T-cell marker (preferentially as PC5-conjugate; not included) is used to gate the specific population. The kit can be used in a multi parametric environment employing at least three-color flow cytometric analysis. The test is compatible with different methods of red blood cell lysis and can be run on Beckman Coulter as well as BD Biosciences cytometers. The IOtest Beta Mark kit includes a control for PMT setting and fluorescence compensation adjustments. Since the reagent in vial A is used as to prepare this control, the kit contains 50 tests of reagent A instead of 25.

| IOtest β Mark TCR Vβ Repertoire Kit | | | Size | Status | Part # |
|-------------------------------------|--------|---------|----------------------------|--------|--------|
| | | | 25 tests | RUO | IM3497 |
| Vial A | Vβ5.3 | PE | 3D11 (IgG1 Mouse) | | |
| | Vβ7.1 | PE+FITC | ZOE (IgG2a Mouse) | | |
| | Vβ3 | FITC | CH92 (IgM Mouse) | | |
| Vial B | Vβ9 | PE | FIN9 (IgG2a Mouse) | | |
| | Vβ17 | PE+FITC | E17.5F3.15.13 (IgG1 Mouse) | | |
| | Vβ16 | FITC | TAMAYA1.2 (IgG1 Mouse) | | |
| Vial C | Vβ18 | PE | BA62.6 (IgG1 Mouse) | | |
| | Vβ5.1 | PE+FITC | IMMU 157 (IgG2a Mouse) | | |
| | Vβ20 | FITC | ELL1.4 (IgG2a Mouse) | | |
| Vial D | Vβ13.1 | PE | IMMU 222 (IgG2b Mouse) | | |
| | Vβ13.6 | PE+FITC | JU74.3 (IgG1 Mouse) | | |
| | Vβ8 | FITC | 56C5.2 (IgG2a Mouse) | | |
| Vial E | Vβ5.2 | PE | 36213 (IgG1 Mouse) | | |
| | Vβ2 | PE+FITC | MPB2D5 (IgG1 Mouse) | | |
| | Vβ12 | FITC | VER2.32.1 (IgG2a Mouse) | | |
| Vial F | Vβ23 | PE | AF23 (IgG1 Mouse) | | |
| | Vβ1 | PE+FITC | BL37.2 (IgG1 Rat) | | |
| | Vβ21.3 | FITC | IG125 (IgG2a Mouse) | | |
| Vial G | Vβ11 | PE | C21 (IgG2a Mouse) | | |
| | Vβ22 | PE+FITC | IMMU 546 (IgG1 Mouse) | | |
| | Vβ14 | FITC | CAS1.1.3 (IgG1 Mouse) | | |
| Vial H | Vβ13.2 | PE | H132 (IgG1 Mouse) | | |
| | Vβ4 | PE+FITC | WJF24 (IgM Rat) | | |
| | Vβ7.2 | FITC | ZIZOU4 (IgG2a Mouse) | | |

Systems and Kits

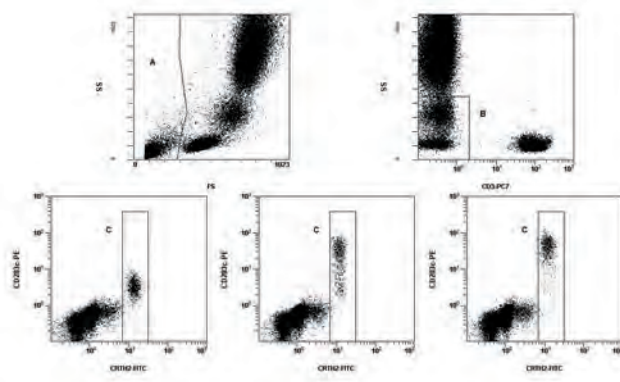


Allergenicity Kit - Cellular Analysis of Allergy

Allergenicity Kit, Cellular Analysis of Allergy consists of an optimized three-color combination of fluorescent monoclonal antibodies, an activation solution, a positive control for IgE-mediated basophil activation, a stop solution, a lysing solution and a fixative solution.

The Allergenicity Kit is intended for the identification of resting and activated basophils based on an accurate basophils gating tool (utilizing CRTH2^{pos}CD203c^{pos}CD3^{neg}). The analysis is performed on whole blood specimens. The cell population of interest is stained with monoclonal antibodies in the presence of the allergen or controls. Erythrocytes are then lysed prior to flow cytometry analysis. Once T lymphocytes (CD3⁺ cells) are excluded, basophils are identified using CRTH2 and CD203c expression. Non-activated and resting basophils are CRTH2^{pos}CD203c^{dim}CD3^{neg}, whereas *in vitro* activated basophils are CRTH2^{pos}CD203c^{bright}CD3^{neg}.

The flow cytometer must be equipped to detect forward scatter, side scatter and three fluorescence channels allowing the analysis of FITC-, PE-, and PC7- conjugated antibodies.



| | Size | Status | Part # |
|----------------------------------|-----------|---------|-------------|
| Allergenicity Kit | 100 tests | CE | A17116 |
| CRTH2-FITC / CD203c-PE / CD3-PC7 | - | 1 vial | 2 mL |
| Positive Control | - | 1 vial | 0.2 mg |
| Activation Solution | - | 2 vials | 5 mL/vial |
| Stop Solution | - | 1 vial | 10 mL |
| Lysing Solution | - | 3 vials | 100 mL/vial |
| Fixative Solution | - | 1 vial | 10 mL |

Residual Leukocyte Enumeration

The LeukoSure Enumeration Kit is comprised of a set of reagents used to prepare and enumerate white blood cells in leukoreduced red blood cell and platelet products by flow cytometry. The LeukoSure Enumeration Kit is configured to utilize the sensitivity of flow cytometry to enumerate residual leukocytes at the levels necessary to ensure the quality control of leukoreduced blood.

The enumeration method depends upon mixing a known volume (100 μ L) of LeukoSure Fluorospheres with an identical volume of sample to be tested. After analysis the absolute count for the specimen is calculated. This represents the absolute number of leukocytes in the specimen.

The specimen is lysed and permeabilized using the LeukoSure Lyse Reagent to eliminate RBCs and prepare the cells for subsequent addition of the LeukoSure Stain Reagent which contains propidium iodide and RNase (enzyme used to remove ribonucleic acid, or RNA). In the absence of RNA, propidium iodide binds only to double stranded deoxyribonucleic acid (DNA) so that nucleated cells in the sample emit fluorescence in proportion to their DNA content. The flow cytometer measures the fluorescence from each stained cell as it passes through the laser beam. Since mature platelets and red blood cells do not contain DNA, the stained cells represent the leukocyte component of the blood.

| | Size | Status | Part # |
|---------------------------------|-----------|----------|--------|
| LeukoSure Enumeration Kit | 200 tests | IVD & CE | 175621 |
| Leuko-Trol Platelet Control Kit | 200 tests | IVD & CE | 175651 |
| Leuko-Trol RBC Control Kit | 200 tests | IVD & CE | 175658 |

Systems and Kits

Annexin V Kits

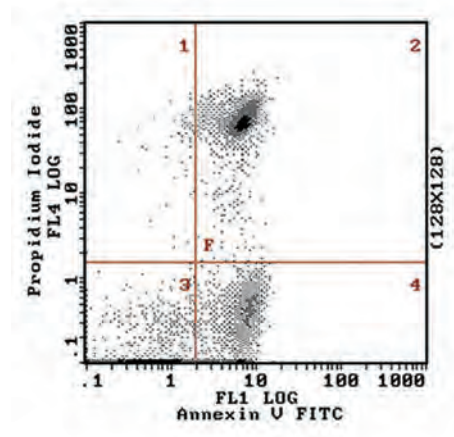
In early apoptosis, cells lose membrane phospholipid asymmetry, whilst the integrity of the cell membrane is maintained. The Annexin-V kits contain a viability dye to evaluate membrane integrity as well as annexin-V to assess membrane asymmetry.

In fact, phosphatidylserine (PS), a negatively charged phospholipid located in the inner surface of the plasma membrane, appears very early in apoptosis at the external cell surface. Annexin V, a calcium and phospholipid binding protein, binds preferentially to PS. The Annexin V kits employ recombinant annexin V labeled with biotin, fluorescein or R-phycoerythrin in together with the viability dyes propidium iodide (PI) or 7-amino actinomycin D (7-AAD).

Apoptotic cells are easily identified utilizing a rapid and simple staining procedure. Fixation of the cells is not necessary.

When cells are double-stained with annexin V and a viability dye, three different cell populations may be observed (see figure below): (i) live cells that do not stain either with annexin V or with the vital dye, (ii) necrotic or late apoptotic cells that stain with both annexin V and the vital dye, and (iii) early apoptotic cells that stain with annexin V only.

Analysis may be performed on any flow cytometer equipped with a 488nm laser or Arc Lamp depending on the reagent kit chosen. Alternatively, the cells may be examined with a fluorescent microscope or cell imaging system equipped with the appropriate filters.



| | Size | Status | Part # |
|---------------------------------------|-----------|---------------|---------------|
| Annexin V-FITC Kit (20 tests) | 20 tests | RUO | IM2375 |
| Annexin V-FITC | - | 1 vial | 0.1 mL |
| Binding Buffer | - | 1 vial - 10X | 1.7 mL |
| Propidium Iodide | - | 1 vial | Lyophilized |
| Annexin V-FITC Kit (200 tests) | 200 tests | RUO | IM3546 |
| Annexin V-FITC | - | 1 vial | 0.2 mL |
| Binding Buffer | - | 6 vials - 10X | 1.7 mL |
| Propidium Iodide | - | 1 vial | Lyophilized |
| Annexin V-FITC/7-AAD kit | 150 tests | RUO | IM3614 |
| Annexin V-FITC | - | 1 vial | 1.7 mL |
| Binding Buffer | - | 5 vials - 10X | 1.7 mL |
| 7-AAD | - | 1 vial | 3 mL |



SUPPORT REAGENTS

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| Lysing, Permeabilizing and Fixative Reagents | 215-221 |
| Viability Dyes | 223-224 |
| Ancillary Reagents | 225-226 |

Fluorospheres and Quality Controls

Beckman Coulter provides a complete comprehensive workflow solution for all your flow cytometry needs.

| Description | Utility | Emission Range | Excitation |
|------------------------------------|---|---|----------------------------|
| Fluorospheres | | | |
| Flow-Check Fluorospheres | Used for daily verification of a flow cytometer's optical alignment and fluidics system | 525 nm - 700 nm | 488 nm |
| Flow-Check Pro Fluorospheres | Used for daily verification of optical alignment and fluidics of flow cytometers configured with multiple laser (Blue, Red, and Violet) | 515 nm - 800 nm 640 nm - 800 nm 400 nm - 500 nm | 488 nm 635 nm 405 nm |
| Flow-Set Fluorospheres | Used for standardization of flow cytometers for analysis of human leukocytes | 525 nm - 700 nm | 488 nm |
| Flow-Set Pro Fluorospheres | Used for standardization of flow cytometers configured with Multiple laser (Blue, Red, and Violet), for quantitative analysis of human leukocytes | 515 nm - 800 nm 640 nm - 800 nm 400 nm - 500 nm | 488 nm 635 nm 405 nm |
| IMMUNO-BRITE Fluorospheres | Used to monitor instrument linearity. Fluorospheres uniform in size, with varying fluorescent intensities. | 525 nm - 700 nm | 488 nm |
| Flow-Count Fluorospheres | Used to determine absolute counts on the flow cytometer | 525 nm - 700 nm | 488 nm |
| CytoFlex Daily QC Fluorospheres | Used for daily verification of the flow cytometer's optical alignment and fluidics system | 410 nm - 800 nm | 405, 488 or 635 nm |
| CytoFlex Daily IR QC Fluorospheres | Used for daily verification of the CytoFLEX flow cytometer's IR (Infrared) laser | > 800 nm | 808 nm |
| APC (675/633) Set-Up Kit | Daily verification of optical alignment/fluidic stability | 675 nm | 633 nm |
| PC7 (770/488) Set-Up Kit | Daily verification of optical alignment/fluidic stability | 770 nm | 488 nm |
| VespaComp Antibody Capture Beads | Set compensation to account for spectral overlap in multicolor flow cytometry assays | | |
| Quality Controls | | | |
| CYTO-COMP Cell Kit | Lyophilized human lymphocytes used in conjunction with Cyto-Comp Reagent kit or the Quick Comp Reagent kits to establish and monitor compensation settings for multicolor analysis | | |
| CYTO-COMP Reagent Kit | Preparation of 4 vials of 2-Color reagents. Used to establish and monitor color compensation settings in conjunction with the Cyto-COMP cell kit, for multicolor analysis | | |
| CYTO-TROL Control Cells | Lyophilized human lymphocytes used to assess activity of monoclonal antibodies | | |
| IMMUNO-TROL Cells | Whole blood based lysable positive process control for immunophenotyping analysis using monoclonal antibody reagents and flow cytometry | | |
| IMMUNO-TROL Low Cells | Whole blood based lysable positive process control for immunophenotyping analysis using monoclonal antibody reagents and flow cytometry, targeted for low level CD4 counts | | |
| AQUIDS IMMUNO-TROL Cells | Verification of instrument and reagent performance. | | |
| AQUIDS IMMUNO-TROL Low Cells | Allows verification of instrument and reagent performance. | | |
| QuickCOMP 2 Kit | 2 single-color reagents comprised of one monoclonal antibody each labeled with FITC or PE conjugated antibodies for adjusting color compensation with flow cytometers performing full matrix compensation | | |
| QuickCOMP 4 Kit | 4 single-color fluorescent reagents comprised of one monoclonal antibody each labeled with FITC, PE, ECD, or PC5 conjugated antibodies for adjusting color compensation equipped with flow cytometers performing full matrix compensation | | |
| Stem Comp Reagent | 2 color fluorescent reagents implementing two monoclonal antibodies conjugated to FITC and PE, set to adjust color compensation for automated or manual analysis with the Stem kit reagent | | |
| Stem Trol Control Cells | Ready-to-use highly calibrated control cells providing antibody-to-antigen positive control for absolute counting of CD34 ⁺ CD45 ^{dim} cells | | |
| ClearLab Compensation Kit | Used to adjust color compensation settings on a Navios flow cytometer | | |

Fluorospheres and Quality Controls

Fluorospheres

Flow-Check Fluorospheres

Flow-Check Fluorospheres consist of 10 μm (nominal diameter) polystyrene fluorescent microspheres suspended in an aqueous medium containing surfactants and preservatives at 1×10^6 fluorospheres/mL (nominal concentration). The fluorescence emission of the dye contained within the fluorospheres ranges from 525 nm to 700 nm when excited at 488 nm. Flow-Check Fluorospheres are used to verify instrument optical alignment and fluidics.

| | Size | Presentation |
|-----------------------------------|------------|--------------|
| Fluorospheres (10 μm) | 10 mL/vial | 3 vials |

| Size | Status | Part # |
|-----------|----------|---------|
| 3 x 10 mL | IVD & CE | 6605359 |

Flow-Check Pro Fluorospheres

Flow-Check Pro Fluorospheres is a suspension of fluorescent microspheres which may be used for daily verification of optical alignment and fluidics of flow cytometer's configured with multiple lasers (Blue, Red, and Violet). The Fluorosphere suspension consists of a mixture of 10 μm fluorescent microbeads with a fluorescence emission of 515 nm to 800 nm when excited at 488nm, 6 μm fluorospheres with a fluorescence emission of 640 nm to 800 nm when excited at 635 nm, and 3 μm fluorospheres with a fluorescence emission of 400 nm to 500 nm when excited at 405 nm, respectively.



| | Size | Presentation |
|---|------------|--------------|
| Fluorospheres (10 μm ; 6 μm ; 3 μm) | 10 mL/vial | 3 vials |

| Size | Status | Part # |
|-----------|----------|--------|
| 3 x 10 mL | IVD & CE | A63493 |
| 3 x 10 mL | RUO | A69183 |

Flow-Set Fluorospheres

Flow-Set Fluorospheres are a suspension of fluorospheres (fluorescent microbeads) used as an aid in optimizing a flow cytometer for quantitative analysis of human leukocytes. Each fluorosphere contains a dye which has a fluorescent emission range of 525 nm to 700 nm when excited at 488 nm. They have a uniform size and fluorescence intensity allowing the standardization of light scatter, fluorescence intensity and optimal hydrodynamic focusing instrument settings.

| | Size | Presentation |
|------------------------------------|------------|--------------|
| Fluorospheres (3.6 μm) | 10 mL/vial | 3 vials |

| Size | Status | Part # |
|-----------|----------|---------|
| 3 x 10 mL | IVD & CE | 6607007 |

Flow-Set Pro Fluorospheres

Flow-Set Pro Fluorospheres is a suspension of fluorescent microspheres which may be used as an aid in standardizing a flow cytometer configured with multiple lasers (Blue, Red, and Violet). The suspension contains 3 μm (nominal diameter) polystyrene fluorospheres suspended in an aqueous medium containing surfactants and preservatives.



| | Size | Presentation |
|----------------------------------|------------|--------------|
| Fluorospheres (3 μm) | 10 mL/vial | 3 vials |

| Size | Status | Part # |
|-----------|----------|--------|
| 3 x 10 mL | IVD & CE | A63492 |
| 3 x 10 mL | RUO | A69184 |

Fluorospheres and Quality Controls

Fluorospheres

IMMUNO-BRITE Fluorospheres

IMMUNO-BRITE Fluorospheres are a suspension of fluorescent microbeads uniform in size with varying fluorescence intensities. The set contains one vial of non-fluorescent fluorospheres and four vials of fluorospheres of increasing intensity. They may be used to monitor instrument linearity.

| | <i>Size</i> | <i>Presentation</i> |
|---------------|-------------|---------------------|
| Fluorospheres | 10 mL/vial | 5 vials |

| | <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|--|-------------|---------------|---------------|
| | 5 x 10 mL | IVD & CE | 6603473 |

Flow-Count Fluorospheres

Flow-Count Fluorospheres are a suspension of fluorescent microbeads used to determine absolute counts on the flow cytometer. Each fluorosphere contains a dye which has a fluorescent emission range of 525 nm to 700 nm when excited at 488 nm. They have uniform size and fluorescence intensity, and an assayed concentration allowing a direct determination of absolute counts.

| | <i>Size</i> | <i>Presentation</i> |
|----------------------------|-------------|---------------------|
| Fluorospheres (10 μ m) | 20 mL/vial | 1 vial |

| | <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|--|-------------|---------------|---------------|
| | 200 tests | IVD & CE | 7547053 |



CytoFLEX Daily QC Fluorospheres

CytoFLEX Daily QC Fluorospheres consists of a suspension of ~3 μ m fluorospheres with a fluorescence emission of 410 nm to 800 nm when excited at 405 nm, 488 nm or 635 nm. CytoFLEX Daily QC Fluorospheres may be used for daily verification of the CytoFLEX flow cytometer's optical alignment and fluidics system.

| | <i>Size</i> | <i>Presentation</i> |
|---------------------------|-------------|---------------------|
| Fluorospheres (3 μ m) | 2 mL/vial | 1 vial |

| | <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|--|-------------|---------------|---------------|
| | 1 vial | RUO | B53230 |



CytoFLEX Daily IR QC Fluorospheres

CytoFLEX Daily IR QC Fluorospheres consists of a suspension of ~2.8 - ~3.4 μ m fluorospheres with infrared fluorescence emission greater than 800 nm when excited with an infrared laser at 808 nm. CytoFLEX Daily IR QC Fluorospheres may be used for daily verification of the CytoFLEX flow cytometer's IR (Infrared) laser optical alignment and fluidics system.

| | <i>Size</i> | <i>Presentation</i> |
|---------------------------|-------------|---------------------|
| Fluorospheres (3 μ m) | 10 mL/vial | 2 vials |

| | <i>Size</i> | <i>Status</i> | <i>Part #</i> |
|--|-------------|---------------|---------------|
| | 2 x 10 mL | RUO | C06147 |



Fluorospheres and Quality Controls

Fluorospheres

APC (675/633) Set-up Kit

The APC (675/633) Setup Kit is a set of fluorospheres (fluorescent microbeads) used for daily verification of a flow cytometer's optical alignment and fluidic stability and as an aid in standardizing the detectors on a flow cytometer for the quantitative analysis of human leukocytes. Data from each fluorosphere is collected with the 675 nm detector when excited with a 633 nm light source. The kit is comprised of two vials: one vial of Flow-Check 675 fluorospheres and one vial of Flow-Set 675 fluorospheres.

| | Size | Presentation |
|------------------------------|-----------|--------------|
| Flow-Set 675 Fluorospheres | 1 x 10 mL | 1 vial |
| Flow-Check 675 Fluorospheres | 1 x 10 mL | 1 vial |

| Size | Status | Part # |
|---------|--------|---------|
| 2 vials | CE | 737663 |
| 2 vials | RUO | 6607120 |

PC7 (770/488) Set-up Kit

The PC7 (770/488) Setup Kit is used for daily verification of a flow cytometer's optical alignment and fluidic stability and as an aid in standardizing the detectors on a flow cytometer for the quantitative analysis of human leukocytes. Data from each fluorosphere is collected with the 770 nm detector when excited with a 488 nm light source. The kit is comprised of two vials: one vial of Flow-Check 770 fluorospheres and one vial of Flow-Set 770 fluorospheres.

| | Size | Presentation |
|------------------------------|-----------|--------------|
| Flow-Set 770 Fluorospheres | 1 x 10 mL | 1 vial |
| Flow-Check 770 Fluorospheres | 1 x 10 mL | 1 vial |

| Size | Status | Part # |
|---------|--------|---------|
| 2 vials | CE | 737664 |
| 2 vials | RUO | 6607121 |

VersaComp Antibody Capture Kit

VersaComp Antibody Capture Bead kit provides both positive and negative microspheres that can be used to set compensation for multicolor flow cytometry experiments. The positive population captures conjugates in single color stains and recognizes all mouse and rat isotypes, most hamster isotypes and rabbit polyclonal IgG. The negative population provides fluorescence similar to unstained cells across the different excitation/emission wavelength combinations. This combination can be used to set up compensation to correct for spectral overlap.

| | Size | Presentation |
|-----------------------|------|--------------|
| Positive microspheres | 5 mL | 1 vial |
| Negative microspheres | 5 mL | 1 vial |

| Size | Status | Part # |
|---------|--------|--------|
| 2 vials | LUO | B22804 |



Fluorospheres and Quality Controls

Quality Control

CYTO-COMP Cell Kit

CYTO-COMP Cell Kit is a preparation of lyophilized human lymphocytes and reconstitution buffer used in conjunction with the CYTO-COMP Reagent Kit to establish and monitor color compensation settings for multicolor analysis.

| | Size | Presentation |
|--|-------------|--------------|
| Cells ($\geq 3.5 \times 10^6$ cells/vial) | Lyophilized | 5 vials |
| Reconstitution buffer | 1 mL/vial | 5 vials |

| Size | Status | Part # |
|----------|----------|---------|
| 50 tests | IVD & CE | 6607023 |



CYTO-COMP Reagent Kit

CYTO-COMP Reagent Kit is comprised of four sets of two-color reagents used in conjunction with the CYTO-COMP Cell Kit to establish and monitor color compensation settings for multicolor analysis.

| | Size | Presentation |
|------------------|----------|--------------|
| COMP 1 (FITC/PE) | 50 tests | 1 vial |
| COMP 2 (PE/ECD) | 50 tests | 1 vial |
| COMP 3 (PE/PC5) | 50 tests | 1 vial |
| COMP 4 (ECD/PC5) | 50 tests | 1 vial |

| Size | Status | Part # |
|----------|----------|---------|
| 50 tests | IVD & CE | 6607021 |



CYTO-TROL Control Cells

CYTO-TROL Control Cells are used to assess the activity of monoclonal antibodies by flow cytometry. They are a lyophilized preparation of human lymphocytes that exhibit surface antigens detectable with monoclonal antibodies. These cells are isolated from peripheral blood and express antigens that are representative of those found on normal lymphocytes. They may be used with directly-conjugated monoclonal antibodies.

| | Size | Presentation |
|--|-------------|--------------|
| Cells ($\geq 3.5 \times 10^6$ cells/vial) | Lyophilized | 5 vials |
| Reconstitution buffer | 1 mL/vial | 5 vials |

| Size | Status | Part # |
|----------|----------|---------|
| 50 tests | IVD & CE | 6604248 |



IMMUNO-TROL Cells

IMMUNO-TROL Cells are a positive process control for flow cytometry. They are assayed for lymphocyte, granulocyte and monocyte specific antigens and single platform absolute counts. Light scatter, population distribution, fluorescence intensity, and antigen density mimic those of whole blood.

| | Size | Presentation |
|-------------------------|-----------|--------------|
| Quality Control Product | 3 mL/vial | 2 vials |

| Size | Status | Part # |
|----------|----------|---------|
| 60 tests | IVD & CE | 6607077 |



Fluorospheres and Quality Controls

Quality Control

IMMUNO-TROL Low Cells

IMMUNO-TROL Low Cells provide the same quality and reproducibility as IMMUNO-TROL Cells in a quality control product for low-level CD4 counts. IMMUNO-TROL Low Cells also provide open vial stability of 90 days for decreased waste.

| | <i>Size</i> | <i>Presentation</i> |
|-------------------------|-------------|-----------------------------|
| Quality Control Product | 3 mL/vial | 2 vials |
| | <i>Size</i> | <i>Status</i> <i>Part #</i> |
| | 60 tests | IVD & CE 6607098 |



AQUIOS IMMUNO-TROL Cells

AQUIOS IMMUNO-TROL Cells are assayed, lysable whole blood quality control product for immunophenotyping analysis using monoclonal antibody reagents and flow cytometry. It provides a positive cell control that is processed in the same manner as a whole blood sample. This allows verification of instrument and reagent performance. It also verifies the methods used for staining targeted cells, lysing erythrocytes, and analyzing samples by the AQUIOS CL Flow Cytometer.

| | <i>Size</i> | <i>Presentation</i> |
|--|-------------|-----------------------------|
| | <i>Size</i> | <i>Status</i> <i>Part #</i> |
| | 2 x 3 mL | IVD & CE B23535 |



AQUIOS IMMUNO-TROL Low Cells

AQUIOS IMMUNO-TROL Low Cells are assayed, lysable whole blood quality control product for immunophenotyping analysis using monoclonal antibody reagents and flow cytometry. It provides a positive cell control that is processed in the same manner as a whole blood sample. This allows verification of instrument and reagent performance. It also verifies the methods used for staining targeted cells, lysing erythrocytes, and analyzing samples by the AQUIOS CL Flow Cytometer.

| | <i>Size</i> | <i>Presentation</i> |
|--|-------------|-----------------------------|
| | <i>Size</i> | <i>Status</i> <i>Part #</i> |
| | 2 x 3 mL | IVD & CE B25700 |



QuickCOMP 2 Kit

The QuickCOMP 2 Kit consists of two single-color fluorescent reagents comprised of one monoclonal antibody each. Each antibody is labeled with either FITC or PE. It may be used with the CYTO-COMP Cell Kit to adjust color compensation settings on a flow cytometer equipped with AutoSetup Software.

| | <i>Size</i> | <i>Presentation</i> |
|-----------|-------------|-----------------------------|
| CD45-FITC | 50 tests | 1 vial |
| CD45-PE | 50 tests | 1 vial |
| | <i>Size</i> | <i>Status</i> <i>Part #</i> |
| | 50 tests | IVD & CE 177018 |



Fluorospheres and Quality Controls

Quality Control

QuickCOMP 4 Kit

The QuickCOMP 4 Kit consists of four single-color fluorescent reagents comprised of one monoclonal antibody each. Each antibody is labeled with one or four fluorochromes: FITC, PE, ECD or PC5. It may be used with the CYTO-COMP Cell Kit to adjust color compensation settings on a flow cytometer equipped with AutoSetup Software.



| | Size | Presentation |
|-----------|----------|--------------|
| CD45-FITC | 50 tests | 1 vial |
| CD45-PE | 50 tests | 1 vial |
| CD45-ECD | 50 tests | 1 vial |
| CD45-PC5 | 50 tests | 1 vial |

| Size | Status | Part # |
|----------|----------|--------|
| 50 tests | IVD & CE | 177017 |

Stem-Comp Reagent

The Stem-Comp Reagent consists of a two color fluorescent reagent implementing two monoclonal antibodies. The antibodies are conjugated to fluorescein isothiocyanate (FITC) for the fluorescence 1 channel (FL1) of a flow cytometer and R Phycoerythrin (PE) for the fluorescence 2 channel (FL2). The Stem-Comp Reagent is used to adjust color compensations for automated or manual analysis with the Stem-Kit Reagents (Part# IM3630).



| | Size | Presentation |
|-------------------|----------|--------------|
| Stem-Comp Reagent | 50 tests | 1 vial |

| Size | Status | Part # |
|----------|----------|--------|
| 50 tests | IVD & CE | IM3631 |

Stem-Trol Control Cells

COULTER Stem-Trol Control Cells are preserved KG-1a cells, that have been modified and stabilized (patent pending) to express the CD34 Class III epitopes and the CD45 leucocyte common antigen at densities that approximate normal human hematopoietic progenitor cells (HPC). This product is a ready-to-use cell suspension. COULTER Stem-Trol Control Cells provide an antibody-to-antigen positive control for CD34 and CD45 staining in flow cytometry studies. The concentration of this cell suspension is precisely calibrated. Therefore it is also designed as an internal control for absolute count verification procedures in CD34+ HPC absolute counting process.

| | Size | Presentation |
|-------------------------------|----------|--------------|
| HPC Control Cells 0.2 mL/vial | 10 tests | 1 vial |

| Size | Status | Part # |
|----------|----------|--------|
| 10 tests | IVD & CE | IM3632 |

Lysing, Fixative and Permeabilizing Solutions

Beckman Coulter provides a complete comprehensive workflow solution for all your flow cytometry needs.

| Product | Principle | Sample | Fixation in lysis step | Wash / No-wash | Fixation after lysis | Applications |
|---------------------------------------|--|--|--------------------------------------|-------------------------------------|-----------------------------|---|
| Lysis without permeabilization | | | | | | |
| Versalyse | Enzyme-based erythrocytes lysis | Venous blood, bone marrow | Optional (IDTest3 Fixative Solution) | Can be used both washed and no-wash | Yes | Extracellular staining Low stringency, Gentle to cells |
| IDTest 3 Lysing Solution | Ammonium Chloride based erythrocyte lysis | Venous blood, bone Marrow | No | Wash after lysis | Optional (IDTest3 Fixative) | Classical Reference Method for extracellular staining |
| OptiLyse C | Formaldehyde-glycerol-based erythrocytes lysis. | Venous blood, bone marrow | Yes | Designed for no-wash | Yes | Extracellular staining on Beckman Coulter instruments |
| OptiLyse B | Fixation and protection of cells and hypotonic shock to lyse | Venous blood | Yes | Designed for no-wash | Yes | Extracellular staining on Beckton Dickinson instruments (low angle forward scatter) |
| Whole Blood Lysing Reagents | Amphipathic glycoside based lysis | Venous blood | No | Wash | Yes | Extracellular staining Optimized for use with COULTER CLONE and CYTO-STAT COULTER CLONE antibodies |
| IMMUNOPREP | Formic acid-based lysis targeted for immunofluorescence measurements on flow cytometers | Venous blood | Yes | No-wash | Yes | Extracellular staining Automation only Used on Q-PREP, FP1000, Multi-Q-prep and TQ-prep |
| Aquios VersaFix Lysing Reagent | Combination of enzyme-based erythrocyte lysis and cell fixation | Venous blood | Yes | Designed for no-wash | Optional | Lysing of erythrocytes and fixation of white blood cells. Optimized for use with the AQUIDS CL Flow Cytometer |
| Lysis with permeabilization | | | | | | |
| IntraPrep Permeabilization Reagent | Formaldehyde/saponin-based Permeabilization | Venous blood, bone marrow | Yes | Wash | Yes | Classical Reference Method for intracellular staining |
| PerFix-nc | Low Formaldehyde/Low detergent-based permeabilisation | Venous blood, peripheral blood mononuclear cells, mouse blood, bone marrow | Yes | Optional | Yes | Allows simultaneous staining of both extracellular and intracellular markers No wash procedure providing high resolution |
| PerFix EXPOSE | Detection of phospho epitopes by fixation, erythrocyte lysis, and permeabilization | Venous blood, bone marrow, peripheral blood mononuclear cells | Yes | Wash | Yes | High Stringency reagent. Phospho epitope detection. Allows the simultaneous staining of both extracellular markers, intracellular markers and phospho epitopes. |
| Fixation | | | | | | |
| ThromboFix Platelet Stabilizer | Two part liquid preparation containing buffered reagents that when combined in equal volumes is used for the stabilization of platelets. | Venous blood | Yes | Not Applicable | Yes | Preserves platelets in their current state at the time of preparation up to 7 days. |
| IDTest 3 Fixative Solution | Formaldehyde-based fixative, provided as 10X concentrate. | Venous blood, bone marrow | Yes | Not Applicable | Yes | Optimized to work in combination with IDTest 3 Lysing Solution, Versalyse Lysing Solution and other systems. |

Lysing, Fixative and Permeabilizing Solutions

AQUIOS VersaFix Lysing Reagent

The AQUIOS VersaFix Lysing Reagent consists of a ready to use reagent that lyses red blood cells and fixes white blood cells in whole blood samples sufficiently to perform monoclonal antibody panel analysis without interference from red blood cells and without damage to white blood cells, allowing flow cytometry analysis on the AQUIOS CL Flow Cytometer in combination with AQUIOS PLG or AQUIOS Designer Software 2.0.

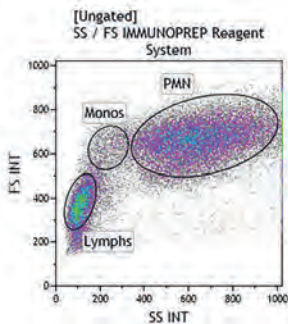
| | Size | Status | Quality Standard | Part # |
|--|--------------|--------|------------------|---------------|
| For the AQUIOS CL Flow Cytometer (1 vial) | 50 tests | CE | 98/79/EC | B43019 |
| For the AQUIOS CL Flow Cytometer (8 vials) | 8 x 50 tests | CE | 98/79/EC | B43020 |
| For the AQUIOS CL Flow Cytometer (1 vial) | 50 tests | RUO | GMP | C02059 |

IMMUNOPREP Reagent System

The IMMUNOPREP Reagent System is a rapid, no-wash, standardized, whole blood preparation procedure maximizing sample to sample, and laboratory to laboratory reproducibility. The IMMUNOPREP reagent lysing action reduces cell stress and minimizes cell shrinkage while maintaining cellular integrity and morphology. Separation of leukocyte cell populations of interest from red blood cell ghosts and debris is maximized. Scatter characteristics are optimized for superior cell type resolution. The IMMUNOPREP Reagent Kit is comprised of 3 ready-to-use reagents:

- Reagent A lyses the red blood cells.
- Reagent B buffers the solution and stops the lysing process.
- Reagent C fixes the cells.

| | Size | Status | Quality Standard | Part # |
|-------------------------|-----------|----------|------------------|----------------|
| For Q-PREP Workstation | 100 tests | IVD & CE | GMP | 7546946 |
| For TQ-Prep Workstation | 300 tests | IVD & CE | GMP | 7546999 |



IMMUNOPREP on venous blood. Acquisition with a Navios cytometer using CXP acquisition software and Kaluza analysis software.

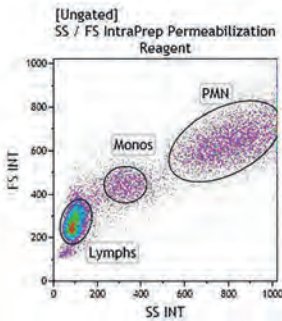
Lysing, Fixative and Permeabilizing Solutions



IntraPrep Permeabilization Reagent

IntraPrep Permeabilization Reagent is a set of two ready-to-use reagents designed for the immunological detection of intracellular leucocyte antigens by flow cytometry. It uses a formaldehyde / saponin-based permeabilization procedure. IntraPrep Permeabilization Reagent can be used for detection of most cytoplasmic and nuclear antigens in whole blood samples. It creates apertures in the membrane without affecting the gross morphology of the cell. The resolution of each cell type on a dual light scatter histogram is well preserved during processing with this reagent system. The standard procedure consists of first, fixing cells with Reagent 1, and second, permeabilizing the white cells and lysing red cells using Reagent 2. The reagent formulation is optimized to minimize non-specific intracellular staining. The IntraPrep Permeabilization Reagent can be used for simultaneous detection of cell surface and cytoplasmic antigens by flow cytometry.

| | Size | Status | Quality Standard | Part # |
|---|-----------|----------|------------------|---------------|
| Fixative + Permeabilizer (5 mL + 5 mL) | 50 tests | IVD & CE | GMP | A07802 |
| Fixative + Permeabilizer (15 mL + 15 mL) | 150 tests | IVD & CE | GMP | A07803 |
| Fixative + Permeabilizer (5 mL + 5 mL) | 50 tests | RUO | GMP | IM2388 |
| Fixative + Permeabilizer (15 mL + 15 mL) | 150 tests | RUO | GMP | IM2389 |

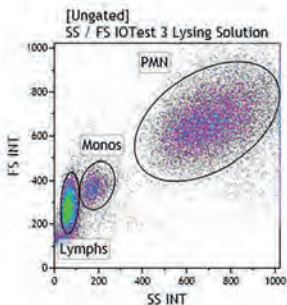


*IntraPrep on venous blood.
Acquisition with a Navios
cytometer using CXP acquisition
software and Kaluza analysis
software.*

IOtest 3 Lysing Solution

IOtest3 Lysing Solution is an ammonium chloride-based erythrocyte lysing solution designed for flow cytometry. This reagent is provided as a 10X-concentrated mixture of ammonium chloride, potassium bicarbonate and ethylenediamine tetraacetic acid (EDTA). IOtest3 Lysing Solution allows whole blood or bone marrow specimen preparation by erythrolysis during immunophenotyping procedures. A wash post lysis is required to yield optimal results.

| | Size | Status | Quality Standard | Part # |
|-----------------|-----------|----------|------------------|---------------|
| Lysing Solution | 100 tests | IVD & CE | GMP | A07799 |
| Lysing Solution | 100 tests | RUO | GMP | IM3514 |



*IOtest 3 on venous blood.
Acquisition with a Navios
cytometer using CXP acquisition
software and Kaluza analysis
software.*

Lysing, Fixative and Permeabilizing Solutions



IOTest 3 Fixative Solution

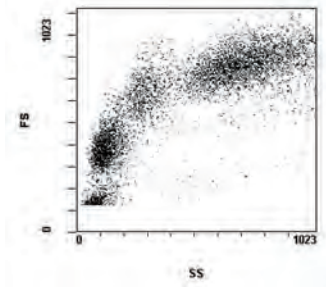
The IOTest3 Fixative Solution allows whole blood or bone marrow specimen preparation by fixing the cell suspension after erythrolysis during immunophenotyping procedures. At least one wash is required between the lysis and the fixation steps. The IOTest3 Fixative Solution is optimized to work in combination with the IOTest3 Lysing Solution. IOTest Fixative Solution is a formaldehyde-based fixative solution designed for flow cytometry. This reagent is provided as a concentrated solution in PBS.

| | Size | Status | Quality Standard | Part # |
|-------------------|-----------------|----------|------------------|---------------|
| Fixative Solution | 100 - 200 tests | IVD & CE | GMP | A07800 |
| Fixative Solution | 100 - 200 tests | RUO | GMP | IM3515 |

OptiLyse No-Wash Lysing Solutions

Both OptiLyse C and B are erythrolytic reagents intended for lysing human red blood cells following direct immunofluorescence staining of whole blood for flow cytometry. OptiLyse C is a ready-to-use lysing solution optimized for use on Beckman Coulter instruments. OptiLyse B is a ready-to-use lysing solution optimized for use on BD Biosciences instruments.

| | Size | Status | Quality Standard | Part # |
|------------|-----------|----------|------------------|---------------|
| OptiLyse C | 200 tests | IVD & CE | GMP | A11895 |
| OptiLyse C | 200 tests | RUO | GMP | A11894 |
| OptiLyse B | 250 tests | RUO | GMP | IM1400 |



This dual-parameter light scatter histogram illustrates the expected spatial separation of leucocyte subsets after red blood cell lysis of normal peripheral blood with OptiLyse C.

Lysing, Fixative and Permeabilizing Solutions



PerFix EXPOSE

Fast and Easy Procedure for Cell Signaling

The PerFix EXPOSE kit has been developed to enhance the signal-to-noise ratio of phospho-epitopes staining and to strongly reduce the workload necessary for the sample preparation.

Accurate detection of both intracellular and extracellular epitopes is obtained, while:

- There are only two washing steps through the procedure.
- There is no methanol treatment, and therefore no ice incubation required.
- A unique procedure can be applied to all phospho-epitopes.
- Several surface markers can be added together with the intracellular markers and incubated simultaneously.
- Total duration of the procedure and total workload are similar to current procedures for surface staining (about 1 hour).

| | Size | Status | Quality Standard | Part # |
|--|----------|--------|------------------|---------------|
| Fixative Reagent : 1 vial Permeabilizing Reagent : 3 vials Staining Reagent : 2 vials Final 20X Solution : 1 vial | 75 tests | RUO | GMP | B26976 |

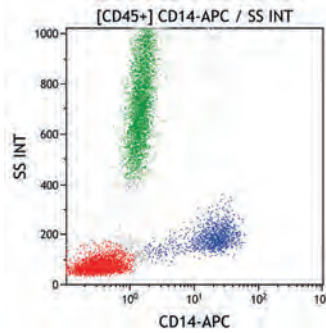


Illustration of leucocyte pattern and surface CD14 staining on a normal whole blood sample, implementing the STRAIGHT procedure (Surface and Phospho-epitopes markers incubated simultaneously).

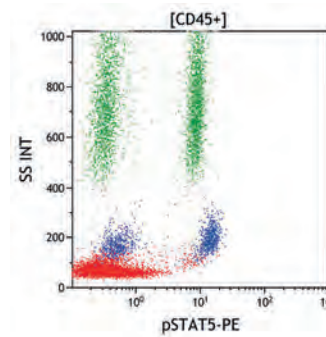


Illustration of leucocyte pattern and Phospho-STAT5 staining on the same normal sample (50/50 mix of GM-CSF activated and non-activated leucocytes), showing a pSTAT5-PE Relative Mean Fluorescence Intensity of more than 30 for both monocytes and granulocytes.

Lysing, Fixative and Permeabilizing Solutions

PerFix-nc (no centrifuge assay kit)

For Intra- and Extra- Cellular Staining Preparation

The PerFix-nc Kit (no centrifuge assay Kit) has been developed to enhance the signal-to-noise ratio of intracellular staining and simplify the workload necessary for the sample preparation.

Accurate detection of both intracellular and extracellular epitopes are obtained, while:

- There are no washing steps through the whole STRAIGHT procedure (only a final wash step is described as optional).
- Several surface markers can be added together with the intracellular markers and incubated simultaneously during the permeabilization step.
- Total duration of the procedure and total workload are similar to current procedures for surface staining (e.g. VersaLyse + Fix No Wash), and much shorter than common permeabilization procedures.
- Potential automation of the PerFix-nc STRAIGHT procedure is rendered possible thanks to the removal of the washing steps.

| | Size | Status | Quality Standard | Part # |
|--|-----------|----------|------------------|---------------|
| Fixative Buffer : 1 vial Permeabilizing Buffer : 1 vial Final 10X Solution : 1 vial | 75 tests | IVD & CE | GMP | B31167 |
| Fixative Buffer : 1 vial Permeabilizing Buffer : 1 vial Final 10X Solution : 1 vial | 75 tests | RUO | GMP | B10825 |
| Fixative Buffer : 2 vials Permeabilizing Buffer : 2 vials Final 10X Solution : 2 vials | 150 tests | IVD & CE | GMP | B31168 |
| Fixative Buffer : 2 vials Permeabilizing Buffer : 2 vials Final 10X Solution : 2 vials | 150 tests | RUO | GMP | B10826 |

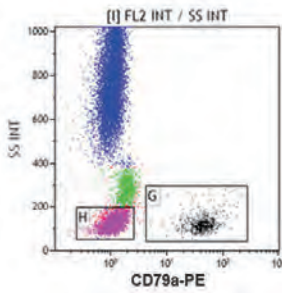
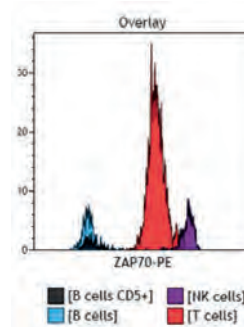


Illustration of leucocyte pattern and intracytoplasmic B-Cell staining on normal sample, implementing the PerFix-nc STRAIGHT protocol.



ZAP-70-PE staining on lymphocytes of another normal sample, implementing the PerFix-nc + wash protocol.

ThromboFix Platelet Stabilizer

The ThromboFix Platelet stabilizer extends the window for platelet analysis by ensuring that the platelets cannot be induced to a new functional state, for example, activated. Platelet Stabilizer preserves platelets in their current state at the time of preparation. The ThromboFix Platelet stabilizer may be used in conjunction with platelet monoclonal antibody-dye conjugates for flow cytometric analysis.

| | Size | Status | Quality Standard | Part # |
|---------------------|-----------|--------|------------------|----------------|
| Platelet Stabilizer | 100 tests | RUO | GMP | 6607130 |

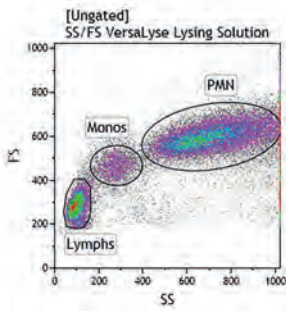
Lysing, Fixative and Permeabilizing Solutions

VersaLyse Lysing Solution

VersaLyse Lysing Solution is a reagent used to lyse red blood cells from any biological fluid and, in particular, to lyse erythrocytes from whole blood. VersaLyse is a highly specific, very gentle lysing solution, suitable for applications such as immunophenotyping, cell sorting, activation or cell culture. It is designed for use in flow cytometry and facilitates obtaining highly discriminative scattergrams whatever the type of flow cytometer used. VersaLyse is a versatile reagent which may be used in lyse / wash, wash / lyse and lyse / no-wash procedures with undiluted or diluted samples.

The histograms are dual-parameter light scatter histograms (FS *versus* SS) of a normal K₃EDTA anticoagulated blood sample lysed with VersaLyse Lysing Solution (No-wash procedure).

| | Size | Status | Quality Standard | Part # |
|-----------------|-----------|----------|------------------|---------------|
| Lysing Solution | 100 tests | IVD & CE | GMP | A09777 |
| Lysing Solution | 100 tests | RUO | GMP | IM3648 |

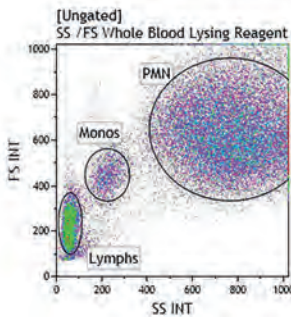


VersaLyse Wash on venous blood. Acquisition with a Navios cytometer using CXP acquisition software and Kaluza analysis software.

Whole Blood Lysing Reagents

The 100-test lysing kit (part number 6602764) provides Immuno-Lyse, Fixative and Stabilizer for preparation of whole blood for analysis by fluorescence microscopy or flow cytometry. The 300-test lysing kit (part number 6603152) provides Immuno-Lyse and Fixative for preparation of whole blood for analysis by flow cytometry only.

| | Size | Status | Quality Standard | Part # |
|------------|-----------|----------|------------------|----------------|
| Lysing Kit | 100 tests | IVD & CE | GMP | 6602764 |
| Lysing Kit | 300 tests | IVD & CE | GMP | 6603152 |



Whole Blood on venous blood. Acquisition with a Navios cytometer using CXP acquisition software and Kaluza analysis software.

Viability Dyes



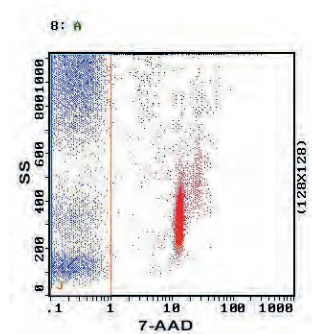
| Description | Utility |
|--|---|
| 7-AAD Viability Dye | Ready-to-use reagent allowing discrimination of viable from non viable cells. |
| DRAQ7 Far-Red Fluorescent Live-Cell Impermeant DNA Dye | Membrane impermeant fluorescent dye for the rapid and convenient staining of the dsDNA/nuclei of cells, tissues and organisms including dead, permeabilized or fixed mammalian cells. |
| DAPI Viability Dye | Blue fluorescent nucleic acid stain that binds to double stranded DNA and appears to associate with AT clusters in the minor groove of the DNA molecule. |
| Cell cycle kit | Ready to use reagent to monitor cell cycle. Consists of a detergent, Propidium Iodide (PI), and RNase A. |

7-AAD Viability Dye

7-AAD Viability Dye is a ready-to-use reagent allowing discrimination of viable from non viable cells using flow cytometry. It is composed of 7-Amino-Actinomycin D (7-AAD) which intercalates between cytosine and guanine bases of the DNA. The maximum absorption of the 7-AAD / DNA complex is situated in the green spectral region, compatible with argon laser equipped-cytometer (excitation wavelength of 488 nm). The deep red fluorescence emission of 7-AAD (635 to 675 nm) makes the use of this probe easier in combination with fluorescein isothiocyanate (FITC) and phycoerythrin (PE) conjugated antibodies because, in contrast to propidium iodide (PI), the 7-AAD / DNA complex shows lower spectral overlap with FITC and PE.

| | Size | Presentation |
|---------------|-----------|---------------|
| Viability Dye | 150 tests | 1 vial |
| | Status | Part # |
| | IVD & CE | A07704 |
| | RUO | IM3422 |
| | RUO | B88526 |

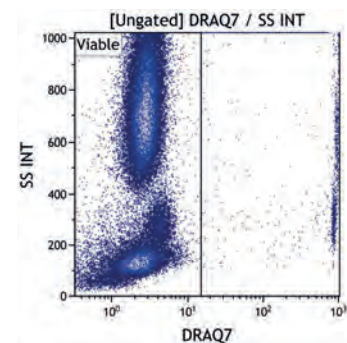
NEW



DRAQ7 dye

DRAQ7 is a novel far-red emitting viability dye (e.g. 725nm/20nm bandpass) that can be used as a membrane impermeant fluorescent dye for the rapid and convenient staining of the dsDNA/nuclei of cells, tissues and organisms including dead, permeabilized or fixed mammalian cells with minimal RNA-associated fluorescence. It does not enter intact live cells, reducing the potential for false-positives, and making it an ideal reporter for real-time viability/toxicity studies by HCS imaging, flow or microplate-based cytometry.

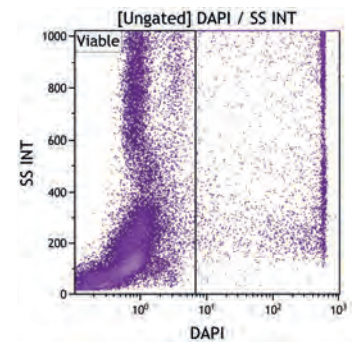
| | Size | Presentation |
|------------------------|-----------|---------------|
| Viability Dye (0.3 mM) | 200 tests | 1 vial |
| | Status | Part # |
| | RUO | B25595 |



Viability Dyes

DAPI

4',6-diamidino-2-phenylindole (DAPI) is a blue fluorescent nucleic acid stain that binds to double stranded DNA and appears to associate with AT clusters in the minor groove of the DNA molecule. DAPI undergoes approximately 20-fold enhancement of fluorescence when associated with DNA, having an excitation maximum of 358 nm and an emission maximum of 461 nm. The spectral properties of DAPI make it very suitable for detecting viability on a flow cytometer equipped with an ultraviolet or a violet laser. DAPI is an impermeant DNA dye; it is largely excluded from live cells by competent plasma membranes, but can enter a compromised membrane where the dye can interact with DNA in the cell. Under recommended conditions, dead cells produce a bright fluorescent signal when excited with a violet laser and detected in the wavelength range of 425-475 nm. It can be readily used with dyes excited by other laser lines. Apoptotic, necrotic cells and / or damaged cells are source of interference in the analysis of viable cells by flow cytometry. Non-viable cells can be evaluated and discriminated following DAPI positive labeling when viable cells remain unstained (negative).

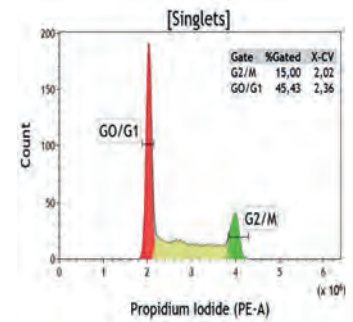


| | Size | Presentation |
|---------------|-----------|---------------|
| Viability Dye | 200 tests | 1 vial |
| | Status | Part # |
| | LUO | B30437 |

Cell Cycle kit

Cells divide following a series of defined steps that involve changes in protein expression, cell morphology, and DNA synthesis. The distinct events within the cell cycle process can be categorized into five main phases. Cells starting at a resting state or G₀, will proceed to Interphase (G₁, S, G₂) followed by the M phase (mitosis and cytokinesis). As proliferating cells transition from G₁ to M, the DNA content will double as the chromosomes are duplicated. Analysis of cell cycle, via monitoring the quantity of DNA is routinely performed by flow cytometry and is a common assay for the platform. DNA binding dyes such as Propidium Iodide (PI), 7-AAD (7-aminoactinomycin) or DAPI are used to measure the change in DNA content of cell as they transition through G₀, G₁, S, G₂ and M phase.

The cell cycle kit is a ready to use reagent to monitor cell cycle consist of a detergent, Propidium Iodide (PI), and RNase A. The detergent permeabilizes the cell membrane, allowing the PI to access the DNA. RNase A ensures elimination of RNA which is also labeled by PI and which can interfere with the interpretation of results. The cell cycle kit has been develop to stain cells fixed either with alcohol or formaldehyde by re-suspension of the fixed cell pellet into 0.5 mL followed by a 15 minute incubation prior to acquisition on a flow cytometer. With an excitation/emission spectra of 493/636, Propidium Iodide can be excited by a 488 nm laser and detected in a cytometer equipped with the appropriate filter.



| | Size | Presentation |
|----------------|-----------|---------------|
| Cell Cycle kit | 200 tests | 1 vial |
| | Status | Part # |
| | RUO | C03551 |

NEW

Ancillary Reagents

Buffer

PBS Buffer

This package contains 15 foil-wrapped packets of PBS Buffer reagent. Each package is brought up to a 500 mL volume with distilled water to yield a 0.01 M potassium phosphate, 0.15 M sodium chloride at a pH of 7.2 ± 0.2.

| Size | Format | Status | Part # |
|------------|--------|--------|----------------|
| 15 packets | Powder | LUO | 6603369 |

Cleaning Agent

AQUIOS Cleaning Agent

AQUIOS Cleaning Agent is a cleaning agent for use on the AQUIOS flow cytometer components that come in contact with blood samples.

| Size | Format | Status | Part # |
|--------|--------|----------|---------------|
| 500 mL | Liquid | IVD & CE | B25698 |

AQUIOS Sodium Hypochlorite Solution

AQUIOS Sodium Hypochlorite Solution is a cleaning agent used as part of an AQUIOS flow cytometer system. The solution maintains AQUIOS instruments in optimal condition.

| Size | Format | Status | Part # |
|-----------|--------|----------|---------------|
| 4 x 50 mL | Liquid | IVD & CE | B23536 |

Contrad 70 Cleaning Solution

This cleaning solution is for use on flow cytometer components. This rinse-free, disposable solution cleans glass, plastic, ceramic, and metals by soaking, manual scrubbing, or ultrasonic cleaning.

| Size | Format | Status | Part # |
|------|--------|--------|--------------|
| 1 L | Liquid | nMD | 81911 |

COULTER CLENZ

COULTER CLENZ Cleaning Agent is an all-purpose cleaning reagent. It contains agents that strip away protein build-up and lysed red blood cells in instrument fluidics. It should be used routinely as part of regular instrument maintenance, such as shutdown. Additionally, it should be included in a schedule of routine preventive maintenance procedures designed to maintain high performance.

| Size | Format | Status | Part # |
|---------|--------|--------|----------------|
| 1 x 5 L | Liquid | CE | 8448222 |
| 1 L | Liquid | CE | 8448188 |

Flow-Clean Cleaning Agent

For use as a cleaning agent for flow cytometer components that come in contact with blood samples.

| Size | Format | Status | Part # |
|--------|--------|----------|---------------|
| 500 mL | Liquid | IVD & CE | A64669 |

Diluent

ISOTON II

The ISOTON II diluent is a filtered, phosphate-buffered saline solution specifically formulated for use in flow cytometers. This isotonic fluid is carefully manufactured for low particulate and fluorescence backgrounds to ensure superior signal to noise ratio measurements.

| Size | Format | Status | Part # |
|----------|--------|--------|----------------|
| 1 x 20 L | Liquid | LUO | 8448011 |

Lysing Reagent

AQUIOS Lysing Reagent Kit

AQUIOS Lysing Reagent Kit is used as part of the AQUIOS flow cytometer system. The kit consists of two reagents used by AQUIOS flow cytometers to prepare whole blood samples for analysis of white blood cells.

| Size | Format | Status | Part # |
|-----------|--------|----------|---------------|
| 100 tests | Liquid | IVD & CE | B23538 |

Sheath Fluid

AQUIOS Sheath Solution

AQUIOS Sheath Solution is a non-fluorescent, azide-free balanced electrolyte solution for use on AQUIOS flow cytometers with light scatter and fluorescent applications.

| Size | Format | Status | Part # |
|----------|--------|----------|---------------|
| 1 x 10 L | Liquid | IVD & CE | B25697 |

CytoFLEX Sheath Fluid

A nonionic, non-fluorescent, and azide-free sheath fluid for use on Beckman Coulter CytoFLEX flow cytometers.

| Size | Format | Status | Part # |
|------|--------|--------|---------------|
| 10 L | Liquid | RUO | B51503 |

Ancillary Reagents

IsoFlow Sheath Fluid

This isotonic fluid is specifically formulated for use in flow cytometers. IsoFlow Sheath Fluid is carefully manufactured for low particulate and fluorescence backgrounds to ensure superior signal to noise ratio measurements.

| <i>Size</i> | <i>Format</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|----------------|
| 4 x 1.8 L | Liquid | IVD & CE | 8547008 |
| 1 x 10 L | Liquid | IVD & CE | 8546859 |

PuraFlow Sheath Fluid

| <i>Size</i> | <i>Format</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|----------------|
| 20 L | Liquid, 1X | RUO | A70188 |
| 4 x 6 L | Liquid, 8X | RUO | CY30230 |

Startup Reagents

CytoFLEX Startup Reagents

Daily QC Beads, Sheath, Flow Clean, Contrad.

| <i>Size</i> | <i>Format</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|---------------|
| | Tubes | nMD | B55031 |
| | Plates | nMD | C14907 |

CytoFLEX Startup Reagents - Infrared

Daily QC Beads, IR QC beads, Sheath, Flow Clean, Contrad.

| <i>Size</i> | <i>Format</i> | <i>Status</i> | <i>Part #</i> |
|-------------|---------------|---------------|---------------|
| | Tubes | nMD | C14908 |
| | Plates | nMD | C14909 |



INSTRUMENTATION

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| Instrument Accessories | 263-265 |
| Tips and Labware | 267-275 |

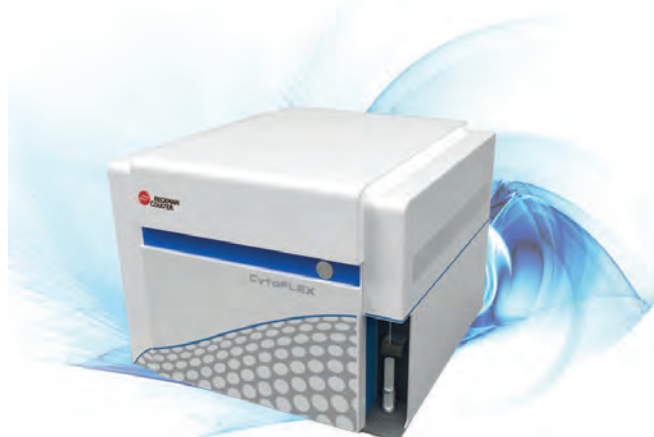
Instruments and Software

FLOW CYTOMETER

ANALYZER

CytoFLEX

CLASS II LASER



CytoFLEX Instrument

Upgradable sensitivity in a small footprint, for both single color and multicolor analysis.

Flexibility

- Up to 25 available configurations to easily adapt to your application needs.
- Instruments with as few as four fluorescent channels activated are available with the ability to activate additional parameters as needed by purchasing an activation key.

Design

- Compact size 42.5 x 42.5 x 34 cm (16.7 x 16.7 x 13.4 in) with Tank/Holder 14 x 35.6 x 43.4 cm (5.5 x 14.0 x 17.1 in).
- Accepts 5 mL (12 x 75 mm) polystyrene and polypropylene and micro centrifuge 1.5 mL and 2 mL formats.
- User installable.
- Fixed optical alignment, no requirement for adjustment of optical system.

Fluidics

- Adjustable sample flow rates between 10 μ L and 240 μ L per minute.
- Sample volumes as low as 10 μ L.
- Calibrated volumetric sample volume delivery, suitable for absolute cell counts.

Up to three lasers

The CytoFLEX Platform is a revolutionary system presenting optimal excitation and emission, minimizing light loss and maximizing sensitivity. This compact system uses innovative technology borrowed from the telecommunications industry, resulting in performance comparable to instruments four times the size. The CytoFLEX model provides the traditional laser palette and a number of channels to accommodate most flow cytometry assay needs. The fully activated instrument includes five fluorescent channels from the 405 nm (Violet), five fluorescent channels from the 488 nm (Blue) laser, and three fluorescent channels from the 638 nm (Red) laser. The instrument includes 13 band pass filters which can be repositioned as needed. You can activate the number of channels that you need now and add channels later as your research needs grow. See the Configurations Table for a current list of available pre-set configurations.

Detection capability & Resolution

- Exceptional detection capability: <30 MESF-FITC, <10 MESF-PE.
- Provides 7 decades of resolution, 16,777,216 channels and an event collection rate of 30,000 events/sec.
- Innovative, proprietary Wavelength Division Multiplexing (WDM) detection module.
- Proprietary flow cell design with integrated optics increases sensitivity and multiple wavelength detection capability.
- Fully integrated optical module design, with flow cell and patented Homodyne forward scatter for greater stability and detection capability.
- Collection of side scatter light from 405 nm (vSSC) for enhanced nanoparticle detection (0.2 μ m).
- Acquire SSC simultaneously from 488nm and 405 nm for flexibility to detect a variety of particles.

CytoFLEX CytExpert Software

CytExpert software allows visualization of data acquisition and data analysis modules.

- Industry standard FCS 3.0 file format supports the use of third party software.
- Full matrix fluorescence compensation supports both automatic compensation and manual compensation.
- Unique Compensation Library lets users store and retrieve a repository of compensation spillover values of dyes.
- Free fully featured analysis software featuring time saving analysis functions.

| Workstation | | Status | Part # |
|---------------------------------------|------------------------------------|--------|---------------|
| CytoFLEX Workstation | 1 unit | RUO | Please call |
| <i>Violet-Blue-Red (V-B-R) Series</i> | | | |
| CytoFLEX V0-B2-R2 System | 2 Laser (488 nm, 638 nm), 4 Colors | RUO | B53016 |
| CytoFLEX V0-B3-R1 System | 2 Laser (488 nm, 638 nm), 4 Colors | RUO | B53015 |
| CytoFLEX V0-B3-R2 System | 2 Laser (488 nm, 638 nm), 5 Colors | RUO | B53014 |
| CytoFLEX V0-B3-R3 System | 2 Laser (488 nm, 638 nm), 6 Colors | RUO | B53011 |
| CytoFLEX V0-B4-R0 System | 1 Laser (488 nm), 4 Colors | RUO | B53019 |
| CytoFLEX V0-B4-R2 System | 2 Laser (488 nm, 638 nm), 6 Colors | RUO | B53013 |
| CytoFLEX V0-B5-R0 System | 1 Laser (488 nm), 5 Colors | RUO | B53018 |
| CytoFLEX V0-B5-R3 System | 2 Laser (488 nm, 638 nm), 8 Colors | RUO | B96622 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

| | | | |
|---------------------------------|---|-----|---------------|
| CytoFLEX V2-B2-R0 System | 2 Laser (405 nm, 638 nm), 4 Colors | RUO | B53017 |
| CytoFLEX V2-B2-R2 System | 2 Laser (405 nm, 488 nm), 6 Colors | RUO | C02944 |
| CytoFLEX V2-B2-R2 System | 3 Laser (405 nm, 488 nm, 638 nm), 6 Colors | RUO | C02946 |
| CytoFLEX V2-B3-R2 System | 3 Laser (405 nm, 488 nm, 638 nm), 7 Colors | RUO | B53010 |
| CytoFLEX V2-B3-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 8 Colors | RUO | B53009 |
| CytoFLEX V2-B4-R2 System | 3 Laser (405 nm, 488 nm, 638 nm), 8 Colors | RUO | C02945 |
| CytoFLEX V2-B4-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 9 Colors | RUO | B53008 |
| CytoFLEX V2-B5-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 10 Colors | RUO | B53005 |
| CytoFLEX V3-B3-R0 System | 2 Laser (405 nm, 488 nm), 6 Colors | RUO | B53012 |
| CytoFLEX V3-B3-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 9 Colors | RUO | B53007 |
| CytoFLEX V3-B4-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 10 Colors | RUO | B53006 |
| CytoFLEX V4-B4-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 11 Colors | RUO | B53003 |
| CytoFLEX V4-B5-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 12 Colors | RUO | B53001 |
| CytoFLEX V5-B3-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 11 Colors | RUO | B53004 |
| CytoFLEX V5-B4-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 12 Colors | RUO | B53002 |
| CytoFLEX V5-B5-R0 System | 2 Laser (405 nm, 488 nm), 10 Colors | RUO | B53037 |
| CytoFLEX V5-B5-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 13 Colors | RUO | B53000 |

| Filter modules | Status | Part # |
|--|--------|-------------------|
| 405/10 nm Bandpass Filter | nMD | A01-1-0048 |
| 405/30 nm Bandpass Filter | nMD | B99146 |
| 450/45 nm Bandpass Filter | nMD | A01-1-0049 |
| 450/45 nm Bandpass Filter with Signal Attenuation (OD1) | nMD | B90300 |
| 488/8 nm Bandpass Filter | nMD | A01-1-0050 |
| 510/20 nm Bandpass Filter | nMD | B76128 |
| 510/20 nm Bandpass Filter with Signal Attenuation (OD1) | nMD | B90294 |
| 515/20 nm Bandpass Filter | nMD | B76124 |
| 525/40 nm Bandpass Filter | nMD | A01-1-0051 |
| 525/40 nm Bandpass Filter with Signal Attenuation (OD1) | nMD | B90303 |
| 550/30 nm Bandpass Filter | nMD | B76139 |
| 561/6 nm Bandpass Filter | nMD | B72627 |
| 585/15 nm Bandpass Filter | nMD | B76121 |
| 585/30 nm Bandpass Filter | nMD | B71089 |
| 585/42 nm Bandpass Filter | nMD | A01-1-0052 |
| 595/20 nm Bandpass Filter | nMD | B76117 |
| 610/20 nm Bandpass Filter | nMD | A01-1-0053 |
| 610/20 nm Bandpass Filter with Signal Attenuation (OD1) | nMD | B90297 |
| 638/6 nm Bandpass Filter | nMD | A01-1-0054 |
| 660/10 nm Bandpass Filter | nMD | A01-1-0055 |
| 675/30 nm Bandpass Filter | nMD | B78244 |
| 690/50 nm Bandpass Filter | nMD | A01-1-0056 |
| 710/50 nm Bandpass Filter | nMD | B71092 |
| 712/25 nm Bandpass Filter | nMD | A01-1-0057 |
| 740/35 nm Bandpass Filter | nMD | B78217 |
| 763/43 nm Bandpass Filter | nMD | B99143 |
| 780/60 nm Bandpass Filter | nMD | A01-1-0058 |
| 819/44 nm Bandpass Filter | nMD | B78220 |
| 840/20 nm Bandpass Filter | nMD | B99144 |
| 885/40 nm Bandpass Filter | nMD | B99145 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

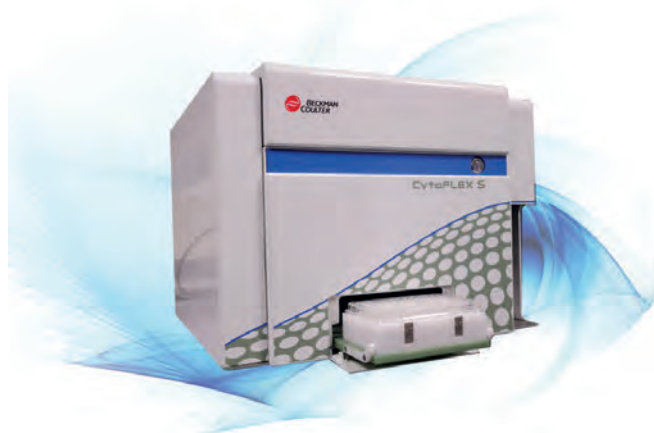
Instruments and Software

FLOW CYTOMETER

ANALYZER

CytoFLEX S

CLASS LASER



CytoFLEX S Instrument

Up to 4 Lasers Excitation and Superior Detection Sensitivity in a small footprint, for simple and multicolor analysis.

Configuration Choices

- 19 configurations to easily adapt to your application needs.
- Choose up to (4) lasers from the following options: 375 nm, 405 nm, 488 nm, 638 nm, 561nm and 808 nm.

Design

- Compact size 42.5 x 42.5 x 34 cm (16.7 x 16.7 x 13.4 in) with Tank/Holder 14 x 35.6 x 43.4 cm (5.5 x 14.0 x 17.1 in);
- Accepts 5mL (12 x 75 mm) polystyrene and polypropylene and micro centrifuge 1.5 mL and 2 mL formats.
- User installable.
- Fixed optical alignment, no requirement for adjustment of optical system.

Fluidics

- Adjustable sample flow rates between 10 μ L and 240 μ L per minute.
- Sample volumes as low as 10 μ L.
- Calibrated volumetric sample volume delivery, suitable for absolute cell counts.

Up to four lasers

The CytoFLEX S models bring up to four laser instruments to the research community expanding the fluorochrome palette for special applications. The CytoFLEX S system provides additional choice of the 561 nm (Yellow Green) 375 nm (Near UV), or the 808 nm (Infrared) lasers. It uses the same innovative technology borrowed from the telecommunications industry as the CytoFLEX System, resulting in performance comparable to instruments four times the size. Also like the CytoFLEX, each instrument includes the full set up repositionable bandpass filters and users can purchase the number of channels required now and activate additional channels laser within the series.

Detection capability & Resolution

- Exceptional detection capability: <30 MESF-FITC, <10 MESF-PE.
- Provides 7 decades of resolution, 16,777,216 channels and an event collection rate of (30,000 events/sec).
- Innovative, proprietary Wavelength Division Multiplexing (WDM) detection module; Dual Port WDM Modules.
- Proprietary flow cell design with integrated optics increases sensitivity and multiple wavelength detection capability.
- Fully integrated optical module design, with flow cell and patented Homodyne forward scatter for greater stability and detection capability.
- Collection of side scatter VSSC from 405nm laser excitation for enhanced nanoparticle detection (0.2 μ m).
- Acquire SSC simultaneously from both 488 nm and 405 nm for flexibility to detect a variety of particles.

CytoFLEX CytExpert Software

CytExpert software allows visualization of data acquisition and data analysis modules.

- Industry standard FCS 3.0 file format supports the use of third party software.
- Full matrix fluorescence compensation supports both automatic compensation and manual compensation.
- Unique Compensation Library lets users store and retrieve a repository of compensation spillover values of dyes.
- Free fully featured analysis software featuring time saving analysis functions.

| Configurations | | Status | Part # |
|--|---|--------|---------------|
| Near UV-Violet-Blue-Red (N-V-B-R) Series | | | |
| CytoFLEX S N2-V0-B4-R0 System | 2 Laser (375 nm, 488 nm), 6 Colors | RUO | B78558 |
| CytoFLEX S N2-V0-B5-R3 System | 3 Laser (375 nm, 488 nm, 638 nm), 10 Colors | RUO | B78559 |
| CytoFLEX S N2-V3-B5-R3 System | 4 Laser (375 nm, 405 nm, 488 nm, 638 nm), 13 Colors | RUO | B78557 |
| Near UV-Violet-Blue-Yellow Green (N-V-B-Y) Series | | | |
| CytoFLEX S N0-V0-B2-Y2 System | 2 Laser (488 nm, 561 nm), 4 Colors | RUO | C02949 |
| CytoFLEX S N0-V4-B2-Y4 System | 2 Laser (488 nm, 561 nm), 6 Colors | RUO | B96618 |
| CytoFLEX S N0-V4-B2-Y4 System | 3 Laser (375 nm, 405 nm, 488 nm, 561 nm), 10 Colors | RUO | B96619 |
| CytoFLEX S N2-V0-B2-Y4 System | 3 Laser (375 nm, 488 nm, 561 nm), 8 Colors | RUO | B78561 |
| CytoFLEX S N2-V4-B2-Y4 System | 4 Laser (375 nm, 405 nm, 488 nm, 561 nm), 12 Colors | RUO | B78560 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software



| CytoFLEX S V4-B2-Y4-RO System | 3 Laser (405 nm, 488 nm, 561 nm), 10 Colors | RUO | B96620 |
|---|---|--------|-------------------|
| <i>Violet-Blue-Red-Infrared (V-B-R-I) Series</i> | | | |
| CytoFLEX S V0-B4-RO-I2 System | 2 Laser (488 nm, 808 nm), 6 Colors | RUO | C01158 |
| CytoFLEX S V0-B4-R3-I2 System | 3 Laser (488 nm, 638 nm, 808 nm), 9 Colors | RUO | C01159 |
| CytoFLEX S V4-B4-RO-I2 System | 3 Laser (405 nm, 488 nm, 808 nm), 10 Colors | RUO | C01160 |
| CytoFLEX S V4-B4-R3-I2 System | 4 Laser (405 nm, 488 nm, 638 nm, 808 nm), 13 Colors | RUO | C01161 |
| <i>Violet-Blue-Yellow Green-Red (V-B-Y-R) Series</i> | | | |
| CytoFLEX S V0-B2-Y4-RO System | 2 Laser (488 nm, 561 nm), 6 Colors | RUO | B75812 |
| CytoFLEX S V0-B2-Y4-R3 System | 3 Laser (488 nm, 561 nm, 638 nm), 9 Colors | RUO | B75811 |
| CytoFLEX S V0-B2-Y4-R3 System | 3 Laser (405 nm, 488 nm, 561 nm), 6 Colors | RUO | C02947 |
| CytoFLEX S V2-B2-Y3-R2 System | 4 Laser (405 nm, 488 nm, 561 nm, 638 nm), 9 Colors | RUO | B96621 |
| CytoFLEX S V4-B2-Y0-R3 System | 3 Laser (405 nm, 488 nm, 638 nm), 9 Colors | RUO | C02948 |
| CytoFLEX S V4-B2-Y4-R3 System | 4 Laser (405 nm, 488 nm, 561 nm, 638 nm), 13 Colors | RUO | B75408 |
| Filter modules | | Status | Part # |
| 405/10 nm Bandpass Filter | | nMD | A01-1-0048 |
| 405/30 nm Bandpass Filter | | nMD | B99146 |
| 450/45 nm Bandpass Filter | | nMD | A01-1-0049 |
| 450/45 nm Bandpass Filter with Signal Attenuation (OD1) | | nMD | B90300 |
| 488/8 nm Bandpass Filter | | nMD | A01-1-0050 |
| 510/20 nm Bandpass Filter | | nMD | B76128 |
| 510/20 nm Bandpass Filter with Signal Attenuation (OD1) | | nMD | B90294 |
| 515/20 nm Bandpass Filter | | nMD | B76124 |
| 525/40 nm Bandpass Filter | | nMD | A01-1-0051 |
| 525/40 nm Bandpass Filter with Signal Attenuation (OD1) | | nMD | B90303 |
| 550/30 nm Bandpass Filter | | nMD | B76139 |
| 561/6 nm Bandpass Filter | | nMD | B72627 |
| 585/15 nm Bandpass Filter | | nMD | B76121 |
| 585/30 nm Bandpass Filter | | nMD | B71089 |
| 585/42 nm Bandpass Filter | | nMD | A01-1-0052 |
| 595/20 nm Bandpass Filter | | nMD | B76117 |
| 610/20 nm Bandpass Filter | | nMD | A01-1-0053 |
| 610/20 nm Bandpass Filter with Signal Attenuation (OD1) | | nMD | B90297 |
| 638/6 nm Bandpass Filter | | nMD | A01-1-0054 |
| 660/10 nm Bandpass Filter | | nMD | A01-1-0055 |
| 675/30 nm Bandpass Filter | | nMD | B78244 |
| 690/50 nm Bandpass Filter | | nMD | A01-1-0056 |
| 710/50 nm Bandpass Filter | | nMD | B71092 |
| 712/25 nm Bandpass Filter | | nMD | A01-1-0057 |
| 740/35 nm Bandpass Filter | | nMD | B78217 |
| 763/43 nm Bandpass Filter | | nMD | B99143 |
| 780/60 nm Bandpass Filter | | nMD | A01-1-0058 |
| 819/44 nm Bandpass Filter | | nMD | B78220 |
| 840/20 nm Bandpass Filter | | nMD | B99144 |
| 885/40 nm Bandpass Filter | | nMD | B99145 |
| CytoFLEX Sheath Fluid | | RUO | B51503 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

FLOW CYTOMETER

ANALYSER

CytoFLEX LX

CLASS LASER



CytoFLEX LX Instrument

Up to 6 Lasers Excitation and Superior Detection Sensitivity in a small footprint, for simple and multicolor analysis.

Configuration Choices

- 7 configurations to easily adapt to your application needs.
- Choose up to (6) lasers from the following options: 355 or 375 nm, 405 nm, 488 nm, 638 nm, 561 nm and 808 nm.

Design

- Cytometer (with or without Plate Loader) 60.5 cm x 73.3 cm x 45.1 cm. Tanks and Holder 25 cm x 25 cm x 25 cm.
- Accepts 5 mL (12 x 75 mm) polystyrene and polypropylene and micro centrifuge 1.5 mL and 2 mL formats.
- Fixed optical alignment, no requirement for adjustment of optical system.

Fluidics

- Ultra-low pressure peristaltic sheath and sample delivery system Sheath Fluid Filter and Sample Pump Tubing can be replaced by the user (no service visit required).
- Fixed Flow Rates: 10, 30 and 60 $\mu\text{L}/\text{min}$. Custom Flow Rate Control mode from 10 to 240 $\mu\text{L}/\text{min}$ in 1 μL increments.

Up to six lasers

The CytoFLEX LX models bring up to six laser instruments to the research community providing up to 21 fluorescent channels. Users have a choice of the UV 355 nm or Near UV 375 nm laser, as well as 405 nm Violet, 488 nm Blue, 561 nm Yellow Green, 638 nm Red, and 808 nm Infrared lasers. It uses the same innovative technology borrowed from the telecommunications industry as the CytoFLEX System, resulting in performance comparable to instruments four times the size. As part of the CytoFLEX platform, these instruments offer exquisite sensitivity, extensive set up bandpass filters, and the flexibility to upgrade by activating additional parameters.

Detection capability & Resolution

- Exceptional detection capability: <30 MESF-FITC, <10 MESF-PE.
- Provides 7 decades of resolution, 16,777,216 channels and an event collection rate of (30,000 events/sec).
- Innovative, proprietary Wavelength Division Multiplexing (WDM) detection module; Dual Port WDM Modules.
- Proprietary flow cell design with integrated optics increases sensitivity and multiple wavelength detection capability.
- Fully integrated optical module design, with flow cell and patented Homodyne forward scatter for greater stability and detection capability.
- Collection of side scatter VSSC from 405 nm laser excitation for enhanced nanoparticle detection (0.2 μm).
- Acquire SSC simultaneously from both 488 nm and 405 nm for flexibility to detect a variety of particles.

CytoFLEX CytExpert Software

CytExpert software allows visualization of data acquisition and data analysis modules.

- Industry standard FCS 3.0 file format supports the use of third party software.
- Full matrix fluorescence compensation supports both automatic compensation and manual compensation.
- Unique Compensation Library lets users store and retrieve a repository of compensation spillover values of dyes.
- Free fully featured analysis software featuring time saving analysis functions.

| Configurations | Status | Part # |
|---|---|-------------------|
| Near UV-Violet-Blue-Yellow Green-Red-Infrared (N-V-B-Y-R-I) Series | | |
| CytoFLEX LX N0-V5-B3-Y5-R3-I0 System | 4 Laser (405 nm, 488 nm, 561 nm, 638 nm), 16 Colors | RUO C23009 |
| CytoFLEX LX N3-V5-B3-Y5-R3-I2 System | 5 Laser (375 nm, 405 nm, 488 nm, 561 nm, 638 nm), 19 Colors | RUO C00446 |
| CytoFLEX LX N3-V5-B3-Y5-R3-I2 System | 6 Laser (375 nm, 405 nm, 488 nm, 561 nm, 638 nm, 808 nm), 21 Colors | RUO C00445 |
| UV-Violet-Blue-Yellow Green-Red-Infrared (U-V-B-Y-R-I) Series | | |
| CytoFLEX LX U3-V5-B3-Y0-R3-I0 System | 4 Laser (355 nm, 405 nm, 488 nm, 638 nm), 14 Colors | RUO C11183 |
| CytoFLEX LX U3-V5-B3-Y0-R3-I0 System | 4 Laser (355 nm, 405 nm, 488 nm, 561 nm), 14 Colors | RUO C11184 |
| CytoFLEX LX U3-V5-B3-Y5-R3-I0 System | 5 Laser (355 nm, 405 nm, 488 nm, 561 nm, 638 nm), 19 Colors | RUO C11185 |
| CytoFLEX LX U3-V5-B3-Y5-R3-I2 System | 6 Laser (355 nm, 405 nm, 488 nm, 561 nm, 638 nm, 808 nm), 21 Colors | RUO C11186 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software



| Filter modules | Status | Part # |
|---|--------|------------|
| 405/10 nm Bandpass Filter | nMD | A01-1-0048 |
| 405/30 nm Bandpass Filter | nMD | B99146 |
| 450/45 nm Bandpass Filter | nMD | A01-1-0049 |
| 450/45 nm Bandpass Filter with Signal Attenuation (OD1) | nMD | B90300 |
| 488/8 nm Bandpass Filter | nMD | A01-1-0050 |
| 510/20 nm Bandpass Filter | nMD | B76128 |
| 510/20 nm Bandpass Filter with Signal Attenuation (OD1) | nMD | B90294 |
| 515/20 nm Bandpass Filter | nMD | B76124 |
| 525/40 nm Bandpass Filter | nMD | A01-1-0051 |
| 525/40 nm Bandpass Filter with Signal Attenuation (OD1) | nMD | B90303 |
| 550/30 nm Bandpass Filter | nMD | B76139 |
| 561/6 nm Bandpass Filter | nMD | B72627 |
| 585/15 nm Bandpass Filter | nMD | B76121 |
| 585/30 nm Bandpass Filter | nMD | B71089 |
| 585/42 nm Bandpass Filter | nMD | A01-1-0052 |
| 595/20 nm Bandpass Filter | nMD | B76117 |
| 610/20 nm Bandpass Filter | nMD | A01-1-0053 |
| 610/20 nm Bandpass Filter with Signal Attenuation (OD1) | nMD | B90297 |
| 638/6 nm Bandpass Filter | nMD | A01-1-0054 |
| 660/10 nm Bandpass Filter | nMD | A01-1-0055 |
| 675/30 nm Bandpass Filter | nMD | B78244 |
| 690/50 nm Bandpass Filter | nMD | A01-1-0056 |
| 710/50 nm Bandpass Filter | nMD | B71092 |
| 712/25 nm Bandpass Filter | nMD | A01-1-0057 |
| 740/35 nm Bandpass Filter | nMD | B78217 |
| 763/43 nm Bandpass Filter | nMD | B99143 |
| 780/60 nm Bandpass Filter | nMD | A01-1-0058 |
| 819/44 nm Bandpass Filter | nMD | B78220 |
| 840/20 nm Bandpass Filter | nMD | B99144 |
| 885/40 nm Bandpass Filter | nMD | B99145 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

FLOW CYTOMETER

ANALYZER

Navios Flow Cytometer

CLASS LASER



The Navios flow cytometer provides high sensitivity and resolution as well as a wide dynamic range to run high complexity, multi-color analyses on both clinical and clinical research samples. The Navios can be configured as either a two-laser system providing six- or eight-color detection, or as a three-laser system offering up to 10-color analysis*. The instrument can be upgraded to adapt as clinical assays and clinical research applications become more complex.

Innovative picomotor-driven beam steering optics facilitate fine adjustments of laser position from instrument-based controls. The Navios' acquisition speed of up to 25,000 events per second combines with a low data abort rate to improve data collection efficiency, lower sample volume requirements and reduce reagent consumption. Additionally, the 20-bit digital electronics and 40-MHz pulse sampling deliver low-end sensitivity and resolution.

Tubes in the instrument's 32-position carousel are vortexed individually, which both ensures sample homogeneity and avoids over-mixing. Automated barcode reading provides verification of carousel number, position and tube label for true positive sample identification. Navios data files also contain cytometer settings, plots, gates and regions, providing a complete record of sample analysis.

Navios flow cytometers interface with Beckman Coulter automation systems to provide secure, high-throughput results, even at the highest volumes. The instruments are LIS-ready, and in conjunction with Beckman Coulter's automated preparation systems and Data Innovations middleware, can provide a complete sample-in/result-out solution for clinical labs.

* CE marked for 10-color in-vitro diagnostic use. In the U.S., Navios is intended for use as an in-vitro diagnostic device for immunophenotyping with Navios tetra software and CYTOSTAT tetraCHROME reagents. All other uses are for research use only.

Optics

- Lasers/Power Output
 - Blue Solid State Diode, 488 nm, 22 mW
 - Red Solid State Diode, 638 nm, 25 mW
 - Violet Solid State Diode, 405 nm, 40 mW
 - 125 μ m spatially separated beam spots

Flow Cell

- 150 x 460 μ m quartz, gel coupled 1.2 NA lens

Fluorescence Delivery

- Highly efficient multi-mode fiber optics to maximize light delivery
- Easy interchangeable 18-degree tilted optical filters

Detectors

- Forward Scatter: Fourier design providing up to three measurements of forward angle
- Side Scatter: Independently focused high performance photodiode with electronic attenuation
- Fluorescence: FL1-FL10 Fluorescent Detectors*

Sample Processing

- Three selectable flow rates
- 32 tube Multi Carousel Loader or single tube mode
- Automated or manual worklist acquisition
- True Positive ID
- Biohazard contained workstation

Signal Processing

- Dynamic range: 20-bit data acquisition
- Workstation resolution: 1,048,576 channels
- Digital sampling rate: 40 MHz
- Digital accuracy: < 5% error

Performance Characteristics

- Throughput: Up to 80 tubes/hour at 10,000 events per second

| Instrument | Status | Part # |
|---|----------|---------------|
| Navios 6 colors, 2 lasers (5+1 configuration) | IVD & CE | B47903 |
| Navios 8 colors, 2 lasers (5+3 configuration) | IVD & CE | B47904 |
| Navios 10 colors, 3 lasers (5+3+2 configuration) | IVD & CE | B47905 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software



| Software | Status | Part # |
|---|----------|---------------|
| Navios tetra Software | IVD & CE | 775213 |
| Navios Win 7 Workstation and SW Upgrade | IVD & CE | B47899 |
| Optional Data Innovations products | Status | Part # |
| Data Innovations Additional Connection, Licence and Service | nMD | Please call |
| Data Innovations Hardware Computer System | nMD | B35622 |
| Data Innovations Instrument Manager Software, Licenses and Service | nMD | Please call |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

FLOW CYTOMETER

ANALYZER

Navios EX Flow Cytometer

CLASS LASER



The Navios EX flow cytometer is built on the successful Navios platform but includes a new optical bench and enhanced functionality. The Navios EX can be configured as either a two-laser system providing six- or eight-color detection, or as a three-laser system offering up to 10-color analysis*. The instrument can be upgraded to adapt as clinical assays and clinical research applications become more complex.

The Navios EX has updated acquisition software and leverages the optical design from our CytoFLEX platform for optimal performance. With an acquisition speed of up to 25,000 events per second combined with a low data abort rate the Navios EX improves data collection efficiency and lowers sample volume requirements.. The new adjustable probe and improved minimum dead volume maximize precious samples. Additionally, the 20-bit digital electronics and 40-MHz pulse sampling deliver low-end sensitivity and resolution.

Tubes in the instrument's 32-position carousel are vortexed individually, which both ensures sample homogeneity and avoids over-mixing. Automated barcode reading provides verification of carousel number, position and tube label for true positive sample identification. Navios EX data files also contain cytometer settings, plots, gates and regions, providing a complete record of sample analysis.

Navios EX flow cytometers interface with Beckman Coulter automation systems to provide secure, high-throughput results, even at the highest volumes. The instruments are LIS-ready, and in conjunction with Beckman Coulter's automated preparation systems and Data Innovations middleware, can provide a complete sample-in/result-out solution for clinical labs.

* CE-IVD marked for 6, 8 or 10-color in-vitro diagnostic use. In the U.S., Navios EX is intended for use as in-vitro diagnostic device for immunophenotyping with Navios EX tetra Software and CYTOSTAT tetraCHROME reagents. All other uses are for research use only.

Optics

- Lasers/Power Output
 - Blue Solid State Diode, 488 nm, 55 mW
 - Red Solid State Diode, 638 nm, 50 mW
 - Violet Solid State Diode, 405 nm, 80 mW
 - Nominal 90 µm spatially separated beam spots

Flow Cell

- 430 µm x 180 µm rectangular channel

Fluorescence Delivery

- Highly efficient multi-mode fiber optics to maximize light delivery
- Easy interchangeable 18-degree tilted optical filters

Detectors

- Forward Scatter: Fourier design providing up to three measurements of forward angle
- Side Scatter: Independently focused high performance photodiode with electronic attenuation
- Fluorescence: FL1-FL10 Fluorescent Detectors*

Sample Processing

- Three selectable flow rates
- 32 tube Multi Carousel Loader or single tube mode
- Dead volume as low as 2 µL when using Beckman Coulter 12 x 75 mm polypropylene tube and adjustable probe
- Automated or manual worklist acquisition
- True Positive ID
- Biohazard contained workstation

Signal Processing

- Dynamic range: 20-bit data acquisition
- Workstation resolution: 1,048,576 channels
- Digital sampling rate: 40 MHz
- Digital accuracy: < 5% error

Performance Characteristics

- Throughput: Up to 82 tubes/hour at 10,000 events per second; 89 tubes/hour for a concentrated sample
- Scatter resolution: Resolves 0.404 µm diameter particles from background noise using forward scatter with maximum detection of up to 40 µm diameter particles

| Instrument | Status | Part # |
|--|----------|---------------|
| Navios EX 6 colors, 2 lasers (5+1 configuration) | IVD & CE | B86735 |
| Navios EX 8 colors, 2 lasers (5+3 configuration) | IVD & CE | B86672 |
| Navios EX 10 colors, 3 lasers (5+3+2 configuration) | IVD & CE | B83535 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software



| Software | Status | Part # |
|---|----------|---------------|
| Navios EX Acquisition New User Software Win 7 | IVD & CE | B91237 |
| Navios EX offline Acquisition 1 User Software, v2.0 | IVD & CE | B91238 |
| Navios EX Offline Acquisition 5 User Software, v2.0 | IVD & CE | B91239 |
| Navios EX tetra Software | IVD & CE | B91240 |
| Navios EX Win 7 Workstation | nMD | B80220 |
| Optional Data Innovations products | Status | Part # |
| Data Innovations Additional Connection, Licence and Service | nMD | Please call |
| Data Innovations Hardware Computer System | nMD | B35622 |
| Data Innovations Instrument Manager Software, Licenses and Service | nMD | Please call |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

FLOW CYTOMETER

ANALYZER

Gallios Flow Cytometer

CLASS LASER



Designed to fit your needs, today and tomorrow, the Gallios flow cytometer provides efficient acquisition of superior quality data from up to 12 parameters with advanced optical design for enhanced sensitivity for multicolor assays. With customized forward scatter, to achieve the most accurate size measurement, and optimized electronics for high resolution and fast, accurate processing, the Gallios was designed for your research needs. Gallios is optimized for unparalleled signal to noise resolution in all parameters and its quick and easy setup of automated walk-away processing improves your workflow while its remote diagnostics minimize downtime and allows you to maximize lab productivity.

Developed for the research and biopharmaceutical markets, with a particular emphasis on optical and electronics design, combined with powerful automation and software tools, the Gallios enhances the efficiency and analytical capabilities of flow cytometry laboratories. Electronics provide accurate and efficient digital signal processing at high event rates over a wide dynamic range of fluorescence intensities. These benefits are packaged in a compact analyzer that delivers stable performance over long periods of time and across a wide range of operating temperatures.

With Kaluza Software for Gallios you can power through data sets containing multiple colors, plots and events with speed and precision. The result: your flow cytometry research can find that extra gear to get you to your objective sooner.

Optics

- Lasers/Power Output
 - Blue Solid State Diode, 488 nm, 22 mW
 - Red Solid State Diode, 638 nm, 25 mW
 - Violet Solid State Diode, 405 nm, 40 mW
 - 125 μ m spatially separated beam spots
 - Optional 561 nm Yellow Solid State Laser, 20 mW

Flow Cell

- 150 x 460 μ m quartz, gel coupled 1.2 NA lens

Fluorescence Delivery

- Highly efficient multi-mode fiber optics to maximize light delivery
- Easy interchangeable 18-degree tilted optical filters

Detectors

- Forward Scatter: Fourier design providing up to three measurements of forward angle
- Side Scatter: Independently focused high performance photodiode with electronic attenuation
- Fluorescence: FL1-FL10 Fluorescent Detectors

Sample Processing

- Three selectable flow rates
- 32 tube Multi Carousel Loader or single tube mode
- Automated or manual worklist acquisition
- True Positive ID
- Biohazard contained workstation

Signal Processing

- Dynamic range: 20-bit data acquisition
- Workstation resolution: 1,048,576 channels
- Digital sampling rate: 40 MHz
- Digital accuracy: < 5% error

Performance Characteristics

- Throughput: Up to 80 tubes/hour at 10,000 events per second

| Models | Status | Part # |
|--|--------|---------------|
| Gallios 6 colors, 2 lasers (5+1 configuration) | RUO | B47900 |
| Gallios 8 colors, 2 lasers (5+3 configuration) | RUO | B43619 |
| Gallios 10 colors, 3 lasers (5+3+2 configuration) | RUO | B43618 |

| Workstation | Status | Part # |
|---|--------|---------------|
| Gallios Windows 7 Workstation and SW Upgrade | RUO | B47898 |
| Kaluza Acquisition Upgrade Package | RUO | B43734 |
| Kaluza Acquisition Upgrade Package Minus Monitor | RUO | B43735 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software



| Option | Status | Part # |
|--------------------|--------|---------------|
| 561nm Laser | RUO | B01751 |

| Accessories | Status | Part # |
|--|--------|---------------|
| Kaluza Controller | RUO | B43666 |
| Kaluza Monitor | RUO | B43609 |
| Kaluza Software Kit Single User Perpetual Educational License | RUO | B16406 |
| Kaluza Software Kit 1 year Single User Educational License | RUO | B16407 |
| Kaluza Software Kit 1 year Single User renewable license | RUO | A84174 |
| Kaluza Software Kit 5 User Network | RUO | A84175 |
| Kaluza Software Kit 5 User Network Educational License | RUO | B16408 |
| Kaluza Software Kit 10 User Network | RUO | A82961 |
| Kaluza Software Kit 10 User Network Educational License | RUO | B16409 |
| Kaluza Software Kit Single User, Perpetual | RUO | A82959 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

FLOW CYTOMETER

ANALYZER

FC 500 Series Flow Cytometry Systems

CLASS LASER



FC 500 with Carousel loader and CXP software

Automated quality control monitoring

To comply with the rigors of the routine flow cytometry laboratory, CXP software provides automatic daily monitoring of system performance, simplifying daily quality control recording. Built in Levy-Jennings plots are updated with each QC run for constant quality monitoring. The integrated product log keeps track of lot numbers and expiration dates helping with compliance for regulated laboratories.

Multi-file analysis software

Data files produced by the FC 500 Flow Cytometer contain complex biological information. Review of the data offline to acquisition is an important process. The CXP software provides powerful tools that offer flexibility and automation in data analysis. It is possible to analyze multiple files concurrently or on one desktop to glean as much information as possible from an experiment or patient sample. Overlay histograms can be created to visualize small changes in populations together with three dimensional plots to analyze interacting parameters. All of which can be processed manually or in batch mode.

Customized panel reporting

Available within CXP software to tailor reports to groups of assays. Each report can include both user selected statistics as well as plots from the panel. Output can be made via a printed page or electronic PDF documents to easily e-mail to offsite laboratories.

The FC 500 Series delivers flexible testing, powerful software and a user-friendly interface; features that help both clinical and basic researchers optimize their overall workflow.

The systems have the capacity to conduct 5-color analysis using either a single (488nm) laser or a dual (488nm/635nm) air-cooled laser configuration. Coupled with the ability to perform tube or plate based automated analysis, the FC 500 Series improves efficiency by enabling users to easily manage and automate every aspect of their flow cytometric analysis.

The FC 500 incorporates Beckman Coulter's ADC technology, the most advanced method of color compensation available. Combined with high resolution acquisition electronics, its proven algorithm provides superior correction of spectral overlap for more accurate results. With ADC technology, biological samples can be used for automated color compensation, without the limitations of latex beads.

20-bit Digital Signal Processing (DSP) on the system is responsible for excellent linearity, drift-free amplification and accurate color compensation. High resolution color compensation is available during acquisition and in Listmode analysis, increasing the flexibility of the system.

Both optical and digital systems work together to yield unrivalled visualization of low intensity fluorescence populations.

Detection

Photodiodes (forward & side scatter)
Photomultiplier tubes (fluorescence)

Resolution

0.5 μ m diameter particles.
HPCV is <2% to <4% depending on the laser

Performance

<300 MESF for PE
<600 MESF for APC
<600 MESF for FITC

Optics/Laser Power

488 nm argon ion laser (20 mW),
635 nm solid state laser (25 mW)

Flow Cell

150 x 450 μ m rectangular channel BioSense enhanced optics, Quartz mounted with vertical flow path for superior hydrodynamic focusing

Signal Processing

Digital System with 4 decade data display

Power Requirements

50/60 Hz, 100-240 VAC

| Instruments | Status | Part # |
|---|----------|---------------|
| FC 500 with Carousel Loader and CXP Software | IVD & CE | Please call |
| Workstation | Status | Part # |
| Offline Analysis Workstation | nMD | B22394 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software



| Accessories | Status | Part # |
|---|----------|----------------|
| CXP Analysis Software Packages | nMD | Please call |
| Red Diode Laser Upgrade | nMD | 623101 |
| Sample Tubes | nMD | 2523749 |
| stemCXP SYSTEM Software | IVD & CE | Please call |
| tetraCXP SYSTEM Software | IVD & CE | Please call |
| Optional Data Innovations products | Status | Part # |
| Data Innovations Additional Connection, Licence and Service | nMD | Please call |
| Data Innovations Hardware Computer System | nMD | B35622 |
| Data Innovations Instrument Manager Software, Licenses and Service | nMD | Please call |
| Window 7 Upgrades | Status | Part # |
| CXP Analysis Software 2.2 Single User License | nMD | B27031 |
| CXP Analysis Software 2.2 Three User License | nMD | B27032 |
| CXP Analysis Software 2.2 Five User License | nMD | B27033 |
| CyAn ADP Windows 7 Upgrade | RUO | Please call |
| Optional 22" LCD Monitor | nMD | A56136 |
| WIN 7 Upgrade Kit (Computer, CXP 2.2, 22" Monitor) | nMD | B28946 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

FLOW CYTOMETER

LOAD & GO SYSTEM

AQUIOS CL Flow Cytometer

CLASS LASER



Aquios CL is the first true Load & Go flow cytometer. It is easy to learn, easy to use, ideal for cross-training your lab staff, and represents a breakthrough solution to the most basic operational challenges of flow cytometry. With Aquios CL in your lab, Load & Go simplicity means you can...

- Provide a 24/7 flow cytometry service as the Aquios CL can be run safely by minimally trained users.
- Minimize the potential for user error inherent in existing systems that require numerous manual steps to set up and run.
- Increase productivity with high-throughput performance that eliminates many of the least efficient features of existing systems.
- Minimize hands-on time with a fully integrated system that incorporates automated loading, sample preparation, reagent management, barcode scanning, data analysis, and full LIS connectivity.
- Get system users up to speed in one day with computer-based training and an application specialist site visit.
- Allocate staff resources for maximum productivity, putting your skilled operators where you need them most.
- Minimize exposure to potentially biohazardous material. The Aquios CL uses cap piercing technology which will greatly reduce your need to handle open blood tubes.

The Aquios CL Flow cytometer in combination with Aquios Tetra-1 Panel has been accepted for the WHO list of prequalified in vitro diagnostic products.

Full Bidirectional LIS Connectivity

- Automatic retrieval of test requests and transmission of test results
- No need for additional workstations or software to connect to the LIS System
- No need to create or download worklists manually

Automated System Setup

- Preprogrammed protocols per application
- No daily setup reagents required
- No manual system or controls optimization
- Power on, system warmup, load controls, load samples - that's it!

Smart Track Reagent Monitoring

- Uses a range of barcoded reagents and consumables
- Automatic barcode scanning to track those reagents, lot numbers, open and closed vial expiration dates, and number of tests or volume per reagent container
- Continuous tracking of reagent usage
- Automatic reagent monitoring including the number of tests remaining and warnings when tracked reagents are low, out or expired

Cassette Autoloader

- Total capacity 40 sample tubes
- Accommodates a variety of tube sizes
- Continuous, random loading and unloading
- Separate single-tube loader for STAT samples, open vials, and tubes that are not barcoded

Automated Sample Preparation

- Automatic matching of sample identification code with the test request
- All sample preparation and analysis performed in 96-well microplates
- Automatic launch of applicable testing protocol
- Positive specimen ID and automatic specimen mixing immediately prior to aspiration
- Automatic dispensing and mixing of applicable reagents
- No manual pipetting of primary tubes

Pipeline Sample Processing

- Eliminate slow, inefficient batch processing of samples
- 20 minutes to the first result after sample load (measured with Tetra -1 or Tetra-2+)
- After the first result, it's 25 results/hour for up to one full 96-well plate (measured with Tetra Combo)
- Two multitasking probes: one for cap piercing and sample preparation, the other for aspirating prepared samples for analysis
- Each sample is analyzed as soon as it is ready
- Intelligent analysis algorithm sets all gates and regions automatically
- System flags samples that don't meet autovalidation criteria

Real Time Sample Monitoring

- Intuitive software interface indicates the status of each sample
- Know at a glance where each sample is in the process and how much time until results are available

Comprehensive Quality Control

- Barcode tracking means no manual QC or reagent logs
- Generate a full, easily reviewable audit trail that includes reagent traceability
- Should QC fail, operator can be alerted via text message or email

Aquios CL System Specifications

Dimensions:
System: W: 32" (82 cm); D: 22" (56 cm); H: 22" (56 cm)
Workstation: W: 23" (59cm); D: 5" (13cm); H: 18" (46cm)
Supply Cart: W: 21" (54cm); D: 18" (46cm); H: 16" (41cm)

Sample Loading

Autoloader holds up to 8 cassettes at a time with up to 5 sample tubes each and allows for continuous loading and unloading. A separate single-tube loader enables both open- and closed-vial sampling.

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software



| Instrument | | Status | Part # |
|--|----------------|----------|---------------|
| AQUIOS CL (100-120v) | | IVD & CE | B39101 |
| AQUIOS CL (220-240v) | | IVD & CE | B39102 |
| Software | | Status | Part # |
| AQUIOS Designer Software 2.0 | | CE | B69476 |
| AQUIOS Designer Software 2.0 | | - | C04893 |
| Reagents | | Status | Part # |
| AQUIOS Cleaning Agent | 500 mL | IVD & CE | B25698 |
| AQUIOS Flow-Count Fluorospheres | 100 tests | CE | B43611 |
| AQUIOS Flow-Count Fluorospheres | 100 tests | RUO | B96656 |
| AQUIOS IMMUNO-TROL Cells | 2 x 3 mL | IVD & CE | B23535 |
| AQUIOS IMMUNO-TROL Low Cells | 2 x 3 mL | IVD & CE | B25700 |
| AQUIOS Lysing Reagent Kit | 100 tests | IVD & CE | B23538 |
| AQUIOS Sheath Solution | 10 L | IVD & CE | B25697 |
| AQUIOS Sodium Hypochlorite Solution | 4 x 50 mL | IVD & CE | B23536 |
| AQUIOS Tetra-1 Panel | 50 tests | IVD & CE | B23533 |
| AQUIOS Tetra-2+ Panel | 50 tests | IVD & CE | B23534 |
| AQUIOS VersaFix Lysing Reagent | 50 tests | CE | B43019 |
| AQUIOS VersaFix Lysing Reagent | 50 tests | RUO | C02059 |
| AQUIOS VersaFix Lysing Reagent | 8 x 50 tests | CE | B43020 |
| Accessories | | Status | Part # |
| AQUIOS Deep Well Plate | 50 plates/case | nMD | B23502 |
| The AQUIOS Deep Well Plate is a 96-well, conical bottom microplate that optimizes the sample preparation process in the AQUIOS system. The plate is a high quality deep well type, made of virgin polypropylene. Each Deep Well Plate has a unique barcode that is automatically read when placed onboard the system. This enables the system to track sample locations. | | | |
| Option | | Status | Part # |
| AQUIOS Stand-Alone Workstation with Software | | nMD | B49616 |
| The AQUIOS Standalone Workstation with preloaded AQUIOS system software is an all-in-one computer system with a 23 inch touch display and wireless mouse and keyboard. The Workstation can be enabled remotely (via network), such as in a nearby office or on a bench top that is not adjacent to the instrument. The Workstation has an Intel Core I7 Processor, 3.2 GHZ, 8GB RAM and includes Microsoft Windows 7 Professional Edition 64-bit and Microsoft Excel 2013 32B/x64 for professional use | | | |
| Color Laser Printer | | nMD | B31892 |
| Lexmark color laser printer (C746N), 120v for high-quality color printing and reliable performance. Easy-to-use features and solutions increase efficiency. For compatible color laser printers in other regions, please contact your Beckman Coulter representative. | | | |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

FLOW CYTOMETER

CELL SORTER

MoFlo Astrios EQ Sorter Family

CLASS LASER



Simplify your most complex sorting tasks with Beckman Coulter's MoFlo Astrios sorter family, offering 7 spatially separated lasers and six-way jet-in-air sorting proficiency that delivers powerful capability while reducing complexity. It's easy, intuitive, and flexible—and lets you see what others cannot.

Leveraging the historically stable fluidic and electronic design of the original MoFlo Astrios—the new flagship MoFlo Astrios EQs and extended EQ sorters expand sorting capability with not only a broad full palette choice of laser options and 6-way sort capability but also adding a unique patent pending enhanced Forward Scatter (eFSC) technology for submicron particle detection. Complex, multi-color sorting is enabled by seven pinholes that spatially separate each of up to seven lasers. The flat-top multilaser shaping optic (MLSO) creates flat-top beam profiles, providing short alignment times and high-level optic stability. Two micrometer stages control the alignment for all seven lasers to simplify sorter preparation and reduce setup time. Advanced software components enhance the instrument's capabilities. The Touch Screen Control Panel facilitates daily set up with its operation optimized for a core laboratory workflow and ideal for compatibility with an optional integrated biohazard hood.

Auto QC allows system performance to be tracked and trended for up to 44 simultaneous parameters from a maximum of 51 parameter choices. A simple 2-stage alignment is complemented by our IntelliSort II beadless drop-delay technology.

Irrespective whether your assays require tube, plate or slide-based deposition, the MoFlo Astrios sorter family delivers choice and performance without compromise to deliver superior results that advance discovery in science, today and tomorrow.

Optics:

- 7 laser / 7 pinhole configurable system; 355nm, 405nm, 488nm, 532nm, 560nm, 592nm, 645nm (wavelengths are nominal and may vary).
- Single Multi-Laser Shaping Optic (MLSO) for fiber-coupled lasers.
- Flat-Top beam profile on fiber coupled lasers increases beam stability and alignment ease.
- 7 lasers aligned through two alignment stages for quick sorter set up.

Software:

- IntelliSort II - The only sorter with a fully beadless drop delay determination and monitoring.
- Touch Screen Control Panel for instrument set up and sort monitoring (intuitive operation and cross-training).
- Auto Startup enables lasers to automatically turn on and fluidics to pressurize.
- Single button Auto QC for tracking and trending with enhanced troubleshooting guidance.
- Summit Software 6.2.4 (or later).

Performance:

- 6-way sorting with a variety of collection devices (temperature control for all sort outputs available with water bath option).
- Mixed Mode sorting: each sort stream is capable of having its own sort mode (Enrich, Purify, Single) programmed. Soft aborts can be collected for reanalysis or resorting.
- Index sorting with intuitive mapping of events.
- Reproducibly sort up to 1536-well plates (due to historically stable fluidics).
- Only sorter capable of 70,000 sort decisions/second validated performance.

Electronics and Software:

- Electronic capability to simultaneously detect 44 parameters.
- 32 bit processing and 100 MHz sampling speeds.
- Negligible electronic dead time equates to very low hard aborts.
- 100,000 events per second acquisition rate validated performance.
- 5-decade dynamic range PMTs.
- Up to 2 FSC channels including user-selectable FSC masks and optional additional SSC detection off each wavelength greater than or equal to 405nm.
- Height, Area, Width, Log, Log Area collected simultaneously for all parameters.
- Describes regions mathematically at the full resolution of the parameter.
- 1 billion events .fcs files with no parameter limit.

Biosafety

- Custom Baker SterilGARD BSL2 cabinet provides best-in-class biocontainment and uninhibited access to sorter fluidics and optical arrays.
- Cabinet provides single turnkey aerosol evacuation direct from sorter sort chamber to HEPA enclosure.
- Cabinet tested to NSF-49 specifications.
- Optional Aerosol Evacuation System (AES) pulls particulates from three (3) chambers with verified performance to meet the ISAC guidelines in absence of Biosafety cabinet.
- Quick release nozzle design for easy access to nozzle tip.
- Sort chamber free of hard edges designed for aerosol containment and cleanability.
- CyClone plate arm with wiper that seals back of sort chamber.

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software



| Instrument | Status | Part # |
|--------------------------|--------|---------------|
| MoFlo Astrios EQ | RUO | B25982 |
| MoFlo Astrios EQs | RUO | B52102 |

| Accessories | Status | Part # |
|---|--------|---------------|
| Baker SterilGARD BSL2 Cabinet 220-240V version | RUO | B10301 |
| Baker SterilGARD BSL2 Cabinet 100V version | RUO | B10300 |
| Baker SterilGARD BSL2 Cabinet 110-120V version | RUO | B10302 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

FLOW CYTOMETER

CELL SORTER

MoFlo XDP Cell Sorter

CLASS II LASER



MoFlo XDP combines historic sorting reliability with cutting edge engineering and proven performance. The open architecture of the instrument enables configuration modularity to meet the diverse sorting applications. The optical bench can accommodate any laser used in Flow Cytometry. Improved light detection and filter designs provide the sensitivity required of a sorter.

The unmatched electronics ensure you identify and accurately sort each cell of interest at higher sort speeds. Accelerating cell sorting research with the first true 32-bit-high resolution 5-decade multi-channel digital system enables accurate sorting of rare events and stem cells. Critical for stable droplet formation required in sorting, the MoFlo XDP fluidic design is robust and proven. Whether performing long sorts or additional precision is required for sorting into 1536-well plates, the stable fluidics of the MoFlo XDP will facilitate your needs.

Combined with the inherent flexibility, digital processing, and fluidic stability; the intuitive software and Touch Screen Control Panel make the set up time on a MoFlo XDP quick and easy, leaving more time for sorting critical samples.

Modularity

- Compatible with any Flow Cytometry laser: water cooled, free-space, fiber coupled
- Fiber coupled lasers with Beam Shaping Optics providing increased stability and alignment ease
- Filter changes simplified with the Precision Optical Detector (POD) structure

Biosafety

- Certifiable Biosafety Level I or II cabinet option
- Aerosol Evacuation System (AES) removes aerosols from sort chamber
- Replaceable probe and sample line
- SmartSampler sample input protects the sample and user

Electronics

- Negligible dead time
- > 100,000 analysis events per second
- Digital triggering on any parameter
- Digital pulse processing
- True dynamic range of 5 decades
- Unmatched linearity

Sort Performance

- IntelliSort II: Beadless drop delay determination and monitoring
- Validated for 70,000 sorts per second
- > 99% purity at all data rates
- High recovery, yield and viability
- Proven 4-Way Sort for multiple population sorting
- Independent Sort Mode capability in each tube
- CyClone custom plate and slide sorting

Touch Screen Control Panel

- Easy-to-use intuitive cytometer set up and control
- Independent control of each stream
- Simple coarse and fine alignment
- CyClone calibration up to 1536-well plate
- Real-time sort statistics

Summit Software

- Established software with powerful data handling
- 18x18 Auto-compensation matrix
- Determine regions with full parameter resolutions
- > 1 Billion event listmode files
- Workspace concept for flexible experiment design

| Instrument | Status | Part # |
|------------------|--------|----------------|
| MoFlo XDP | RUO | ML99030 |

| Accessories | Status | Part # |
|--|--------|----------------|
| Class I Biosafety Cabinet 220V | RUO | ML23330 |
| Class I Biosafety Cabinet 110V | RUO | ML23230 |
| Class II Biosafety Cabinet 220V | RUO | ML23530 |
| Class II Biosafety Cabinet 110V | RUO | ML23430 |
| Class II Biosafety Cabinet 90V | RUO | A70400 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

SOFTWARE

Kaluza Analysis Software



Kaluza Analysis Software from Beckman Coulter employs cutting edge technology for fast, efficient real-time analysis of complex multicolor files for the research lab. It's easy to learn, easy to use, and represents true innovation in data manipulation and analysis. With tools such as panning and zoom, Kaluza allows you to use one software to analyze data from multiple cytometry platforms.

Kaluza isn't just for people who have a cytometer from Beckman Coulter. Kaluza can be integrated into your laboratory operations regardless of the cytometer since it reads standard FCS data files. Improved functionality allows you to:

Change the scale mode from Legacy to full range

- Customize the plot axis range
- Use pan to position data on plot

Kaluza's unique Auto-Layout design intelligently reconfigures your workspace for you. This minimizes the clicks required to create and maintain your workspace to save you time and frustration.

With Kaluza you get:

- Custom plot sizing
- Easy creating of plots
- Zoom in and out
- Guided drag & drop

Kaluza is available in the format you and your laboratory need. Whether you are looking for an individual timed license or a large site license, we have the solution for you. And, with the Kaluza Network License Control Center managing a site license is easier than ever.

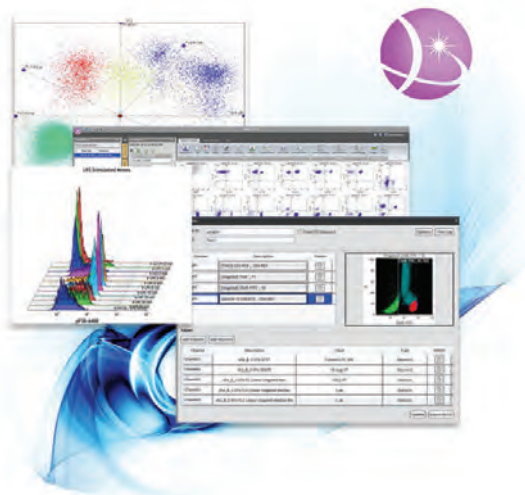
| Non-academic license | Status | Part # |
|--|--------|---------------|
| Kaluza Software Kit 1 year Single User renewable license | RUO | A84174 |
| Kaluza Software Kit 5 User Network | RUO | A84175 |
| Kaluza Software Kit 10 User Network | RUO | A82961 |
| Kaluza Software Kit Single User, Perpetual | RUO | A82959 |
| Academic license | Status | Part # |
| Kaluza Software Kit Single User Perpetual Educational License | RUO | B16406 |
| Kaluza Software Kit 1 year Single User Educational License | RUO | B16407 |
| Kaluza Software Kit 5 User Network Educational License | RUO | B16408 |
| Kaluza Software Kit 10 User Network Educational License | RUO | B16409 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

SOFTWARE

Kaluza C Analysis Software



Kaluza C Flow Cytometry Analysis Software is built upon our successful Kaluza Analysis research use platform. We've turned our attention now to the unique needs and challenges of the clinical flow cytometry laboratory.

Clinical laboratories are under increasing pressure from three sources: reimbursement, regulatory, and resource. Meeting regulatory requirements places demands on both time and expertise.

Kaluza C provides features that streamline the clinical QC reporting requirements and address standardization issues in flow cytometry. At the same time it provides the power to process multi-color files of up to 20 million events in real time.

- Integration with Laboratory Information Systems (LIS).
- Traceability through user management.
- Specialized QC Report generation functions.
- Loads any listmode file that is compliant with the FCS standard up through version 3.1.

Kaluza C allows you to create and edit a Report Sheet, which can include plots, tables, graphics, text, page numbers, and/or a date and time stamp. Quickly arrange plots so that they do not overlap, or align them to the location of your choice. An electronic approval signature can be added to the report sheet. Kaluza C includes an interface that enables the transmission of results, including plots, related statistics, and keywords, to a Laboratory Information System (LIS).

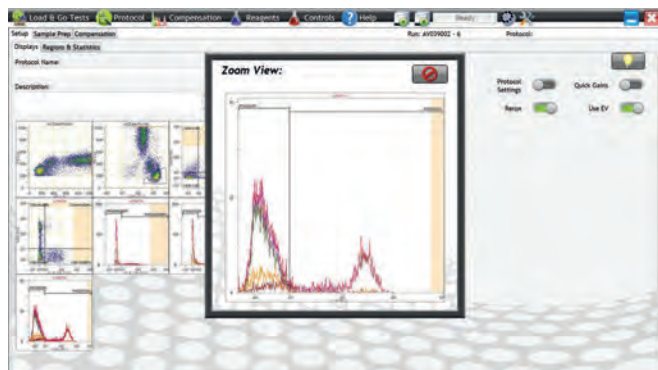
| Non-academic license | Status | Part # |
|--|--------|---------------|
| Kaluza C Analysis Software 1 Year, 1-User (Single) | * | C10575 |
| Kaluza C Analysis Software Perpetual, 1-User (Single) | * | C10574 |
| Kaluza C Analysis Software, 10-User (Network) | * | C10576 |
| Kaluza C Analysis Software, 5-User (Network) | * | C10577 |
| Academic license | Status | Part # |
| Kaluza C Analysis Software 1 Year, 1-User (Single) | * | C10578 |
| Kaluza C Analysis Software Perpetual, 1-User (Single) | * | C10579 |
| Kaluza C Analysis Software, 10-User (Network) | * | C10580 |
| Kaluza C Analysis Software, 5-User (Network) | * | C10581 |

* In development, pending achievement of CE compliance; not yet available for in vitro diagnostic use

Instruments and Software

SOFTWARE

AQUIOS Designer Software



Many laboratories create their own reagent cocktails for routine applications in order to accommodate the marker combinations they need. With the optional AQUIOS Designer Software, these user-defined assays now can be combined with the Load & Go automation features of the AQUIOS CL flow cytometer.

AQUIOS Designer Software provides an intuitive and user-friendly interface with powerful features to set up your user-defined protocols, acquisition templates, panels, compensation settings, and statistic / QC parameters. All features can be accessed via pull-down menus or slider bars, and an easy to use help function will guide you through each individual step.

AQUIOS Designer Software is not available in all countries. Please contact your local Beckman Coulter representative for details. For more information on AQUIOS or AQUIOS Designer Software, please visit AquiosCL.com

Each step in the sample preparation process (volumes, incubation times, mix cycles) can be adapted to your specific requirements. To customize your assay even more, AQUIOS Designer Software supports the use of different lysing options and can derive absolute cell counts using either reference beads or the AQUIOS volumetric absolute counting methodology.

In order to take advantage of the automation features of the AQUIOS CL system, Beckman Coulter provides the reagents for your user-defined assays either through our Contract Manufacturing (GMP) or Custom Design Services* of user defined reagents. Either option provides barcoded and cap-pierceable vials that can be run on the AQUIOS CL instrument with automated tracking of all QC functionalities, including (but not limited to) reagent type, container ID, and lot number.

With AQUIOS Designer Software, running user-defined assays does not mean to sacrifice automated data transfer. The software supports all features you are used to from your catalog applications, without the need for any additional software or workstation**.

The AQUIOS CL Flow Cytometry System streamlines operations by incorporating automated loading, sample preparation, reagent management, and barcode scanning as well as data analysis and bidirectional LIS connectivity in one compact platform - This is what we call, Load & Go Flow Cytometry.

No matter which Custom Reagent Service option you choose, complex inventory management is a thing of the past because you receive your customized reagents in the quantities and lot sizes you require (minimum order quantities apply).

Under Beckman Coulter's Contract Manufacturing Services, we manufacture the components of your user defined test reagents under GMP conditions according to your specifications.

Our Custom Design Services* go even one step further, in that our antibody experts assist you in panel design and reagent formulation.

* Custom Design Services products are For Research Use Only. Not for use in diagnostic procedures.

** Beckman Coulter recommends that all results be reviewed prior to release.

| Software | Status | Part # |
|-------------------------------------|--------|---------------|
| AQUIOS Designer Software 2.0 | CE | B69476 |
| AQUIOS Designer Software 2.0 | - | C04893 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

CELL WASHER

nizonPlus



The nizonPLUS cell washer is an automated sample preparation device for lysis and separation (wash) of the liquid phase of blood (residual part of the lysis of red blood cells) from the solid phase (cells and white blood cells) for cytometric determination of marked cells.

Cell lysis takes place through the release of a programmable volume of an appropriate solution. Washing is performed through specimen centrifugation with subsequent cell sedimentation and supernatant, removing RBCs, platelets and other contaminations while preserving the white blood cells.

Up to 32 specimen tubes can be accommodated and processed in two batches of 16 tubes each directly on the 32 position MCL carousel compatible with Beckman Coulter's Epics XL, FC 500, Navios and Gallios cytofluorometers.

The nizonPLUS offers storing up to 10 methods (including two factory preset reference methods) and four modes of operation (lysis only, wash only, lysis&wash, double lysis). A touch screen user interface simplifies instrument control for novice and experienced users.

Sample Loading

- Beckman Coulter 32 position MCL carousel
- Uncapped 12 x 75 mm polypropylene tubes

Performance

- Deviation of the Subset Percentages compared to manual preparation: $\leq 5\%$
- Relative standard deviation on subsets: $\leq 5\%$
- Medium Deviation between two instruments: $\leq 2.5\%$

WBC Recovery:

- After one wash: 91-101% (mean: 97%)
- After two washes: 80-96% (mean: 88%)

Throughput:

- Typical throughput for 16 tubes (1 wash cycle)¹: 38 min.
- Typical throughput for 32 tubes (1 wash cycle)¹: 76 min.
- Typical throughput for 16 tubes (2 wash cycle)²: 52 min.
- Typical throughput for 32 tubes (2 wash cycle)²: 104 min.

Custom Protocol Parameters

- Custom method storage: 8 methods
- 4 Modes: Lysis only; Washing only; Lysis&Washing; Double lysis
- Lysis parameters: Source (Buffer, Lysing solution, TQ-Prep); Volume (1-2.5 mL with 0.1 mL steps); Time (0-99 minutes with 1 minute steps)
- Washing parameters: Centrifuge cycles (1-9 washing cycles); Centrifuge speed (50-300g in 50g steps); Centrifuge time (1-10 min with 1 min steps); Final volume (0.0-1.9 mL with 0.1 mL steps)

1 Obtained with reference method 1 (Mode: Lysis&Washing, Lysis source: Lysing solution, Lysis Volume: 2mL, Lysis time: 15min, Centrifuge repetition: 1, Centrifuge speed: 250g, Centrifuge time: 3min, Final Volume: 1mL)

2 Obtained with reference method 2 (The parameters are the same as the method 1, but Centrifuge repetition: 2)

Capacity

- Total samples on system: 32
- Samples per batch/centrifuge: 16
- Lysing solution: 250 mL
- Washing solution: 500 mL
- Waste Tank: 20 L

Installation

- Dimensions (W x D x H): 530 mm x 780 mm x 700 mm
- Weight: Centrifuge: 12 kg; Main unit: 15 kg; Total weight: 27 kg
- Voltage: 100-240 +/-10% Vac
- Frequency: 50/60Hz
- Power: 120 W

Operating Conditions

- Temperature: 15-35°C
- Ambient humidity: 5%-80% (non condensing)
- Maximum altitude: 2000 m
- Noise: Maximum measured level 67 dbA

Accessories

- Full waste detector: Complete Waste cap with sensor
- LYSI can: Lysing solution can
- BUFFER can: Buffer can w/o cap
- Full LYSI can cap: Full Lysing solution can cap
- Full BUFFER can cap
- Tube rack: 32 position rack with labels indicating the position
- Waste container: , 20 L; in plastic material
- Syringe: Syringe 10 mL PTFE RN/82 mm/G19 Point-style:LC
- Needle: Needle 82 mm/G19/Point:LC (2pcs/pk)

| Instrument | Status | Part # |
|-----------------------|--------|-------------|
| nizonPlus Cell washer | nMD | Please call |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

CELL PREPARATION SYSTEM

TQ-Prep Workstation & IMMUNOPREP Reagent System



The TQ-Prep Workstation and IMMUNOPREP Reagent System together provide rapid, no-wash whole-blood sample preparation. Automation provides inter-sample and inter-laboratory consistency and reproducibility. A standard 32-tube carousel allows walk-away processing and perfectly complements Beckman Coulter flow cytometers with automatic sample loaders. Intended primarily for laboratories with a high test volume (at least 300 tests per month), the TQ-Prep uses the revolutionary patented lyse and fix technology introduced more than a decade ago with the Q-PREP Workstation and IMMUNOPREP Reagent System.

| | | | |
|----------------------------------|--|----------|----------------|
| Workstation | | Status | Part # |
| TQ-Prep Workstation | Standard 50/60 Hz | IVD & CE | 6605429 |
| Accessories | | Status | Part # |
| Syringe Pump | Upgrade kit for Low Angle Light Scatter (LALS) | RUO | 6915116 |
| Reagent System | | Status | Part # |
| IMMUNOPREP Reagent System | | IVD & CE | 7546999 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

CELL PREPARATION SYSTEM

PrepPlus 2 Workstation



The PrepPlus 2 provides precision pipetting of reagents, patient samples, controls and fluorospheres into daughter tubes of both the FC500 and Navios Carousels. Lysing is then automatically performed on the TQ-Prep. Other features include:

- Flexible software programming of reagents, controls and pipetting parameters
- Improved safety with closed tube sampling
- Standardized, reproducible performance

| | | |
|---------------------------------|----------|----------------|
| Workstation | Status | Part # |
| PrepPlus 2 Workstation | IVD & CE | 378600 |
| Accessories | Status | Part # |
| PrepPlus 2 Accessory Kit | nMD | 6915549 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

AUTOMATION WORKSTATION

Biomek i-Series Automated Workstations

Representing what has made Biomek Workstations an industry leader—combined with enhancements suggested by customers around the globe—Biomek i-Series Automated Workstations have been designed to optimize dependability and walk-away time in mid- to high-throughput labs.



- **Off-set, rotating gripper** optimizes access to high-density decks, enabling more efficient workflows
- **Large-volume, 1 mL multichannel pipetting head** expedites sample transfers and enables more efficient mixing steps
- **Onboard cameras** enable live broadcast and on-error video capture to expedite response time and system diagnosis
- **Spacious, open-platform design** enables access from all sides to allow for integration of adjacent-to-deck and off-deck processing elements (e.g., analytical devices, external storage/incubation units, and labware feeders)
- **Biomek light curtain** provides a key safety feature during operation and method development
- **Internal LED light** illuminates the instrument deck for easy access and monitoring of your workspace status
- **Bright, multiple color- and pattern-coded status light bar** alerts you to the instrument's current mode, even from across the room

- **Windows 10-compatible Biomek i-Series software** provides sophisticated pipetting techniques including automatic volume-splitting, and can interface with third-party and all other Biomek support software
- **Biomek Method Launcher** enables you to select, set up, run and track methods in a few simple mouse clicks, as well as remotely monitor real-time progress from any device with a Google Chrome browser.
- **SAMI EX** designed to provide complete automation and process control by creating planned schedules with the benefits of an optimized, predictable static schedule
- **DART** (Data Acquisition and Reporting Tool) gathers data and synthesizes runtime information from Biomek log files to capture each manipulation of the sample during the course of the method
- **SAMI Process Management (SPMS)** is a calendar organizational tool that allows the addition, monitoring, and planning of SAMI EX methods

Biomek i5

Dimensions without Enclosure:
Width: 112 cm (44"); Depth: 81 cm (32"); Height: 104 cm (41")

Dimensions with Enclosure:
Width: 112 cm (44"); Depth: 81 cm (32"); Height: 112 cm (44")

Deck Capacity:
25 MTP (microtiter plate) Positions

Pipetting Options:
Multichannel-96; Multichannel-384; Span-8

Biomek i7

Dimensions without Enclosure:
Width: 170 cm (67"); Depth: 81 cm (32"); Height: 104 cm (41")

Dimensions with Enclosure:
Width: 170 cm (67"); Depth: 81 cm (32"); Height: 112 cm (44")

Deck Capacity:
45 MTP Positions

Pipetting Options:
Multichannel-96; Multichannel-384; Dual Multichannel; Span-8; Hybrid (Multichannel & Span-8)

| Workstation | | Status | Part # |
|----------------------------|-----------------|--------|---------------|
| Biomek i5 Base Unit | | nMD | Please call |
| Biomek i7 Base Unit | | nMD | Please call |
| Pipetting Heads | | Status | Part # |
| MC-96, 300 µL | 1 µL - 300 µL | nMD | B87590 |
| MC-96, 1200 µL | 5 µL - 1,200 µL | nMD | B87589 |
| MC-384, 60 µL | 0.5 µL - 60 µL | nMD | B87591 |

Biomek Automated Workstations are not intended or validated for use in the diagnosis of disease or other conditions.

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

AUTOMATION WORKSTATION

Biomek NX^P Laboratory Automation Workstation



The compact and cost effective Biomek NX^P sets the standard for flexible laboratory solutions. Available with two pipetting models - Multi-channel (96 or 384) or Span-8, it puts every aspect of liquid handling - including pipetting, dilution, dispensing and integration - into a single, automated system that is as powerful and flexible as it is efficient and economical. Both configurations combine the benefits of a small footprint with the increased efficiency and flexibility of a medium to high throughput instrument. Open-ended flexibility enables integration capability based on your workflow needs. Powered by easy-to-use, icon-driven Biomek software and a library of ready-to-run methods, you can configure the instrument to your specification and choose from a wide range of components to build your optimal solution.

The NX^P workstation offers multiple configurations, including multichannel, Span-8 and Span-8 with an optional gripper. The multichannel model is available with 96- and 384-channel pipetting heads for rapid plate-to-plate applications and assay miniaturization.

With the ability to rotate a full 360°, the optional gripper handle provides access from the left, right or from integrated devices on the back of the instrument. It turns to pick up plates in different orientations, enhances on-the-fly barcode reading and saves deck space by moving titer lids while the Span-8 is pipetting.

The flexible, open architecture of Biomek NX^P simplifies integration, as plate readers, washers and storage devices can be located on the left, right or back of the instrument. The open frame design allows future vertical and horizontal workspace integration, for applications where limited lab space is an issue.

Biomek NX^P offers proven pipetting performance for low-volume reaction setup and assay miniaturization, as well as accurate and repeatable results extending into the submicroliter range. Different techniques can be used for various volume ranges, to enhance liquid handling capabilities. Improved X, Y and Z stability delivers reliable results for small volumes and, to ensure optimum pipetting performance, an integrated pump purges air from the lines.

Workstation:

Weight : 86.18 kg (190 lb.) Height: 111.76 cm (44 in.)
 Width: 91.44cm (36 in.) Depth: 81.28 cm (32 in.)
 Power Requirements : 50/60 Hz, 100-240VAC

Performance Specifications:

| Transfer Volume | Span-8 Syringe Volume | Tip Types | Accuracy ± % | Precision <% |
|-----------------|-----------------------|-----------------------|--------------|--------------|
| 0.5 µL | 250 µL | P20, Fixed 60 mm | 5 | 10 |
| 1 µL | 250, 500, 1000 µL | P20, P50, Fixed 60 mm | 3 | 7 |
| 5 µL | 250, 500, 1000 µL | P20, Fixed 60 mm | 3 | 5 |
| 10 µL | 500 µL | P50, P250 | 3 | 5 |
| 50 µL | 500 µL | P250 | 3 | 5 |
| 100 µL | 500 µL | P250, P1000 | 3 | 5 |
| 250 µL | 500 µL | P1000 | 2 | 2 |
| 950 µL | 1000 µL | P1000 | 1 | 1 |

Pipetting Options:

96-Channel Disposable Tip Pipetting Head, 384-Channel Disposable Tip Pipetting Head, Span-8 Fixed 100 Probes, Span-8 Fixed 60 Probes, Span-8 P250 Disposable Tips, Span-8 P250 Liquid Level Sensing Tips, Span-8 P20 Disposable Tips, Span-8 P20 Liquid Level Sensing Tips, Septum Piercing Probes.

Multichannel Systems:

| Transfer Volume | Multichannel Configuration | Tip Types | Accuracy ± % | Precision <% |
|-----------------|----------------------------|---------------|--------------|--------------|
| 0.5 µL | 384 | P30 | 3 | 7 |
| 1 µL | 96 & 384 | P20, P50, P30 | 3 | 5 |
| 5 µL | 96 & 384 | P20 & P30 | 3 | 5 |

| Workstation | Status | Part # |
|--|-------------------------------------|-------------|
| Biomek NX^P Workstation | Power Configuration 50/60 Hz nMD | Please call |

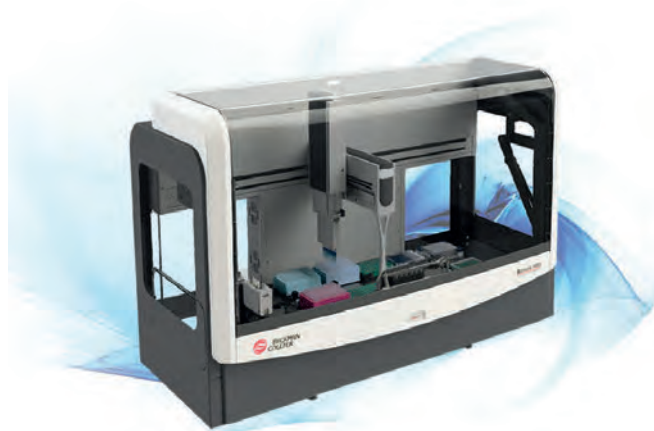
Biomek Automated Workstations are not intended or validated for use in the diagnosis of disease or other conditions.

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

AUTOMATION WORKSTATION

Biomek 4000 Laboratory Automation Workstation



Optional enclosure

Even though the Biomek 4000 fits comfortably into a laminar flow hood, it's also available with an optional enclosure. The small footprint of the enclosure will fit neatly on your lab bench.

Expanded dynamic volume range

From 1 μL to 1000 μL , the Biomek 4000 workstation offers precise and robust pipetting, both single channel and 8-channel.

Frees up deck space

Off-deck mounts—such as the tool rack and liquid waste station—open up deck positions, allowing you to process more plates at a time.

Improved wash tool performance

Allows for dispensing against the wall of a well, tip touches, bulk dispense and per liquid volume calibration to maximize the efficiency of your assay.

The Biomek 4000 Workstation offers powerful and intelligent liquid handling that adapts to changing situations. From its easy-to-use icon-driven software and available application methods to its enhanced work surface with interchangeable tools, the Biomek 4000 Workstation is designed to help you streamline your workflow and automate your laboratory today and tomorrow. The new Biomek 4000 Workstation takes your productivity and accuracy to new levels, so you spend less time on process and more time on powerful discoveries. At the heart of the Biomek 4000 Workstation is its hardware. Built with rugged, robust features, this liquid handling system offers reliable performance that flexes and grows with your needs.

The modular deck configuration allows you to set up the work surface with the standard eight positions (expandable to 12), while off-deck storage space keeps your tool rack and liquid waste station close by. New and improved tools offer even higher throughput for assays greater than 200 μL and up to 1000 μL volume transfers. The improved wash tool enables tip touches and more accurate volume dispenses.

Accessories

Heating, cooling, and shaking accessories are available.

Fully automated deck framing

The AccuFrame tool provides increased accuracy using three-dimensional positioning.

Integration-friendly

The Biomek 4000 system can be customized for larger scale-up applications by Beckman Coulter's Integrated Solutions team of experts.

Additional storage

Storage provided beneath the deck frees up even more precious lab space and keeps all your tools close at hand.

| Workstation | Status | Part # |
|---------------------------------|--------|----------------|
| Biomek 4000 Workstation | nMD | Please call |
| Accessories | Status | Part # |
| 24-Position Tube rack | nMD | 373661 |
| Enclosure | nMD | B22634 |
| Handheld Barcode Scanner | nMD | A47300 |
| MCL | nMD | 6806734 |

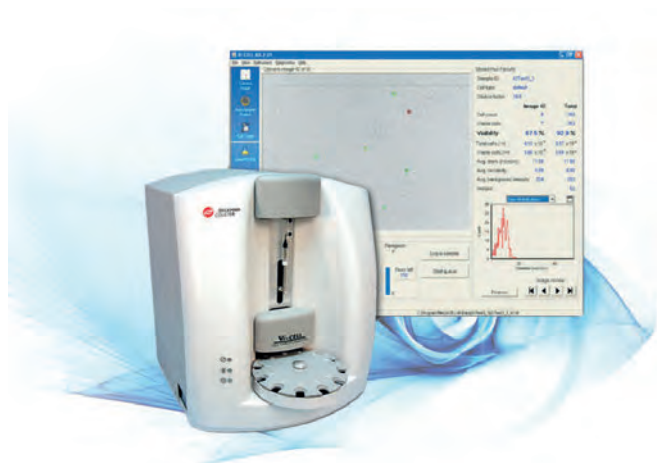
Biomek Automated Workstations are not intended or validated for use in the diagnosis of disease or other conditions.

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

COUNTER

Vi-CELL



The Beckman Coulter Vi-CELL automates the manual trypan blue viability method. The Vi-CELL removes the subjective variables inherent in the manual assay. The instrument also reports cell concentration, size distribution, and circularity measurements. Real time cell images may be archived for future re-analyses.

| Models | | | | Status | Part # |
|--------------------------------------|--------------|---------------|---|--------|---------------|
| Vi-CELL XR | | | | LUO | 383556 |
| Auto Sampler | Size Range | Sample Volume | Analysis Time | | |
| Yes | 2-70 μ m | 0.5 mL | < 2.5 min | | |
| Accessories | | | | Status | Part # |
| Vi-CELL XR Quad Pack | | | 4 reagent packs (120 vials per pack) | LUO | 383722 |
| Vi-CELL Concentration Control | | | (1 x 20 mL) | LUO | 175478 |
| Vi-Cell Focus Control | | | (1 x 15 mL) | LUO | 175474 |
| Vi-CELL Sample Cups | | | 4 x 120 vials | LUO | 383721 |
| Vi-CELL XR Single Pack | | | Reagent Kit (includes 1 reagent pack and 1 bag of 120 sample vials per bag) | LUO | 383260 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

CENTRIFUGE

BENCHTOP CENTRIFUGE

Avanti J-15 Series



The New Avanti J-15 Series of benchtop centrifuges is part of a new family of life science equipment that provides the exceptional performance you expect from Beckman Coulter. Refrigerated (Avanti J-15R) or ventilated (Avanti J-15), these centrifuges use Ultra Harmonic Technology providing time savings when conducting experiments. The Avanti J-15 series is an all around solution for your scientific needs.

Specification

- 3.0 L Max Capacity
- 10,200 RPM
- 11,420 x g

Ultra Harmonic Technology

- Time savings
- Achieve efficiencies up to 10%*

Soft Pellet Deceleration

- Protects sample
- Results in increased sample yield

Optimized Sensitivity

- Detects rotor imbalance within 30 seconds
- Reduces false diagnostics

Speed Efficiency and Minimum Sample Disturbances with Ultra Harmonic Technology: Intelligent acceleration and deceleration profiles

Durable and Easy-to-Clean, Innovative Design: A hallmark of Beckman Coulter's life science equipment

Fast and Accurate Imbalance Detection: Early diagnostic eliminates false positives with hardware and software improvements

Optimize Bench Space: With our truly ventilated unit while processing any protocol in cell culture, blood separation or microbiology

Efficiency: Easy one-touch access to 6 programs and store up to 99 programs

Ease of Use and Faster Accessibility: Icon usability and intuitive display on high contrast color LCD screen

* Compared to the Allegra X-14R.

Avanti J-15 high performance benchtop centrifuge

- Reach up to 10,200 rpm and a max g force of 11,420 RCF
- A compact 55.6 cm (21.9 inches) width saves valuable lab space
- Ultra Harmonic Technology effectively minimizes sample disturbance with intelligent acceleration/deceleration profiles resulting in more sample yield
- New software interface provides one-touch access to your last 6 programs (but stores up to 99)
- Easy-to-use, color LCD screen lets you enter program parameters with no scrolling

Avanti J-15R high performance refrigerated benchtop centrifuge

- The Avanti J-15R cools from room temperature to 4°C in 4 minutes, allowing the user to protect the samples while completing the runs faster†
- Reach up to 10,200 rpm and a max g force of 11,420 RCF
- Ultra Harmonic Technology effectively minimizes sample disturbance with intelligent acceleration/deceleration profiles resulting in more sample yield
- New software interface provides one-touch access to your last 6 programs (but stores up to 99)

† Data reported using thermocouple chamber test method vs. instrument display temperature reading

| Avanti J-15R Centrifuge | Status | Part # |
|-------------------------|--------|--------|
| 120 V, 60 Hz | IVD | B99517 |
| 120 V, 60 Hz | nMD | B99516 |
| 208-230 V, 60 Hz | IVD | B99515 |
| 208-230 V, 60 Hz | nMD | B99514 |
| Avanti J-15 Centrifuge | Status | Part # |
| 100-120 V, 50/60 Hz | IVD | C01994 |
| 100-120 V, 50/60 Hz | nMD | C01995 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

CENTRIFUGE

HIGH PERFORMANCE CENTRIFUGE

Avanti JXN-26 Series



High Performance

Application versatility: can process six liters of fermentor output in less than 10 minutes, deliver a subcellular fraction at 82,000 x g and run 24 microplates at a time.

Ease of use

Large, Windows based intuitive multi language touch screen interface. Ideal for shared labs & GMP environments.

Complete BioSafety* Systems

BioCertified** rotors, instruments and labware contain microbiological aerosols, while sterile filters prevent infectious materials from being expelled into the lab environment. Together, they enhance peace of mind for users and lab managers.

Dual System Rotor Recognition

Automatically detects which rotor is installed and prevents the rotor from running above its maximum-rated speed—without shutting down the run. All to ensure the safety of your lab.

The Avanti JXN-26 has been redesigned to provide even more versatility and safety.

The Avanti JXN-26 has a more impact resistant lid, full containment barrier, and automatic rotor identification. But improvements aren't the only features that set the Avanti JXN-26 apart. It's built upon standard-setting performance, including high speed, low heat output, improved imbalance tolerance and low noise. Its vast range of separations only continues to grow. And its ergonomic design—with lower instrument height and hands-free door operation is enhanced by a large easy to read touch screen interface.

Friction Reduction System

Enables quicker, quieter, more energy-efficient runs with better temperature control, which improves system reliability. High-torque, switched reluctance (SR) drive technology shortens cycle times.

Lightweight J-Lite Rotors

Consistently designed to be the most efficient rotors—for reduced run times and high g-force.

Ergonomic Design

Lower work surface for easier rotor handling. Foot pedal opens the door and improved door design swings up and out of the way.

* Biosafety is term intended to describe the enhanced biocontainment features of product.
**BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility (Health Protection Agency, Porton Down, UK or USAMRIID, Ft. Detrick, MD, USA). Improper use or maintenance may affect seal integrity and, thus, containment.

| Avanti JXN-26 | Status | Part # |
|-----------------------------------|--------|---------------|
| 200-240V, 3 phases, 50-60 Hz, 24A | nMD | B34183 |
| 200-240V, 3 phases, 50-60 Hz, 24A | IVD | B38619 |
| 220V, 3-PH, 50 HZ, 12A | nMD | B34182 |
| 220V, 3-PH, 50 HZ, 12A | IVD | B38618 |
| 230V, 50-Hz, 24A | nMD | B37912 |
| 230V, 50-Hz, 24A | IVD | B38623 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

CENTRIFUGE

HIGH PERFORMANCE CENTRIFUGE

Avanti JXN-30 Series



Work remote with the MobileFuge app

- Set and monitor run parameters from your Apple iOS or Android device with MobileFuge
- Securely email results
- Receive alerts and diagnostics remotely

Designed for Speed and Safety

- Windage, inertia, and rotor ID checks via magnets offer triple redundant safety
- Friction Reduction System (FRS) for quicker, quieter, and cooler runs
- High-torque, Switched Reluctance (SR) drive cycle for shorter cycle times

15" LED Touchscreen Monitor

- Built to withstand 10 million touches
- Backlight life of 50,000 hours
- LED backlight for 20% power saving and environmental protection

Easy to use software

- Simultaneous display of set and actual run conditions
- Rotor selection by name (not code)
- 11 acceleration/12 deceleration rates
- Delay start
- Run times to 99:59, Hold, and ω 2t integrator for applications requiring precise reproducibility

Covering all of the applications of a floor-standing centrifuge, the Avanti JXN-30 features rotor speed of 30,000 RPM and RCF greater than 100,000 x g. Master daily lab challenges with the advanced levels of networking, reliable performance, and improved BioSafety* found in the Avanti JXN-30.

The additional power of the MobileFuge app gives additional flexibility, including the ability to:

- Access and monitor data remotely
- Receive system notifications via email or text message
- Manage permissions
- Address error handling and more via networks or mobile devices

Powerful data management

- Up to 1,000 user-defined programs
- Storage for numerous protocols
- Password protection for up to 50 unique user profiles
- Networking capability for multiple instruments
- Data logging and real-time run graphing

Application Versatility

- Compatible with an expansive library of rotors including fixed-angle and swinging bucket options
- Dynamic Rotor Inertia Check (DRIC) and rotor recognition provide redundant safety checks to ensure rotors run at rated speeds
- Optimized temperature control to ensure sample quality and prevent unwanted artifacts
- Swinging bucket and fixed angle rotors capable of relative centrifugal force (RCF) greater than 100,000 x g

Ergonomics designed for you

- Low work surface height for easier installation and unloading of rotors
- Foot pedal for hands-free door operation
- Door swings up and out of the way for easy access to the rotor chamber
- 15" digital monitor
- Energy efficient for reduced total cost of ownership

* Biosafety is term intended to describe the enhanced biocontainment features of product.

| Avanti JXN-30 | Status | Part # |
|-----------------------------|--------|--------|
| 200/208/240V, 50/60 Hz, 24A | nMD | B34193 |
| 200/208/240V, 50/60 Hz, 24A | IVD | B38621 |
| 220V, 3 phases, 50 Hz, 12A | nMD | B34192 |
| 220V, 3 phases, 50 Hz, 12A | IVD | B38620 |
| 230V, 50 Hz, 24A | nMD | B37913 |
| 230V, 50 Hz, 24A | IVD | B38624 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

CENTRIFUGE

HIGH PERFORMANCE CENTRIFUGE

Avanti J-E Series



Easily perform separations with the compact Avanti J-E high-speed centrifuge. Our entry-level high performance is uniquely designed to achieve a high degree of separation, and offer outstanding high-speed performance in a compact design.

- 4.0L max capacity
- 21,000 max RPM
- 53,300 x g
- -10° C to 40° C in 1° increments

Space Conscious

Knowing space is at a premium, we gave the Avanti J-E a small footprint, allowing you the freedom to place it right in your lab, so it's where you need it, when you need it.

Safety Minded

Each rotor is automatically identified at low speed to ensure that each run is 100% safe. Even if the operator inputs incorrect run parameters, the Avanti J-E will check and reset itself to a speed that is safe for the detected rotor and complete the run without shutting down.

Efficient Operation

Avanti J-E's low height and contoured front panel help ease the burden of rotor installation and retrieval. Our high-torque switch reluctance (SR*) technology generates fast acceleration and deceleration meaning quicker separations and less waiting.

* SR Drives are manufactured by Beckman Coulter with technology licensed from Switched Reluctance Drives Limited.

Friction Reduction System

Avanti J-E uses a Friction Reduction System (FRS) to reduce heat generation, which means better sample cooling, a cooler lab, quieter operation, and greatly reduced energy usage. FRS uses a zero-maintenance partial vacuum system that increases overall reliability and saves you money.

Variety of Applications

Avanti J-E's extensive rotor library maximizes capacity and optimizes g-Force for efficient, fast separations. The library includes: The AllSpin rotor for microplates and general purpose separations; lightweight, high-capacity 4-liter capability, and a complete range of BioCertified rotors.

Programmable

The Avanti J-E can save up to nine user programs for recall.

| Avanti J-E | Status | Part # |
|------------------------|--------|--------|
| 200/208/240V, 50/60 Hz | nMD | 969352 |
| 200V, 3 phases, 50 Hz | nMD | B20699 |
| 230V, 50 Hz | nMD | B20698 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

CENTRIFUGE

ULTRACENTRIFUGE

Optima XPN Series Ultracentrifuges



Security and tracking features

Manage rotor life by serial number. Track detailed usage history. Password protection and electronic signatures help you maintain chain of custody and compliance.

Remote Monitoring and Control

Saves time. Start, stop, and monitor from computer or smart phone. Receive diagnostic alerts via e-mail.

Real-time Run Graphing

Plots speed and temperature over time, allowing you to track and record progress.

Powerful On-board Simulation and Calculation Tools

Saves time and samples. Proprietary software optimizes protocols before running to ensure maximum efficiency. Quickly perform common calculations and conversions.

Optima XPN is the ultra of ultracentrifuges. No other floor-model preparative ultracentrifuge offers this level of design, functionality, and performance. Possessing all of the attributes of our entry-level model, the XE, the Optima XPN boasts additional enhancements that will simplify use, optimize control and security, and increase productivity. You'll applaud its intelligent user interface, networking and remote control capabilities, and energy efficiency. And of course, our total system design backed by our exclusive rotors, labware, and unparalleled service.

Large Touch-screen Display

Easy to read and navigate. Viewable from across the lab. Intuitive graphical interface with on-screen help. Multilingual software for error-free operation.

Improved Power Tolerance

Maintains runs during power fluctuations. Handles a wider tolerated range of 180 VAC to 264 VAC. Tracks power interruption data to convey if parameters remained within an acceptable range.

Energy Efficient

Regenerative braking returns energy to local circuit reducing utility costs. Highly efficient thermoelectric cooling results in lower power consumption. Uses the same amount of power as a 60-watt light bulb while idling.

Quiet-drive Technology

Designed for lowest drive noise. Operates at less than 51dBA.

Total System Design

The Optima XPN, its rotors and its labware are designed, manufactured, and tested as an integrated system to ensure optimal performance and safety for your lab.

| Optima 80K Preparative Ultracentrifuge | Status | Part # |
|---|--------|--------|
| XPN-80K | nMD | A95765 |
| XPN-80K | IVD | A99839 |
| Optima 90K Preparative Ultracentrifuge | Status | Part # |
| XPN-90K | nMD | A94468 |
| XPN-90K | IVD | A99842 |
| Optima 100K Preparative Ultracentrifuge | Status | Part # |
| XPN-100K | nMD | A94469 |
| XPN-100K | IVD | A99846 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instruments and Software

CENTRIFUGE

ULTRACENTRIFUGE

Optima MAX Series Ultracentrifuges



The Optima MAX Series of tabletop ultracentrifuges delivers the power and performance into any laboratory. But Optima MAX instruments are far from the average tabletops. They bring more sophistication than ever, without sacrificing usability.

Elevating laboratory's potential starts with the optimal tabletop ultracentrifuge. And the Optima MAX Series is the absolute top of the line. Reaching up to 150,000 rpm and over 1,000,000 x g, Optima MAX instruments set the standard in tabletop speed. Our entry-level model, the TL, is designed for optimum functionality and efficiency within a compact, quiet package. Our premium model, the XP, features advanced software with password-controlled security features, remote control capabilities, and a variety of tracking and archiving features.

Both models feature multi-layered BioSafety* measures to ensure an uncompromised working environment, and both work perfectly with our existing library of rotors and labware. The Optima MAX Series takes sophistication and total system design to a whole new level.

Total-system design: Instruments, rotors and labware are designed to work together perfectly.

Multi-level approach to BioSafety*: HEPA filtration, BioSafe* tubes, fluid containment annulus rotors, fits in standard BioSafety hood.

User-friendly, multilingual interface: Full-color LCD touch-screen with nine languages—the most available in the industry.

*BioSafe and BioSafety are terms intended to describe the enhanced biocontainment features of our products.

The Optima MAX-TL tabletop ultracentrifuge

- 40.8 mL max rotor capacity
- 120,000 max RPM
- 657,000 x g

The Optima MAX-XP tabletop ultracentrifuge

- 194.4 mL max rotor capacity
- 150,000 max RPM
- 1,019,000 x g
- Security and tracking
- Remote monitoring and control
- On-screen rotor library

| Optima MAX-TL | Status | Part # |
|-----------------------|--------|---------------|
| BioSafe MAX-TL | nMD | B11229 |
| MAX-TL | nMD | A95761 |
| Optima MAX-XP | Status | Part # |
| BioSafe MAX-XP | nMD | A47882 |
| MAX-XP | nMD | 393315 |

For Accessories see pages 263-265, for Support Reagents see pages 225 and for Consumables see pages 267-275

Instrument Accessories

Cell Culture Flask Adapters

| | Description | Status | Part # |
|------------------------------|--|--------|--------|
| Corning T-25 cm ² | 2 adapters for canted-neck flask, 25 cm ² | nMD | 369295 |
| Corning T-75 cm ² | 2 adapters for canted-neck flask, 75 cm ² | nMD | 369292 |

For AQUIOS CL

| | Description | Status | Part # |
|--|--|--------|---------|
| AQUIOS Deep Well Plate | Case of 50 plates | nMD | B23502 |
| AQUIOS Stand-Alone Workstation with Software | 1 unit | nMD | B49616 |
| Cassette Type 1 | For tubes: 13mm X 75mm | nMD | B25218 |
| Cassette Type 2 | For tubes: 13mm X 100mm | nMD | B25219 |
| Cassette Type 3 | For tubes: 16mm X 100mm | nMD | B25220 |
| Cassette Type 4 | For tubes: 10.25mm X 50mm | nMD | B25221 |
| Cassette Type 5 | For tubes: AQUIOS IMMUNO-TROL Control Tube | nMD | B25318 |
| Cassette Type 6 | For tubes: Sarstedt 13mm X 75mm | nMD | B25918 |
| Cassette Type 7 | For tubes: Sarstedt 13mm x 90mm | nMD | B52994 |
| Cassette Type 8 | For tubes: Sarstedt 11mm X 66mm | nMD | B53022 |
| Cassette Type 9 | For tubes: Sarstedt 15mm X 92mm | nMD | B53031 |
| Cassette Type 10 | For tubes: Sarstedt 13mm X 65mm | nMD | B53808 |
| Color Laser Printer | 1 unit (120v only) | nMD | B31892 |
| Waste Collection Container | 10 L | nMD | 7547155 |

For Biomek 4000

| | Description | Status | Part # |
|--|--------------------------------|--------|---------|
| 24-Position Tube rack | 1 unit | nMD | 373661 |
| Amber vials, 5 mL | 12/case | nMD | B08859 |
| Biomek 4000 ACPrep Accessory Kit Integrated Solutions -Class 7 | 1 unit | nMD | 969126 |
| Enclosure | Field Install Kit for B4K Base | nMD | B22634 |
| Handheld Barcode Scanner | 1 unit | nMD | A47300 |
| MCL | 1 molded carousel | nMD | 6806734 |

For CyAn ADP Series

| | Description | Status | Part # |
|----------------------------|-------------|--------|-------------|
| CyAn ADP Windows 7 Upgrade | 1 unit | RUO | Please call |

For other product accessories please visit www.beckmancoulter.com.

Instrument Accessories

For CytoFLEX

| | Description | Status | Part # |
|---|---|--------|------------|
| 10 L Waste/Sheath Tanks Wiring Harness | Waste/Sheath Tanks Wiring Harness | nMD | B86549 |
| CytoFLEX Plate Loader | | nMD | B63215 |
| CytoFLEX Plate Loader with Mode Control Upgrade Kit | | nMD | C02396 |
| Deep Clean Solution Bottle | | nMD | A04-1-0038 |
| Peristaltic Sample Tubing | sample pump | nMD | A04-1-0048 |
| Plate Loader Sample Probe | Contains tubing to attach to plate assembly | nMD | B63213 |
| Preventive Maintenance Kit | Materials for 2 PM or 1 year supply | nMD | C02943 |
| Sample needle | 115 mm (blue bead) | nMD | A04-1-0034 |
| Sample needle | 113 mm (orange bead) | nMD | B71294 |
| Sheath Bottle | | nMD | A04-1-0036 |
| Sheath Filter | | nMD | A04-1-0041 |
| Waste Bottle | | nMD | A04-1-0037 |
| Waste Collection Container | 10 L | nMD | 7547155 |

For FC 500 and Navios

| | Description | Status | Part # |
|--------------|------------------------|--------|---------|
| Sample Tubes | 250 tubes, 12mm x 75mm | nMD | 2523749 |

For FC 500 Series

| | Description | Status | Part # |
|--|---|----------|-------------|
| CXP Analysis Software 2.2 Single User License | Version 2.2 - 1 user - WIN 7 | nMD | B27031 |
| CXP Analysis Software 2.2 Three User License | Version 2.2 - 3 user - WIN 7 | nMD | B27032 |
| CXP Analysis Software 2.2 Five User License | Version 2.2 - 5 user - WIN 7 | nMD | B27033 |
| MPL Upgrade | 1 unit | IVD & CE | 733321 |
| Offline Analysis Workstation | 1 unit | nMD | B22394 |
| Optional 22" LCD Monitor | 1 unit | nMD | A56136 |
| Red Diode Laser Upgrade | 15 mW solid state laser - 635 µm laser line | nMD | 623101 |
| stemCXP SYSTEM Software | 1 unit | IVD & CE | Please call |
| tetraCXP SYSTEM Software | 1 unit | IVD & CE | Please call |
| WIN 7 Upgrade Kit (Computer, CXP 2.2, 22" Monitor) | 1 unit | nMD | B28946 |

For MoFlo Astrios EQ Sorter Family

| | Description | Status | Part # |
|-------------------------------|-------------------|--------|--------|
| Baker SterilGARD BSL2 Cabinet | 100 V, 1 unit | RUO | B10300 |
| Baker SterilGARD BSL2 Cabinet | 110-120 V, 1 unit | RUO | B10302 |
| Baker SterilGARD BSL2 Cabinet | 220-240 V, 1 unit | RUO | B10301 |

For other product accessories please visit www.beckmancoulter.com.

Instrument Accessories

For MoFlo XDP

| | Description | Status | Part # |
|----------------------------|---------------|--------|---------|
| Class I Biosafety Cabinet | 220 V, 1 unit | RUO | ML23330 |
| Class I Biosafety Cabinet | 110 V, 1 unit | RUO | ML23230 |
| Class II Biosafety Cabinet | 220 V, 1 unit | RUO | ML23530 |
| Class II Biosafety Cabinet | 110 V, 1 unit | RUO | ML23430 |
| Class II Biosafety Cabinet | 90 V, 1 unit | RUO | A70400 |

For Navios and FC 500

| | Description | Status | Part # |
|--|-------------|--------|-------------|
| Data Innovations Additional Connection, Licence and Service | 1 unit | nMD | Please call |
| Data Innovations Hardware Computer System | 1 unit | nMD | B35622 |
| Data Innovations Instrument Manager Software, Licenses and Service | 1 unit | nMD | Please call |

For PrepPlus Workstation

| | Description | Status | Part # |
|--------------------------|-------------|--------|---------|
| PrepPlus 2 Accessory Kit | 1 unit | nMD | 6915549 |

For Quanta Series

| | Description | Status | Part # |
|--------------------------|-------------|----------|---------|
| 24-Position Tube rack | 1 unit | nMD | 373661 |
| Flow-Check Fluorospheres | 3 x 10 mL | IVD & CE | 6605359 |

For TQ-Prep

| | Description | Status | Part # |
|--------------|-------------|--------|---------|
| Syringe Pump | 1 kit | RUO | 6915116 |

For Vi-Cell Counter

| | Description | Status | Part # |
|-------------------------------|---|--------|--------|
| Vi-CELL XR Quad Pack | 4 reagent packs (120 vials per pack) | LUO | 383722 |
| Vi-CELL Concentration Control | - | LUO | 175478 |
| Vi-Cell Focus Control | - | LUO | 175474 |
| Vi-CELL Sample Cups | 4 x 120 vials | LUO | 383721 |
| Vi-CELL XR Single Pack | One reagent pack and one bag of 120 sample cups | LUO | 383260 |

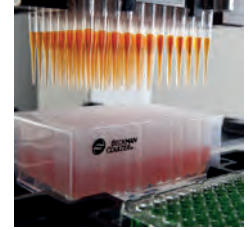
For other product accessories please visit www.beckmancoulter.com.

Tips and Labware

Biomek Tips and Labware

Excellence for the critical point of contact

From disposable pipette tips to microplates and everything in between, we provide a full suite of accurate, precise performance you can depend on. Biomek disposable tips from Beckman Coulter are the only tips designed, validated and approved for Biomek Liquid Handlers. Manufactured under stringent manufacturing processes, we guarantee proper fit and performance of Biomek tips on your Biomek liquid handler. Tip definitions, pipetting techniques, templates and color-coded tip racks are integrated into Biomek software to facilitate method development.



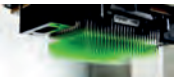
Tip definitions, pipetting techniques, templates, and color-coded tip racks are built into Biomek software to make setup, method writing and operation even more efficient. As a crucial component to the liquid handling systems, Biomek tips from Beckman Coulter ensure performance and quality control for the applications such as genetic analysis, protein research, cellular analysis and drug discovery.

Multichannel Pipetting



For i-Series Biomek

| Part # | Description | Max Volume | Packaging |
|---------------|------------------------|----------------|-----------|
| B87589 | Pipetting head, MC-96 | 5 µL - 1200 µL | 1 unit |
| B87590 | Pipetting head, MC-96 | 1 µL - 300 µL | 1 unit |
| B87591 | Pipetting head, MC-384 | 0.5 µL - 60 µL | 1 unit |



For Biomek NX[®]

| Part # | Description | Max Volume | Packaging |
|---------------|--|---------------|-----------|
| 719368 | 96-Channel disposable Tip Pipetting Head for AP96 P20 or P250 tips | 5 µL - 200 µL | 1 unit |
| 719367 | 96-Channel disposable Tip Pipetting Head for AP96 P20 or P250 tips | 1 µL - 50 µL | 1 unit |
| 719715 | 384-Channel disposable Tip Pipetting Head for AP384 P30 | 1 µL - 30 µL | 1 unit |

Biomek i-Series Non-conductive Pipette Tips

For use with 60 µL Multichannel-384 Head



30 µL Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|-------------------|------------|-------------------------------|
| B85739 | non-sterile | 30 µL | 384 tips/rack ; 10 racks/case |
| B85745 | sterile | 30 µL | 384 tips/rack ; 10 racks/case |
| B85749 | sterile, filtered | 25 µL | 384 tips/rack ; 10 racks/case |



50 µL Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|-------------------|------------|-------------------------------|
| B85753 | non-sterile | 50 µL | 384 tips/rack ; 10 racks/case |
| B85756 | sterile | 50 µL | 384 tips/rack ; 10 racks/case |
| B85760 | sterile, filtered | 40 µL | 384 tips/rack ; 10 racks/case |

Not intended or validated for use in the diagnosis of disease or other conditions.

Tips and Labware

For use with 300 & 1200 μ L Multichannel-96 Head & Span-8 Pod



80 μ L Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|-------------------|------------|------------------------------|
| B85764 | non-sterile | 80 μ L | 96 tips/rack ; 10 racks/case |
| B85767 | sterile | 80 μ L | 96 tips/rack ; 10 racks/case |
| B85771 | sterile, filtered | 40 μ L | 96 tips/rack ; 10 racks/case |



90 μ L Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|-------------------|------------|------------------------------|
| B85881 | non-sterile | 90 μ L | 96 tips/rack ; 10 racks/case |
| B85884 | sterile | 90 μ L | 96 tips/rack ; 10 racks/case |
| B85888 | sterile, filtered | 50 μ L | 96 tips/rack ; 10 racks/case |



230 μ L Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|-------------------|-------------|------------------------------|
| B85903 | non-sterile | 230 μ L | 96 tips/rack ; 10 racks/case |
| B85906 | sterile | 230 μ L | 96 tips/rack ; 10 racks/case |
| B85911 | sterile, filtered | 190 μ L | 96 tips/rack ; 10 racks/case |



230 μ L Wide Bore Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|-----------------------------|-------------|------------------------------|
| B85926 | Wide bore, non-sterile | 230 μ L | 96 tips/rack ; 10 racks/case |
| B85929 | Wide bore, sterile | 230 μ L | 96 tips/rack ; 10 racks/case |
| B85936 | Wide bore, sterile filtered | 190 μ L | 96 tips/rack ; 10 racks/case |



1070 μ L Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|-------------------|--------------|-----------------------------|
| B85940 | non-sterile | 1070 μ L | 96 tips/rack ; 5 racks/case |
| B85945 | sterile | 1070 μ L | 96 tips/rack ; 5 racks/case |
| B85955 | sterile, filtered | 1025 μ L | 96 tips/rack ; 5 racks/case |



1070 μ L Wide Bore Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|-----------------------------|--------------|-----------------------------|
| B85971 | Wide bore, non-sterile | 1070 μ L | 96 tips/rack ; 5 racks/case |
| B85975 | Wide bore, sterile | 1070 μ L | 96 tips/rack ; 5 racks/case |
| B85981 | Wide bore, sterile filtered | 1025 μ L | 96 tips/rack ; 5 racks/case |

Not intended or validated for use in the diagnosis of disease or other conditions.

Tips and Labware

Biomek i-Series Conductive Pipette Tips

For use with Span-8 Pod to enable Liquid Level Sensing



80 µL Conductive Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------------------|------------|------------------------------|
| B85775 | Conductive, non-sterile | 80 µL | 96 tips/rack ; 10 racks/case |
| B85872 | Conductive, sterile | 80 µL | 96 tips/rack ; 10 racks/case |
| B85877 | Conductive, sterile filtered | 40 µL | 96 tips/rack ; 10 racks/case |



90 µL Conductive Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------------------|------------|------------------------------|
| B85892 | Conductive, non-sterile | 90 µL | 96 tips/rack ; 10 racks/case |
| B85894 | Conductive, sterile | 90 µL | 96 tips/rack ; 10 racks/case |
| B85899 | Conductive, sterile filtered | 50 µL | 96 tips/rack ; 10 racks/case |



230 µL Conductive Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------------------|------------|------------------------------|
| B85915 | Conductive, non-sterile | 230 µL | 96 tips/rack ; 10 racks/case |
| B85917 | Conductive, sterile | 230 µL | 96 tips/rack ; 10 racks/case |
| B85922 | Conductive, sterile filtered | 190 µL | 96 tips/rack ; 10 racks/case |



1070 µL Conductive Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------------------|------------|-----------------------------|
| B85959 | Conductive, non-sterile | 1070 µL | 96 tips/rack ; 5 racks/case |
| B85961 | Conductive, sterile | 1070 µL | 96 tips/rack ; 5 racks/case |
| B85965 | Conductive, sterile filtered | 1025 µL | 96 tips/rack ; 5 racks/case |

Not intended or validated for use in the diagnosis of disease or other conditions.

Tips and Labware

Biomek NX^P/FX^P Non-conductive Pipette Tips

For use with Biomek AP384 Multichannel Head



P30 Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|-------------------|------------|-------------------------------|
| 719222 | non-sterile | 30 µL | 384 tips/rack ; 10 racks/case |
| 719223 | sterile | 30 µL | 384 tips/rack ; 10 racks/case |
| 394263 | sterile, filtered | 25 µL | 384 tips/rack ; 10 racks/case |



P30XL Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|-------------------|------------|-------------------------------|
| A22287 | non-sterile | 50 µL | 384 tips/rack ; 10 racks/case |
| A22288 | sterile | 50 µL | 384 tips/rack ; 10 racks/case |
| B98224 | sterile, filtered | 40 µL | 384 tips/rack ; 10 racks/case |

For use with Biomek AP96 Multichannel Head



P20 Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| 717254 | non-sterile | 80 µL | 96 tips/rack ; 10 racks/case |
| 717255 | sterile | 80 µL | 96 tips/rack ; 10 racks/case |
| 717256 | sterile filtered | 20 µL | 96 tips/rack ; 10 racks/case |



P50 Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| A21578 | non-sterile | 90 µL | 96 tips/rack ; 10 racks/case |
| A21582 | sterile | 90 µL | 96 tips/rack ; 10 racks/case |
| A21586 | sterile filtered | 50 µL | 96 tips/rack ; 10 racks/case |



P250 Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| 717251 | non-sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| 717252 | sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| 717253 | sterile filtered | 125 µL | 96 tips/rack ; 10 racks/case |



P250 Wide Bore Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| B01101 | non-sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| B01102 | sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| B01103 | sterile filtered | 190 µL | 96 tips/rack ; 10 racks/case |

Not intended or validated for use in the diagnosis of disease or other conditions.

Tips and Labware

For use with Biomek Span-8 Pod



P20 Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| 379504 | non-sterile | 80 µL | 96 tips/rack ; 10 racks/case |
| 379505 | sterile | 80 µL | 96 tips/rack ; 10 racks/case |
| 379506 | sterile filtered | 40 µL | 96 tips/rack ; 10 racks/case |



P50 Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|---------------|
| A21578 | non-sterile | 90 µL | 10 racks/case |
| A21582 | sterile | 90 µL | 10 racks/case |
| A21586 | sterile filtered | 50 µL | 10 racks/case |



P250 Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| 379501 | non-sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| 379502 | sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| 379503 | sterile filtered | 125 µL | 96 tips/rack ; 10 racks/case |



P250 Wide Bore Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|---------------|
| B01101 | non-sterile | 220 µL | 10 racks/case |
| B01102 | sterile | 220 µL | 10 racks/case |
| B01103 | sterile filtered | 190 µL | 10 racks/case |



P1000 Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|--------------|
| B01122 | non-sterile | 1070 µL | 5 racks/case |
| B01123 | sterile | 1070 µL | 5 racks/case |
| B01124 | sterile filtered | 1025 µL | 5 racks/case |



P1000 Wide Bore Pipette Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|--------------|
| B01112 | non-sterile | 1070 µL | 5 racks/case |
| B01113 | sterile | 1070 µL | 5 racks/case |
| B01114 | sterile filtered | 1025 µL | 5 racks/case |

Not intended or validated for use in the diagnosis of disease or other conditions.

Tips and Labware

Biomek NX^P/FX^P Conductive Pipette Tips

For use with Biomek Span-8 Pod to enable Liquid Level Sensing



P20 Conductive Pipette Tips

| <i>Part #</i> | <i>Description</i> | <i>Max Volume</i> | <i>Packaging</i> |
|---------------|--------------------|-------------------|------------------------------|
| 719012 | non-sterile | 80 µL | 96 tips/rack ; 10 racks/case |
| 719013 | sterile | 80 µL | 96 tips/rack ; 10 racks/case |
| 394622 | sterile filtered | 40 µL | 96 tips/rack ; 10 racks/case |



P50 Conductive Pipette Tips

| <i>Part #</i> | <i>Description</i> | <i>Max Volume</i> | <i>Packaging</i> |
|---------------|--------------------|-------------------|------------------------------|
| B01089 | non-sterile | 90 µL | 96 tips/rack ; 10 racks/case |
| B01090 | sterile | 90 µL | 96 tips/rack ; 10 racks/case |
| B01091 | sterile filtered | 50 µL | 96 tips/rack ; 10 racks/case |



P250 Conductive Pipette Tips

| <i>Part #</i> | <i>Description</i> | <i>Max Volume</i> | <i>Packaging</i> |
|---------------|--------------------|-------------------|------------------------------|
| 719010 | non-sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| 719011 | sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| 394627 | sterile filtered | 190 µL | 96 tips/rack ; 10 racks/case |



P1000 Conductive Pipette Tips

| <i>Part #</i> | <i>Description</i> | <i>Max Volume</i> | <i>Packaging</i> |
|---------------|--------------------|-------------------|-----------------------------|
| 987935 | non-sterile | 1070 µL | 96 tips/rack ; 5 racks/case |
| 987936 | sterile | 1070 µL | 96 tips/rack ; 5 racks/case |
| 987925 | sterile filtered | 1025 µL | 96 tips/rack ; 5 racks/case |

Not intended or validated for use in the diagnosis of disease or other conditions.

Tips and Labware

Biomek 4000 and 3000 Non-conductive Pipette Tips

For use with P20 and MP20 Pipette Tools



P20 Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| 717254 | non-sterile | 80 µL | 96 tips/rack ; 10 racks/case |
| 717255 | sterile | 80 µL | 96 tips/rack ; 10 racks/case |
| 717256 | sterile filtered | 20 µL | 96 tips/rack ; 10 racks/case |



P50 Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| A21578 | non-sterile | 90 µL | 96 tips/rack ; 10 racks/case |
| A21582 | sterile | 90 µL | 96 tips/rack ; 10 racks/case |
| A21586 | sterile filtered | 50 µL | 96 tips/rack ; 10 racks/case |

For use with P200L and MP200 Pipette Tools



P50 tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| A21578 | non-sterile | 90 µL | 96 tips/rack ; 10 racks/case |
| A21582 | sterile | 90 µL | 96 tips/rack ; 10 racks/case |
| A21586 | sterile filtered | 50 µL | 96 tips/rack ; 10 racks/case |



P250 tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| 717251 | non-sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| 717252 | sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| 717253 | sterile filtered | 125 µL | 96 tips/rack ; 10 racks/case |



P250 wide bore tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|------------------------------|
| B01101 | non-sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| B01102 | sterile | 220 µL | 96 tips/rack ; 10 racks/case |
| B01103 | sterile filtered | 190 µL | 96 tips/rack ; 10 racks/case |

For use with P1000SL and MP1000 pipette tools (Biomek 4000)



P1000 Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|-----------------------------|
| B01122 | non-sterile | 1070 µL | 96 tips/rack ; 5 racks/case |
| B01123 | sterile | 1070 µL | 96 tips/rack ; 5 racks/case |
| B01124 | sterile filtered | 1025 µL | 96 tips/rack ; 5 racks/case |

Not intended or validated for use in the diagnosis of disease or other conditions.

Tips and Labware



P1000 wide bore Tips

| Part # | Description | Max Volume | Packaging |
|---------------|------------------|------------|-----------------------------|
| B01112 | non-sterile | 1070 µL | 96 tips/rack ; 5 racks/case |
| B01113 | sterile | 1070 µL | 96 tips/rack ; 5 racks/case |
| B01114 | sterile filtered | 1025 µL | 96 tips/rack ; 5 racks/case |

Biomek Labware and Accessories



Biomek tube rack

| Part # | Description | Packaging |
|---------------|-------------------|-----------|
| 373661 | 24-position Black | 1 unit |



Biomek tube rack inserts

| Part # | Description | Packaging |
|---------------|----------------------|-----------|
| 373699 | 10 mm diameter Black | 25/case |
| 373696 | 11 mm diameter White | 25/case |
| 373698 | 12 mm diameter Red | 25/case |
| 373697 | 13 mm diameter Blue | 25/case |



Microcentrifuge Tubes

| Part # | Description | Packaging |
|---------------|-----------------------|-----------|
| 356090 | Polypropylene Clear | 500/case |
| 356091 | Polypropylene Blue | 500/case |
| 356092 | Polypropylene Green | 500/case |
| 356093 | Polypropylene Yellow | 500/case |
| 356094 | Polypropylene Orange | 500/case |
| 357448 | Polypropylene Natural | 500/case |



Biomek cap mats

| Part # | Description | Packaging |
|---------------|---------------------|-----------|
| 267002 | non-sterile Natural | 12/case |
| 267005 | Sterile Natural | 12/case |



Biomek aluminium foil seals

| Part # | Description | Packaging |
|---------------|---------------------------------|---------------------|
| 538619 | Aluminium Foil Seals | 100/case |
| 267691 | Aluminium Foil Seals | 50 cases ; 100/case |
| 538618 | Roller for Aluminium Foil Seals | 1 unit |

Use roller to ensure complete plate sealing

Not intended or validated for use in the diagnosis of disease or other conditions.

Tips and Labware

Biomek 96-well microplates



Biomek 96 round deep-well plates

| Part # | Description | | Max Volume | Packaging |
|---------------|-------------|---------|------------|-----------|
| 267001 | non-sterile | Clear | 1 mL | 24/case |
| 267004 | pre-sterile | Clear | 1 mL | 24/case |
| 267006 | non-sterile | Natural | 1 mL | 24/case |
| 267007 | pre-sterile | Natural | 1 mL | 24/case |



Biomek 96 square deep-well plates

| Part # | Description | | Max Volume | Packaging |
|---------------|-------------|---------|------------|-----------|
| 140504 | non-sterile | Natural | 2 mL | 24/case |
| 609681 | pre-sterile | Natural | 2 mL | 24/case |



Biomek 96-well microplates

| Part # | Description | | Max Volume | Packaging |
|---------------|-------------|---------|------------|-----------|
| 609844 | non-sterile | Clear | 300 µL | 100/case |
| 609801 | non-sterile | Natural | 200 µL | 25/case |

Biomek Modular Reservoir System



Full reservoirs

| Part # | Description | | Max Volume | Packaging |
|---------------|-----------------------|--|------------|-----------|
| 372784 | Sterile | | 150 mL | 12/case |
| 534678 | Sterile, nonpyrogenic | | 150 mL | 12/case |



Half reservoirs

| Part # | Description | | Max Volume | Packaging |
|---------------|---------------------------|--|---------------|-----------|
| 372786 | Sterile | | 75 mL | 24/case |
| 372794 | Sterile, divided by width | | 37 mL/section | 24/case |
| 534681 | Sterile, nonpyrogenic | | 75 mL | 24/case |



Quarter reservoirs

| Part # | Description | | Max Volume | Packaging |
|---------------|----------------------------|--|---------------|-----------|
| 372790 | Sterile | | 40 mL | 48/case |
| 372792 | Sterile, divided by width | | 19 mL/section | 48/case |
| 534680 | Sterile, nonpyrogenic | | 40 mL | 48/case |
| 372788 | Sterile, divided by length | | 19 mL/section | 48/case |



Other

| Part # | Description | | Max Volume | Packaging |
|---------------|---------------------------------|--|------------|-----------|
| 372795 | Biomek Modular Reservoir System | | - | 1 unit |

Each frame can accommodate up to two half reservoirs or four quarter reservoirs. Full reservoirs do not require a reservoir frame.

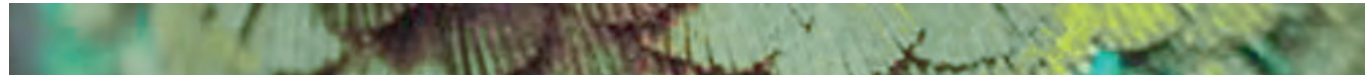
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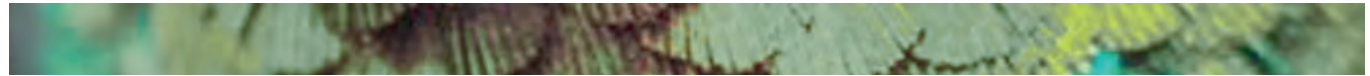
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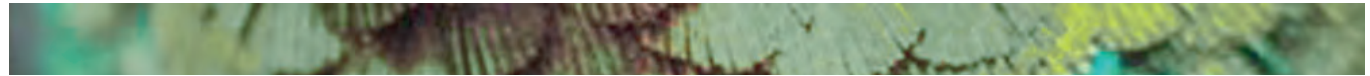
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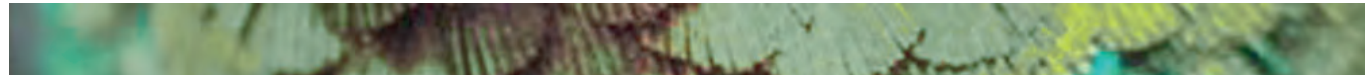
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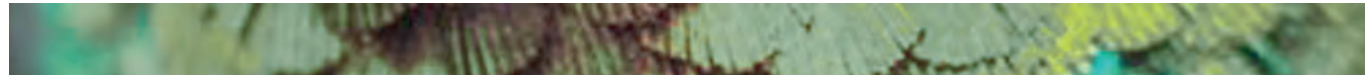
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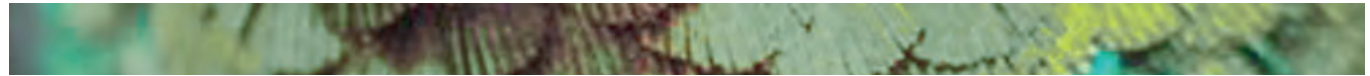
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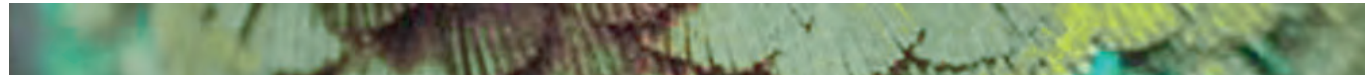
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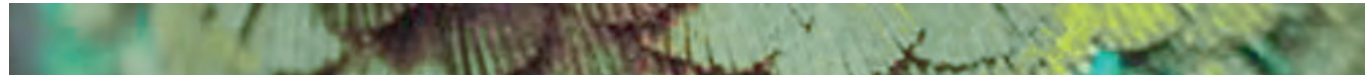
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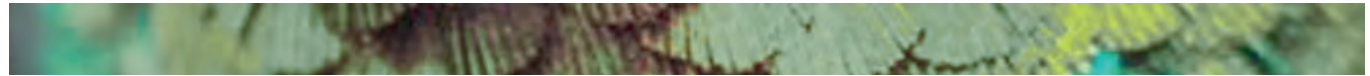
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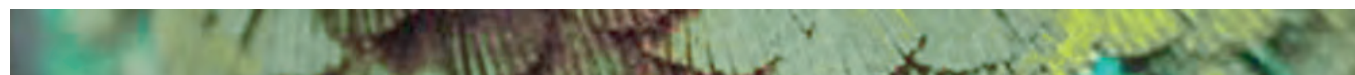
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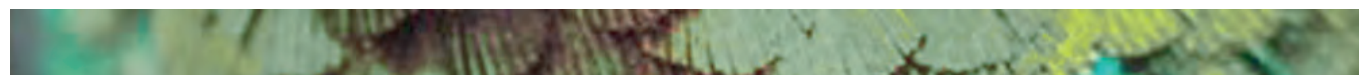
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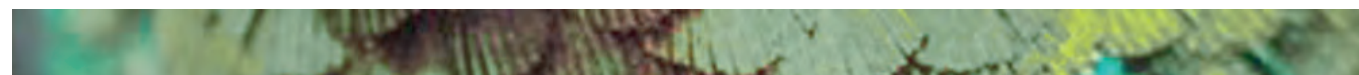
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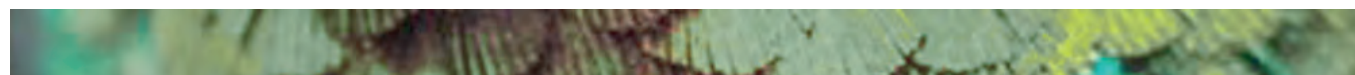
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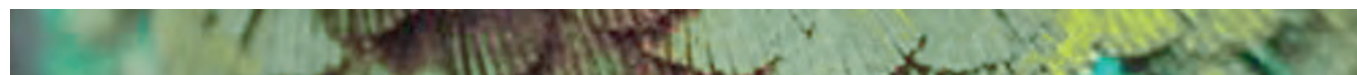
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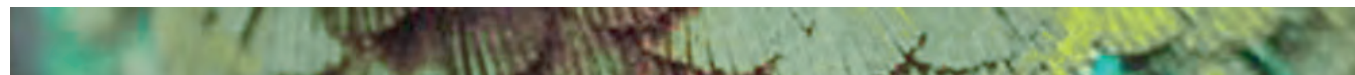
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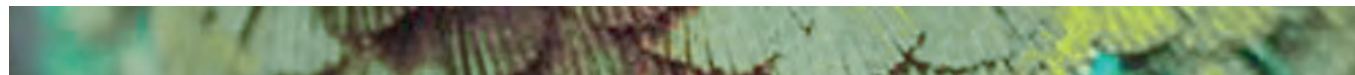
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Clones



The Technical Data are published information about a clone functional or technical applications. They are not systematically tested in our laboratories and for each application, you must select the appropriate format of the product. Please refer to the related package insert for specific information and/or references on intended use or limitations on the use of the products. Each abbreviation indicate technical data that may be appropriate or inappropriate uses of a product (see table below).

APPROPRIATE USES

| | |
|-----------|---------------------------|
| A | Activating |
| B | Blocking |
| C | Flow Cytometry |
| Ci | Intracytoplasmic Staining |
| E | Elisa |

APPROPRIATE USES

| | |
|-----------|---------------------------------------|
| F | Frozen Tissue Sections |
| I | Immunoprecipitation |
| P | Paraffin-embedded Tissue Sections |
| Ph | Heat Treated Paraffin-embedded Tissue |
| W | Western Blot |

INAPPROPRIATE USES

| | |
|----------|---|
| A | Non-activating |
| B | Non-blocking |
| I | Inappropriate for Immunoprecipitation |
| P | Inappropriate for Paraffin-embedded Tissue Sections |
| W | Inappropriate for Western Blot |

Most of the Beckman Coulter Monoclonal Antibodies to human CD antigens have been clustered and studied during at least one of the International Workshops on Human Leucocyte Differentiation Antigens (HLDA). The red number references the HLDA workshop at which an antibody was clustered.

- | | | | |
|----------|---|-----------|--|
| 1 | HDA 1: Leucocyte Typing - Bernad, A., et al Eds., Springer-Verlag (1984) | 6 | HDA 6 Leucocyte Typing VI - Kishimoto, T., et al Eds., Garland Publishing Inc. (1997) |
| 2 | HDA 2: Leucocyte Typing II - Reinherz, E.L., et al Eds., Springer-Verlag (1986) | 7 | HDA 7 Leucocyte Typing VII - Mason, D., et al Eds., Oxford University Press (2002) |
| 3 | HDA 3 Leucocyte Typing III - McMichael, A.J., et al Eds., Oxford University Press (1987) | 8 | HDA 8 www.hlda8.org |
| 4 | HDA 4 Leucocyte Typing IV - Knapp W., et al Eds., Oxford University Press (1989) | 9 | HDA 9 www.hcdm.org |
| 5 | HDA 5 Leucocyte Typing V - Schlossman, S.F., et al Eds., Oxford University Press (1995) | 10 | HDA 10 www.hcdm.org |

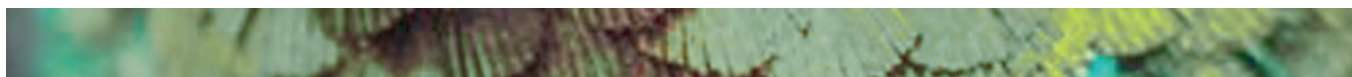
Leucocyte and Stromal Cell Molecules, The CD Molecules, Zola, H., et al Eds. Wiley-Liss (2007)

When known, the cross reactivities with other species than human (primates and non-primates) are indicated below the technical description.

| Clone Name | Technical Data | Page |
|---|------------------|------------|
| 1-2 | | |
| 1A4CD27 | 5 C F I B | 51 |
| 1A4CD27 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon. | | |
| 1D3 | 5 C I F | 45 |
| 1F11 | 5 C I | 53 |
| 1G11 | 5 C I B F | 84 |
| 1HT44H3 | 2 I C | 50 |
| 1HT44H3 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon. | | |
| 2.7A6A3 | C W E Ci | 29 |
| 2A2 | C | 127 |
| 2E1 | 3 C I F E | 53 |
| 2E1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon. 2E1 cross reacts with: Bovine, Ovine, Equine, Mink | | |
| 2G5 | 5 C I | 83 |
| 2G5 cross reacts with: Indian Rhesus, Sooty Mangabey. | | |
| 2G9A10F5 | 5 C | 144 |
| 2H2D9 | C W I F | 143 |
| 2H4G03B | 2 C | 35 |
| 2H4LDH11LDH9 | 3 C F I B | 63 |
| 2ST8.5H7 | 5 C I | 37 |
| 2T8.2F5 | C | 147 |

| Clone Name | Technical Data | Page |
|---|----------------------|------------|
| 3-4 | | |
| 3.29H.10 | B C F | 103 |
| 3A1E-12H7 | 1 C F I | 35 |
| 3A6 | 6 C | 99 |
| 3C10 | C | 128 |
| 3D11 | C | 132 |
| 3G8 | 4 C F B I A E | 44 |
| 3G8 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon, Capuchin Monkey, Common Marmoset, Squirrel Monkey. 3G8 cross reacts with: Equine, Canine | | |
| 4B41 | 6 C | 91 |
| 4B4LDC9LDH8 | 3 C A B I F P | 52 |
| 4B4LDC9LDH8 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon, Capuchin Monkey, Squirrel Monkey. | | |
| 4D9 | C Ci | 121 |
| 4EL1C7 | 2 C I B | 50 |
| 5-6 | | |
| 5.6E | 4 C W I F | 53 |
| 7-8-9 | | |
| 7.1 | I C F W | 125 |

Clones



| Clone Name | Technical Data | Page |
|---|-------------------------------------|------------|
| 7E4 | 6 B I C | 45 |
| 7E4 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon. 7E4 cross reacts with: Bovine, Ovine, Porcine, Equine, Canine, Feline, Mink, Llama | | |
| 8A3 | C | 85 |
| 8F9 | C | 113 |
| 8H8.1 | 2 C F I | 35 |
| 8H8.1 cross reacts with: Equine | | |
| 9-49 | C | 118 |
| 9-49 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon, Capuchin Monkey, Squirrel Monkey. | | |
| 9F5 | 6 C | 88 |
| 9P25 | 6 C B I | 49 |
| 9P25 cross reacts with: Bovine, Ovine, Equine | | |

10-50

| | | |
|---|--|------------|
| 11.1CN5 | C | 126 |
| 11B2G3 | C | 113 |
| 11E4B-7-6 | 7 C F | 105 |
| 12G5 | 7 C B | 100 |
| 12G5 cross reacts with: Cynomolgus Monkey, Olive Baboon. 12G5 cross reacts with: Bovine, Ovine, Canine | | |
| 13B8.2 | 3 W E C B | 33 |
| 13B8.2 cross reacts with: Hamadryas Baboon, Olive Baboon. | | |
| 22 | 4 C I F | 72 |
| 22 cross reacts with: Indian Rhesus. | | |
| 22F6 | C | 116 |
| 25.3 | 4 I C B | 39 |
| 25.3 cross reacts with: Equine, Feline, Mink | | |
| 38.13 | 4 C F A | 76 |
| 39C1.5 | 2 A B C | 31 |
| 39C1.5 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon, Capuchin Monkey, Common Marmoset, Squirrel Monkey. 39C1.5 cross reacts with: Equine | | |
| 42D1 | C | 79 |
| 45.15 | C Ci | 119 |
| 45.15 cross reacts with: Indian Rhesus. | | |

51-99

| | | |
|---------------------------------|---|------------|
| 56C5.2 | C F | 134 |
| 80B3 | 5 C I W F E | 73 |
| 80H5 | 5 C E A Ph F | 43 |
| 80M2 | C | 87 |
| 84H10 | 3 I C F B E Ci | 67 |
| 84H10 cross reacts with: Canine | | |

| Clone Name | Technical Data | Page |
|--------------------------------------|---|----------------|
| 88H7 | 6 C W F | 73 |
| 89B | 2 C I F | 105, 46 |
| 94 | 1 C W I B F | 39 |
| 94 cross reacts with: Indian Rhesus. | | |
| 95C3 | 5 C I F | 86 |
| 97A6 | 7 I C | 102 |

100 & +

| | | |
|---|--|----------------|
| 104G4 | 7 F I Ci | 104 |
| 104D2D1 | 6 C | 86 |
| 104D2D1 cross reacts with: Bovine | | |
| 116 | 1 C I F | 102, 42 |
| 191B8 | 6 C B | 98 |
| 259D | C | 115 |
| 322A-1 | 1 C F W I E B | 102, 42 |
| 322A-1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Capuchin Monkey, Squirrel Monkey. | | |
| 36213 | C | 132 |
| 366 | 1 C I F | 41 |
| 581 | 5 A C W F P | 55 |
| 581 cross reacts with: Ovine | | |
| 906 | 2 C F I | 54 |

A

| | | |
|--|---|------------|
| AD-2 | 4 C | 75 |
| AF23 | C | 141 |
| ACD58 | 5 C I F B | 69 |
| ALB1 | F C | 38 |
| ALB1 cross reacts with: Bovine, Equine | | |
| ALB11 | 5 C P | 63 |
| ALB11 cross reacts with: Ovine, Equine | | |
| ALB12 | C | 62 |
| ALB2 | 3 C F | 38 |
| ALB6 | 3 C I W A F | 37 |
| ALB9 | 6 E C F | 49 |
| AZND1 | 7 C F | 104 |

B

| | | |
|--------------|-------------------|------------|
| B-A38 | C | 91 |
| B-R35 | 8 C | 101 |

Clones



| Clone Name | Technical Data | Page |
|---|---------------------|------------|
| BL499 | 2 I C A B | 50 |
| BL499 cross reacts with: Squirrel Monkey. BL499 cross reacts with: Ovine, Mink | | |
| BLG6 | C | 29 |
| B8122 | C | 118 |
| B8.12.2 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon, Common Marmoset, Cotton-topped Tamarin, Squirrel Monkey. | | |
| B911 | 1 C B I | 36 |
| B9121 | C | 117 |
| B9.12.1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon. | | |
| B9E9 | 5 C | 47 |
| B9E9 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Pigtailed Macaque, Hamadryas Baboon, Olive Baboon, Sooty Mangabey. | | |
| BA54 | 5 C | 58 |
| BA626 | C F | 139 |
| BAB281 | C | 111 |
| BAB281 cross reacts with: Cynomolgus Monkey, African Green, Chimpanzee, Olive Baboon, Common Marmoset. | | |
| Bear1 | 6 C I B F | 39 |
| Bear1 cross reacts with: Ovine, Equine, Canine | | |
| BerACT35 | C | 90 |
| Ber-ACT35 cross reacts with: Feline | | |
| BL13 | 3 C F I E | 48 |
| BL13 cross reacts with: Bovine, Ovine, Equine, Canine, Rabbit | | |
| BL14 | 3 C I F | 57 |
| BL168 | C | 122 |
| BL1a | 3 C I W B | 34 |
| BL1a cross reacts with: Bovine, Equine | | |
| BL37.2 | C | 129 |
| BL37.2 cross reacts with: Indian Rhesus. | | |
| BL6 | 3 C F I | 30 |
| BL6 cross reacts with: Ovine, Equine | | |
| BM6 | C | 108 |
| BNI3 | 6 E F I C Ci | 93 |
| BNI3 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Chimpanzee, Olive Baboon. BNI3 cross reacts with: Ovine, Porcine | | |
| BU15 | 3 F C I | 40 |
| BU15 cross reacts with: Canine | | |
| BY55 | 7 C I B | 98 |
| BY55 cross reacts with: Sooty Mangabey. | | |
| C | | |
| C1.7 | 5 A C W | 106 |
| C15 | C F | 129 |
| C21 | C | 135 |

| Clone Name | Technical Data | Page |
|---|-----------------------|----------------|
| C218 | 6 B C | 68 |
| CAS1.1.3 | C | 137 |
| CB3-1 | 6 A C I W | 77 |
| CB3-1 cross reacts with: Mink | | |
| CD282 | 5 A C B | 51 |
| CF1 | 5 C E B F | 87 |
| CF1 cross reacts with: Cynomolgus Monkey, Indian Rhesus. | | |
| CH1 | 5 A C F P E | 82 |
| CH2 | C | 130 |
| CIB-Gam12 | 4 C W Ci | 72 |
| CIB-MPO-1 | C | 124 |
| CIB-T1/1 | 3 C | 34 |
| CIB-Thomh/6 | 4 W I B C F Ci | 71 |
| CIB317 | C | 124 |
| D | | |
| D3H60251 | 4 C I | 54 |
| DCGM4 | 7 F C I Ci | 103 |
| DFT1 | 5 C P W A I F | 61 |
| DFT1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon. DFT1 cross reacts with: Ovine | | |
| dG9 | C | 126 |
| DREG56 | 5 C W I B E F | 71 |
| DREG56 cross reacts with: Chimpanzee. DREG56 cross reacts with: Bovine | | |
| E | | |
| E12428 | C | 120 |
| E175F31513 | C F | 138 |
| E59126 | C W | 108 |
| EBGB | 6 C I W B | 95 |
| EIL1.4 | C | 139 |
| F | | |
| F15-42-1-5 | 6 C W | 81 |
| F15-42-1-5 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon. | | |
| FAG152 | 5 C F E W B I | 56 |
| FES172 | I C | 97 |
| FN9 | C | 134 |
| FMC7 | W C | 115, 47 |

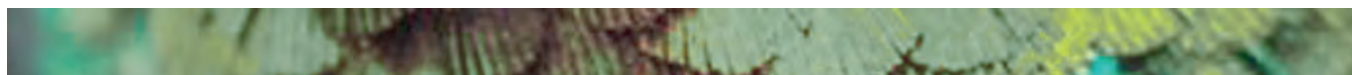
Clones



| Clone Name | Technical Data | Page |
|--|----------------------|----------------|
| G | | |
| G025H7 | C | 100 |
| G043H7 | 8 C | 101 |
| GB11 | C | 116 |
| GB11 cross reacts with: Mouse, Rat | | |
| G9 | 5 B F C I W | 65 |
| GL183 | 6 C I W B | 95 |
| H | | |
| H0E12F4 | C | 114 |
| HI32 | C | 136 |
| H299 | 1 C F I B E | 105, 47 |
| H299 cross reacts with: African Green, Chimpanzee, Common Marmoset, Cotton-topped Tamarin, Squirrel Monkey. | | |
| HA43 | 5 C Ci | 84 |
| HA5.2B7 | C F | 80 |
| HA5.2B7 cross reacts with: Ovine, Caprine, Porcine, Mink | | |
| HB15a | 5 C I A | 78 |
| HB15a cross reacts with: Indian Rhesus, Common Marmoset, Squirrel Monkey. | | |
| HCD99 | 6 C | 82 |
| HD237 | 3 C B | 46 |
| HD239 | 4 I F C | 48 |
| HD50 | 3 C B I | 49 |
| HI86 | 6 C | 66 |
| HM47 | 5 I Ci F Ph C | 76 |
| HM47 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Chimpanzee, Olive Baboon. | | |
| HP-3B1 | 5 B I A C F | 81 |
| HP-F1 | C | 79 |
| HP2/1 | 4 I B C F | 65 |
| HP2/1 cross reacts with: Indian Rhesus. HP2/1 cross reacts with: Bovine, Ovine, Caprine, Equine, Canine, Feline, Mink, Llama, Rabbit, Carp | | |
| HRS4 | 3 C W P I E F | 52 |
| HRS4 cross reacts with: Cynomolgus Monkey, Indian Rhesus. | | |
| HI1 + HI4 + HI8 + HI9 | C | 143 |
| I | | |
| IAG2 | C | 119 |
| IG125 | C | 140 |
| IMU157 | C F | 131 |
| IMU222 | C F | 136 |

| Clone Name | Technical Data | Page |
|---|----------------------|------------|
| IMMU360 | C | 142 |
| IMMU360 cross reacts with: Squirrel Monkey. | | |
| IMMU389 | C | 142 |
| IMMU546 | C F | 140 |
| Immu-357 | C | 118 |
| Immu-357 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon, Capuchin Monkey, Cotton-topped Tamarin. | | |
| Immu103.44 | 5 C | 41 |
| Immu103.44 cross reacts with: Olive Baboon. | | |
| Immu33 | 5 C W P F A I | 55 |
| Immu92 | 6 C | 62 |
| IMMU510 | C I E F | 128 |
| IP26A | C | 127 |
| IPM2 | C | 145 |
| ISA-3 | C | 107 |
| J | | |
| J.173 | 3 C A I | 61 |
| J.173 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon. | | |
| J1B3 | C | 114 |
| J3119 | 4 B I C | 46 |
| J33 | 3 C | 62 |
| J3D3 | 3 I C E B F P | 56 |
| J457 | 4 C I P | 64 |
| J5 | 1 F C I P B | 38 |
| J5 cross reacts with: Bovine, Ovine, Equine, Mink, Guinea Pig | | |
| JS11KSC2.3 | 6 I F C | 67 |
| JS64 | 5 C I W | 78 |
| JS64 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon. | | |
| JU743 | C | 137 |
| K | | |
| K20 | 3 I F C B | 52 |
| K20 cross reacts with: Bovine, Caprine, Porcine, Equine, Canine, Mink | | |
| KC56 | 5 C | 62 |
| KC57 | C | 116 |
| KDR-1 | 8 C | 109 |
| K67 | F W C Ci Ph | 123 |
| KOR-SA3544 | C W Ph | 74 |

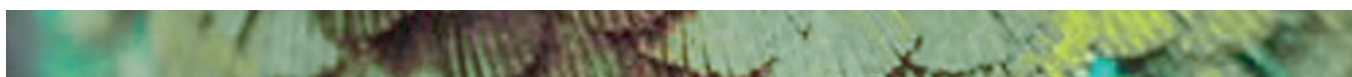
Clones



| Clone Name | Technical Data | Page |
|---|----------------|------|
| L | | |
| L161 | 3 C I F | 30 |
| L161 cross reacts with: Ovine | | |
| IS19843 | 5 C | 57 |
| M | | |
| M60 | C | 92 |
| M61 | 6 F I B W C E | 88 |
| MA127 | C | 112 |
| MA152 | C | 125 |
| MA104 | 6 C I F | 77 |
| MA89 | 4 C P A F W E | 58 |
| MEM43 | 4 C | 70 |
| MHR73-11 | 7 C | 99 |
| MP4-25D2 | C E W | 121 |
| MP4-25D2 cross reacts with: Porcine, Equine | | |
| MP62D5 | C | 130 |
| N | | |
| N7.48A | C Ci | 121 |
| N7.48A cross reacts with: Indian Rhesus. | | |
| N901 | 4 P I F B A C | 68 |
| N901 cross reacts with: Hamadryas Baboon. | | |
| NC1 | 5 C W P | 69 |
| NK1A255 | 8 | 109 |
| O | | |
| ON72 | C | 110 |
| ON72 cross reacts with: African Green, Chimpanzee, Common Marmoset. | | |
| OX-104 | 7 C | 102 |
| P | | |
| P2 | 5 C B E I W | 59 |
| P282E | 5 C | 70 |
| PD-11 | 8 C | 106 |
| PD1.3 | 8 C | 107 |
| Q | | |
| QBEnd10 | 4 C W P F I A | 55 |
| QBEnd10 cross reacts with: Hamadryas Baboon. | | |

| Clone Name | Technical Data | Page |
|--|----------------|--------|
| QBEnd10+ Inmd33+ Inmd210 | C | 55 |
| R | | |
| R34.34 | 6 B C I | 89 |
| R34.34 cross reacts with: Indian Rhesus, Pigtailed Macaque. | | |
| R912 | C | 141 |
| RF3 | 6 C I E | 94 |
| RMD52 | 6 C | 42 |
| S | | |
| SA-DA4 | C | 120 |
| SAM1 | 5 C F I B | 66 |
| SEZAP | C | 145 |
| SC06 | 6 C I W | 85 |
| SFL340 | 6 I C B | 90 |
| SFC12T4D11 | 1 F C B | 33 |
| SFC12T4D11 cross reacts with: Hamadryas Baboon, Olive Baboon. | | |
| SFC19Thy1A8 | 1 C I F | 30 |
| SFC121Thy2D3 | 1 C F B I | 36 |
| SFC121Thy2D3 cross reacts with: Common Marmoset. | | |
| SFC13PT2H9 | 1 C B F | 31, 95 |
| SFC13PT2H9 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon, Capuchin Monkey, Common Marmoset, Squirrel Monkey. | | |
| SJ101H1 | 3 C A I | 48 |
| SJ1D1 | 3 C I F | 41 |
| SPAN 12 | C | 144 |
| SPV13 | I B F C | 117 |
| SSDCLY107D2 | C | 88 |
| SSDCLY107D2 cross reacts with: Cynomolgus Monkey. | | |
| SV11B5 | C | 94 |
| SZ1 | 5 C I W | 60 |
| SZ2 | 5 C B I W P | 60 |
| SZ21 | 5 C I W E P F | 70 |
| SZ22 | 5 C W E I | 59 |
| T | | |
| T16 | 3 F I C | 57 |
| TAMAYA1.2 | C F | 138 |
| TEA 1/31 | 6 F I C | 92 |

Clones



| Clone Name | | Technical Data | Page |
|-------------------|----------|------------------|-----------|
| TEA1/34 | 6 | C F | 93 |
| TEA317.1.1 | 6 | C | 83 |
| Thy1/310 | | C | 81 |
| TP1.55.3 | | C A I F | 74 |
| TRAP-1 | 6 | B C I W F | 94 |

TRAP-1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon.

U

| | | | |
|------------|--|--------------|-----------|
| UB2 | | F C P | 82 |
|------------|--|--------------|-----------|

UB2 cross reacts with: Carp

| | | | |
|--------------|----------|------------------|-----------|
| UCHL1 | 3 | C P F I B | 64 |
|--------------|----------|------------------|-----------|

UCHL1 cross reacts with: Mink, Trout, Carp

| | | | |
|--------------|----------|------------------|------------|
| UCHL1 | 1 | I C A F E | 32 |
| UC2 | | B C F P | 105 |
| UP-R1 | | C | 96 |

V

| | | | |
|------------------|--|----------|------------|
| VER2.32.1 | | C | 135 |
|------------------|--|----------|------------|

W

| | | | |
|---------------|----------|------------|------------|
| WGB3C1 | 7 | C | 89 |
| WEDE15 | | C E | 144 |
| WF24 | | C | 131 |

Y

| | | | |
|-----------------|----------|------------|-----------|
| YDJ1.2.2 | 5 | C F | 75 |
|-----------------|----------|------------|-----------|

YDJ1.2.2 cross reacts with: Cynomolgus Monkey.

Z

| | | | |
|-------------|--|--------------|------------|
| Z176 | | C W | 110 |
| Z199 | | I C B | 97 |

Z199 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Pigtailed Macaque, African Green, Chimpanzee, Olive Baboon, Common Marmoset.

| | | | |
|------------|--|----------|------------|
| Z23 | | C | 111 |
| Z25 | | C | 112 |

Z25 cross reacts with: Cynomolgus Monkey, Indian Rhesus, African Green, Chimpanzee, Olive Baboon, Common Marmoset.

| | | | |
|---------------|----------|--------------|------------|
| Z27.37 | | I C B | 96 |
| ZZOU4 | | C | 133 |
| ZMR8 | 7 | I C | 80 |
| ZOE | | C | 133 |

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