FLOW CYTOMETRY

2020 CATALOG - Outside US Version

VISUALIZE
the possibilities.

BECKMAN COULTER
Life Sciences

Flow Cytometry Catalog

Outside US Version

The Beckman Coulter Life Sciences Difference

Beckman Coulter's commitment to your research dates back to our origin in 1935. For more than 80 years, we have been a trusted partner for laboratory professionals, helping to advance scientific research and patient care.

Beckman Coulter Life Sciences is a global resource for millions of life science researchers, industrial and environmental technicians, and pharmaceutical and biomedical scientists.

2020 Trends in Clinical Flow

Sandra Hernandez MT, SCYM(ASCP) Marketing Manager, former Clinical Flow Cytometry lab supervisor - Beckman Coulter Miami (US)

Sandra Hernandez's perspective on trends, guidelines and regulations which will have an impact on the clinical flow cytometry labs and future product development.

- **Standardization in detection, diagnosis, classification, and clinical management of hematological malignancies:** Flow Cytometry (FCM) is routinely used in clinical practice, particularly in hemato-oncology. Leukemias and lymphomas express a specific set of cell surface markers depending on their stage and differentiation pathway. Therefore, using immunophenotyping, FCM is frequently applied to the clinical diagnosis and sub-classification of these malignancies. ClearLLab 10C is the first FDA-cleared IVD ten color panel for immunophenotyping and comes as a complete system including reagents, protocols, control material and tools for data analysis.

- **Data Management:** Simplified data management is clearly the next major trend in the flow-cytometry lab. While chemistry and hematology labs have employed bidirectional interfaces for years, flow-cytometry data has been harder to manage due to the manual nature of pathology studies and the complexity of the analysis. For example, routine processes, such as the uploading of T-cell subset test results, can be automated to reduce operator time requirements and improve accuracy. This frees lab personnel from tedious manual tasks, allowing them to spend more time on complex flow-cytometric analysis. The FDA-cleared, CE marked and WHO prequalified 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.

- **Changing regulatory guidelines:** In The US, the FDA issued a warning letter in April 2019 to health system laboratories, enforcing its authority related to Laboratory Developed Tests (LDTs). This goes back to October 2014, where the FDA released their guidance document, Framework for Regulatory Oversight of Laboratory Developed Test (LDTs), that is intended to provide a comprehensive framework that describes FDA's enforcement policy for different classes of LDTs. Beckman Coulter has a large number of ASR reagents in their portfolio, enabling our customers in the US to comply with these guidelines. In Europe, both manufacturers and laboratories need to get prepared for the new IVDR guidelines under EU Regulation 2017/746, which will be in effect as of May 2022, and will replace the current medical device directive. Beckman Coulter Quality Systems and processes are designed to be compliant to regulations wherever we market our products, and we are working very closely with Notified Bodies to complete clearance for our products well within the May 2022 deadline.

- **Controls for Flow Cytometry:** Quality Controls monitor all operational techniques and activities during the analytic (testing) phase of a process, with the goal of ensuring valid and reproducible results. In flow cytometry, many QC assessments are used: instrument QC, reagent/antibody QC, and process (assay) QC. All of the above expectations can be met when the laboratory providing the tests makes a coordinated effort to establish laboratory practices to detect, control, and prevent the occurrence of errors. Quality Assurance (QA) and Quality Control (QC) must be performed consistently and must be practiced by everyone within the laboratory in order to ensure quality patient care. Beckman Coulter offers a comprehensive portfolio of excellent solutions for Quality Control for a variety of flow cytometry applications, such as the ClearLLab Control Cells that provide positive reactivity for all 27 CD markers in the ClearLLab 10C panels.

2020 Trends in Life Sciences

Michael Kapinsky, PhD - Senior Marketing Manager Flow Cytometry Reagents - Beckman Coulter Krefeld (Germany)

Michael Kapinsky's perspective on recent peer-reviewed publications and important trends in cellular analysis.

- **Extracellular Vesicles (EVs)** emerge as a powerful messaging avenue in the body, mediating profound physiological effects. Their small physical size, way below cellular dimensions, creates challenges for conventional flow cytometry hardware. Not so for the CytoFLEX platform (pages 235-268) providing access to detection of viruses and EVs<100nm by virtue of its exceptional light-scatter sensitivity and resolution – manifold applications! [3-6].
- **Biomarker discovery** often occurs when looking beneath the layers of the obvious which not necessarily requires data driven approaches based on hundreds of markers. Interrogating some dozens of immune populations, paired with sound statistical analysis and a strong hypothesis, might well chart the course – impressively demonstrated by ONE study-participating laboratories [7, 8, 9] relying on highly standardized DURAClone-based phenotyping (pages 165-186).
- **Automated data analysis** can only be as good as the quality of the data fed into the analysis pipeline - which in turn can only be as good as the reagents used to generate the data. Our strong clinical legacy has left its footprint on what we consider sufficient in this respect. LUCID dry antibody panel custom services (pages 13-15) reflect quality as our core value in each ingredient, enabling the level of data quality needed for automated analysis in multi-institutional phenotyping studies [10]. Cloud-based and machine learning assisted data analysis on the Cytobank platforms offers new ways to interact with data and to collaborate around the globe while providing transparent access to the underlying experiment annotation and data processing steps [11].
- **Circulating Tumor Cells (CTCs)** are believed to carry valuable information on their solid tumor origin. Before molecular analysis of CTCs can unfold its power, the extremely rare CTCs need to be isolated at highest possible cellular integrity, making cell sorting a promising approach. Our R&D team married accurate phenotypic identification with a most simple workflow [2]. Their report made it on the editor's pick list of the journal - and triggered the development of a CTC-dedicated buffer system that will join the family of PerFix intracellular staining kits (pages 219-225) very soon – will keep you posted!

[1] **Clazakizumab in late antibody-mediated rejection: study protocol of a randomized controlled pilot trial.** Eskandary F, Dürr M, Budde K, Doberer K, Reindl-Schwaighofer R, Waiser J, Wahrmann M, Regele H, Spittler A, Lachmann N, Firbas C, Mühlbacher J, Bond G, Halloran PF, Chong E, Jilma B, Böhmig GA. Trials. 2019 Jan 11;20(1):37. doi: 10.1186/s13063-018-3158-6.

[2] **Sensitive and easy screening for circulating tumor cells by flow cytometry.** Lopresti A, Malergue F, Bertucci F, Liberatoscioli ML, Garnier S, DaCosta Q, Finetti P, Gilabert M, Raoul JL, Birnbaum D, Acquaviva C, Mamessier E. JCI Insight. 2019 Jun 13;5. pii: 128180. doi: 10.1172/jci.insight.128180.

[3] **A Novel Semiconductor-Based Flow Cytometer with Enhanced Light-Scatter Sensitivity for the Analysis of Biological Nanoparticles.** George C. Brittain, IV, Yong Q. Chen, Edgar Martinez, Vera A. Tang, Tyler M. Renner, Marc-André Langlois, Sergei Gulnik. Sci Rep. 2019; 9: 16039. Published online 2019 Nov 5.

[4] **Interaction with hyaluronan matrix and miRNA cargo as contributors for in vitro potential of mesenchymal stem cell-derived extracellular vesicles in a model of human osteoarthritic synoviocytes.** Enrico Ragni, Carlotta Perucca Orfei, Paola De Luca, Gaia Lugano, Marco Viganò, Alessandra Colombini, Federico Valli, Daniele Zacchetti, Valentina Bollati, Laura de Girolamo. Stem Cell Res Ther. 2019; 10: 109. Published online 2019 Mar 29.

[5] **Insights into Inflammatory Priming of Adipose-Derived Mesenchymal Stem Cells: Validation of Extracellular Vesicles-Embedded miRNA Reference Genes as A Crucial Step for Donor Selection.** Enrico Ragni, Paola De Luca, Carlotta Perucca Orfei, Alessandra Colombini, Marco Viganò, Gaia Lugano, Valentina Bollati, Laura de Girolamo. Cells. 2019 Apr; 8(4): 369. Published online 2019 Apr 23.

[6] **Extracellular Vesicles Shedding Promotes Melanoma Growth in Response to Chemotherapy.** Luciana Nogueira de Sousa Andrade, Andréia Hanada Otake, Silvia Guedes Braga Cardim, Felipe Ilelis da Silva, Mariana Mari Ikoma Sakamoto, Tatiane Katsue Furuya, Miyuki Uno, Fátima Solange Pasini, Roger Chammas. Sci Rep. 2019; 9: 14482. Published online 2019 Oct 9.

[7] **Standardization of whole blood immune phenotype monitoring for clinical trials: panels and methods from the ONE study.** Streitz M, Miloud T, Kapinsky M, Reed MR, Magari R, Geissler EK, Hutchinson JA, Vogt K, Schlickeiser S, Kverneland AH, Meisel C, Volk HD, Sawitzki B. Transplant Res. 2013 Oct 25;2(1):17. doi: 10.1186/2047-1440-2-17.

[8] **Predicting Early Viral Control under Direct-Acting Antiviral Therapy for Chronic Hepatitis C Virus Using Pretreatment Immunological Markers.** Hutchinson JA, Weigand K, Adenugba A, Kronenberg K, Haarer J, Zeman F, Riquelme P, Hornung M, Ahrens N, Schlitt HJ, Geissler EK, Werner JM. Front Immunol. 2018 Feb 7;9:146. doi: 10.3389/fimmu.2018.00146. eCollection 2018

[9] **Individual Effector/Regulator T Cell Ratios Impact Bone Regeneration.** Schlundt C, Reinke S, Geissler S, Bucher CH, Giannini C, Märdian S, Dahne M, Kleber C, Samans B, Baron U, Duda GN, Volk HD, Schmidt-Bleek K. Front Immunol. 2019 Aug 16;10:1954. doi: 10.3389/fimmu.2019.01954. eCollection 2019.

[10] **A standardized immune phenotyping and automated data analysis platform for multicenter biomarker studies.** Ivison S, Malek M, Garcia RV, Broady R, Halpin A, Richaud M, Brant RF, Wang SI, Goupil M, Guan Q, Ashton P, Warren J, Rajab A, Urschel S, Kumar D, Streitz M, Sawitzki B, Schlickeiser S, Bijl JJ, Wall DA, Delisle JS, West LJ, Brinkman RR, Levings MK. JCI Insight. 2018 Dec 6;3(23). pii: 121867. doi: 10.1172/jci.insight.121867

[11] Kotecha N, Krutzik PO, Irish JM. Web-Based Analysis and Publication of Flow Cytometry Experiments. Current Protocols in Cytometry. 2010;53(1):10.17.1-10.17.24. doi:10.1002/0471142956.cy1017s53

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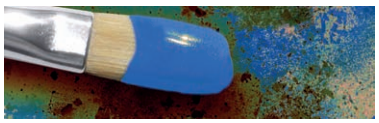
INFORMATION

SERVICES

ANTIBODIES & KITS



SUPPORT REAGENTS

INSTRUMENTATION

INDICES

INFORMATION

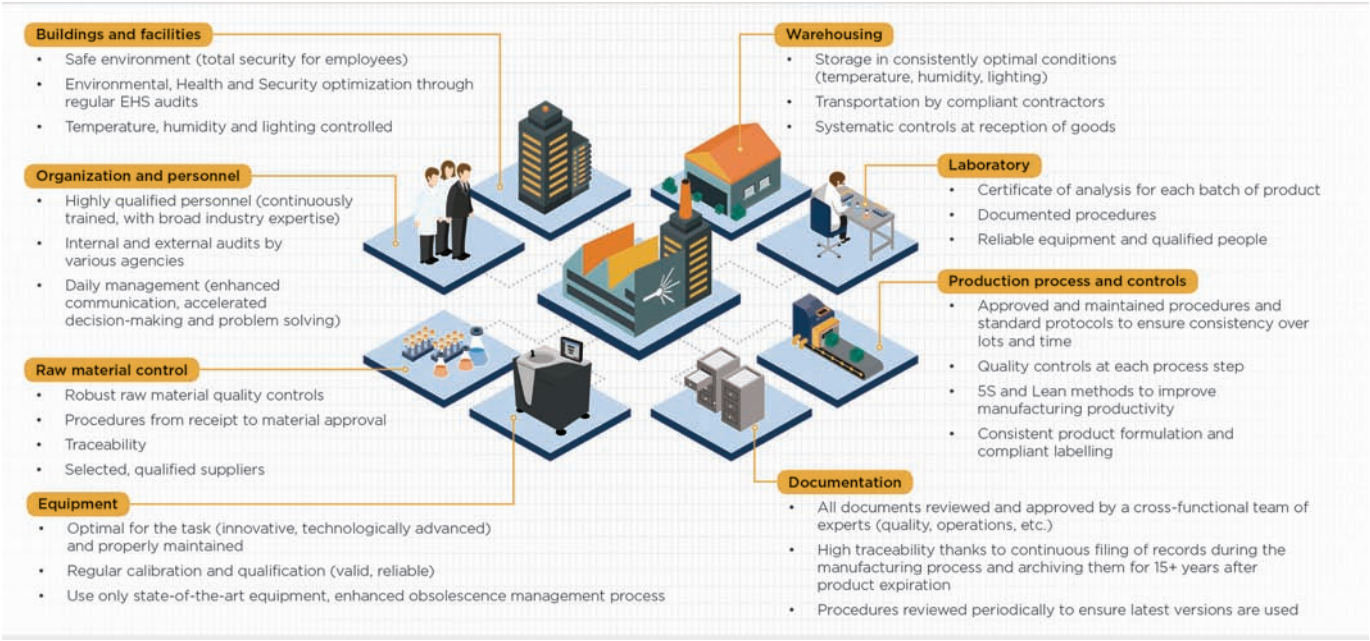
NOTES

Manufacturing & Processing

Beckman Coulter Life Sciences is focused on quality, aiming to provide laboratories with the necessary tools to perform tests and assays by flow cytometry under optimal conditions.

cGMP Manufacturing

The entire Beckman Coulter Flow Cytometry Antibody portfolio is manufactured under current Good Manufacturing Practices (cGMP) of Medical Devices, 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 21CFR Part 820 (Code of Federal Regulations Title 21 / Part 820). 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.



ISO International Standards

The compliance with standards such as ISO 13485:2016/ ISO 9001:2015 demonstrates continuous improvement of Beckman Coulter's quality management systems (QMS) and processes. Facilities are certified MDSAP (Medical Device Single Audit Program), a program that allows the conduct of a single regulatory audit of a medical device manufacturer's quality management system that satisfies the requirements of multiple regulatory jurisdictions.

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 & Product Lines

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 / 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
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
Draq7	Anthraquinone dye	725	Far-red	697	780
ViaKrome 405	405 Fixable Viability Dye	402	Violet/405 nm Diode Laser	425	450
ViaKrome 561	561 Fixable Viability Dye	555	Yellow Green/Blue (488 nm)	565	585
ViaKrome 638	638 Fixable Viability Dye	638	Red Diode/HeNe Laser	655	660
Others					
BIOT	Biotin				
UNLB	Unlabelled, Unconjugated, purified				

[1] As DNA Complex

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

Format & Product 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*
ClearLLab 10C	*Yes*	*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.
- Improves 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 & Product 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 µL 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 µL per test for OptiLyse C and 100 µL 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 µL per test.
- Purified and most FITC antibodies are lyophilized and require reconstitution in 500 µL 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 & Product Lines

DURAClone Antibody Panels

The DURAClone kits are ready-to-use solutions for highly standardized clinical research flow cytometry:

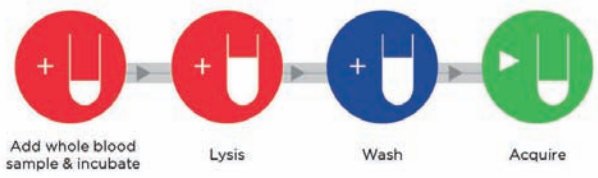
- DURAClone RE for rare event detection in human blood disorder research
- DURAClone IM for human immune system research
- DURAClone IF and DURActive for human immune functional assays
- DURAClone SC for characterization of human adult stem cells

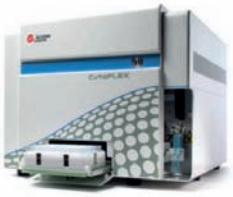
The dry , unitized, pre-formulated DURAClone kits provide the specified antibody panels as a dried-down layer in each test tube eliminating antibody pipetting. This shortens the turn-around time, minimizes human error sources, and eliminates repetitive workflow steps that are costly to automate. The 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

Powered By DURA Innovations
Dry Unitized Reagent Assays

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 & Product Lines

ClearLLab Reagents

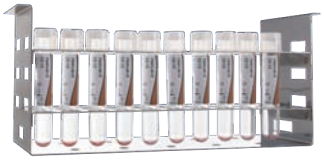
ClearLLab Reagents are the first reagents available in the U.S. for leukemia and lymphoma* flow cytometric immunophenotyping in the clinical lab (via the U.S. Food and Drug Administration (FDA)'s De Novo Process). They are comprised of five pre-formulated antibody cocktails targeted at B-, T-, and Myeloid 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

ClearLLab 10C system

The CE/IVD ClearLLab 10C system covers lymphoid and myeloid lineages, without the need for extensive validation and hard to find clinically relevant samples, while offering a streamlined workflow. The CE/IVD solution offers all components needed from quality controls, sample preparation, antibody panels to analysis software and training material. The 4 premixed, dry ClearLLab 10 C panels can aid in the differential diagnosis of hematologically abnormal patients having or suspected of having hematopoietic neoplasms, such as chronic leukemia, acute leukemia, Non-Hodgkin lymphoma, myeloma, myelodysplastic syndrome (MDS), and/or myeloproliferative neoplasms (MPN).

- 4 Premixed, dry ClearLLab CE/IVD 10-color panels using the DURA Innovations technology: Lymphoid (B-cells, T-cells), Myeloid (M1, M2)
- Fluorescence standardization and color compensation setup kits

ClearLLab Control Cells are the first application specific normal and abnormal CE/IVD controls cells as a liquid preparation of stabilized human erythrocytes and leukocytes

- Validated for the use on the Navios/Navios EX flow cytometers
- Kaluza C analysis software for data analysis and reporting

Regulatory Status

Status Definitions:

ASR

Analyte specific reagents (ASR's) are antibodies, both polyclonal and monoclonal, specific receptor proteins, ligands, nucleic acid sequences, and similar reagents which, through specific binding or chemical reaction with substances in a specimen, are intended for use in a diagnostic application for identification and quantification of an individual chemical substance or ligand in biological specimens.

IVD

A medical device is an in vitro diagnostic medical device (IVD) if it is a reagent, calibrator, control material, kit, specimen receptacle, software, instrument, apparatus, equipment or system, whether used alone or in combination with other diagnostic goods for in vitro use. It must be intended by the manufacturer to be used in vitro for the examination of specimens derived from the human body, solely or principally for the purpose of giving information about a physiological or pathological state, a congenital abnormality or to determine safety and compatibility with a potential recipient, or to monitor therapeutic measures.

CE/IVD

The letters "CE" are the abbreviation of French phrase "Conformité Européene" which literaturely means "European Conformity". The term initially used was "EC Mark" and it was officially replaced by "CE Marking" in the Directive 93/68/EEC in 1993. "CE Marking" is now used in all EU official documents. "CE Mark" is also in use, but it is NOT the official term. CE Marking on a product is a manufacturer's declaration that the product complies with the essential requirements of the relevant European health, safety and environmental protection legislations, in practice by many of the so-called Product Directives.

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

These are products used for research conducted to study all aspects of human life in an attempt to better understand all underlying mechanisms. In such studies / experiments animal and / or human models are used. No medical purpose is defined, as the specimens taken are not being used for the purpose identified in the definitionof an IVD device.

nMD

Equipment not intended to be used in diagnostic procedures are indicated non-Medical Device (nMD)

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.

Other regulatory status are sold everywhere

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:

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

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

NOTES

User Defined Services

User Defined 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 and reagent formulation.

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

	LUCID Custom Panel Design & Cocktail Services	RESOURCE Contract Manufacturing Services
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
Presentation	In tubes or in microplates	In tubes or in microplates

* 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.

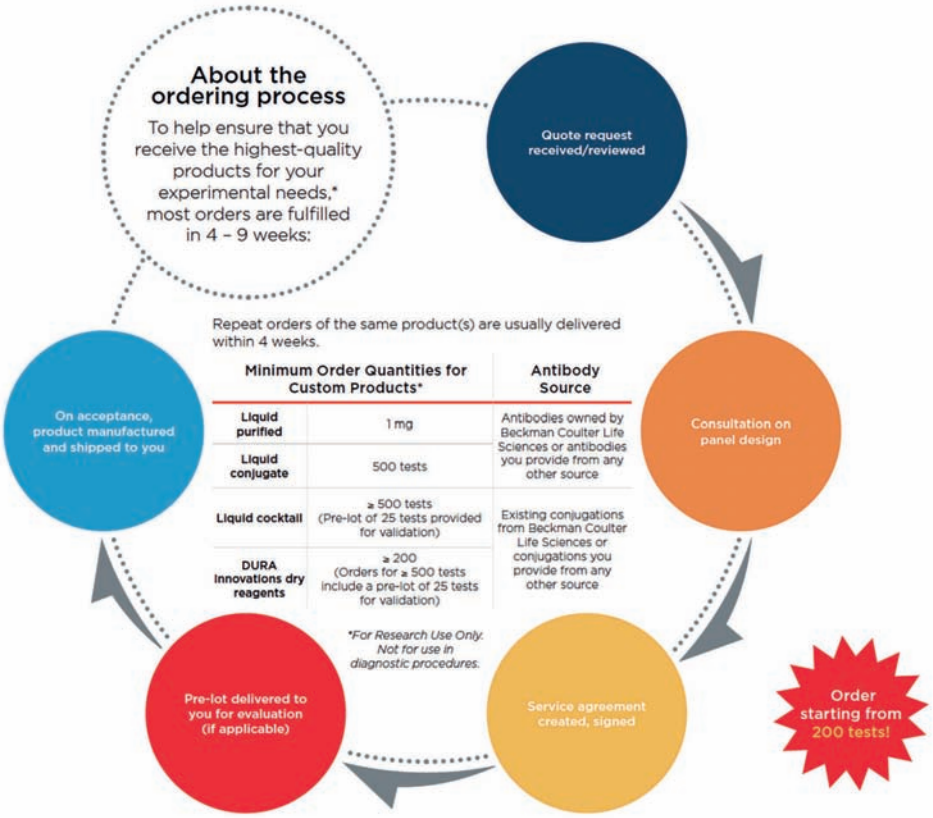
Custom Design Services

LUCID
Custom Panel Design & Cocktail Services

With a spectrum of multicolor options for you to choose from, our experts can create an individual panel design 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 in tubes or in plates format
- Stable at room temperature (18°C – 23°C)
- Warrantied for 18 months
- Include the universal compensation compensation kits



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

RESOURCE
Contract Manufacturing Services

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

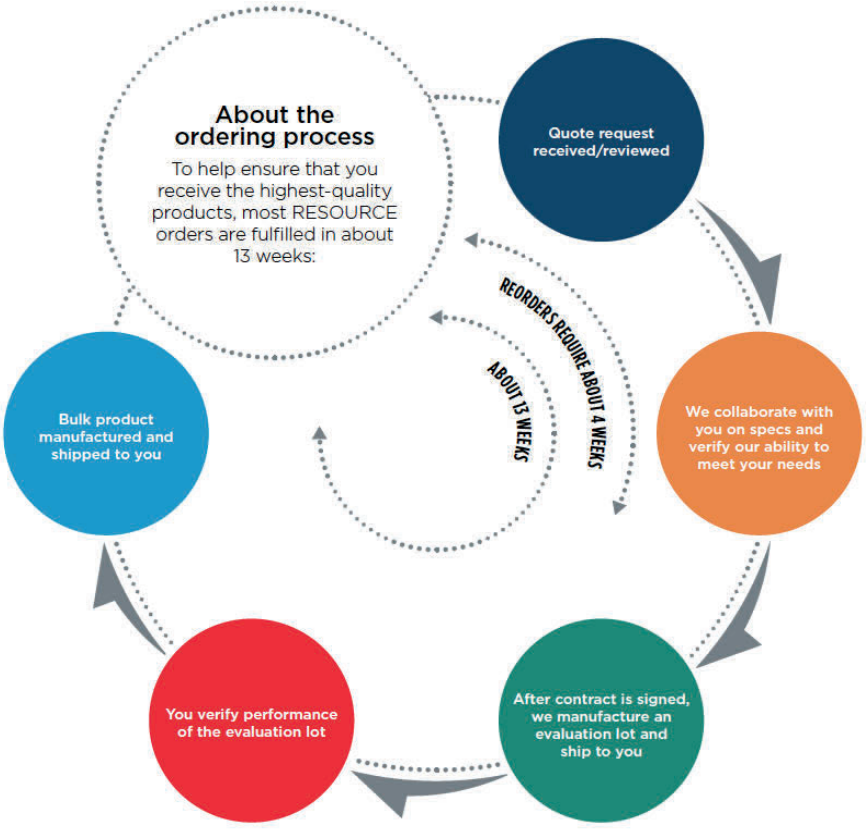
In order to take advantage of the automation features of the AQUIOS CL system, Beckman Coulter provides the reagents for your user-defined assays either through our Contract Manufacturing (GMP) or Custom Design* Services of user defined reagents. Either option provides barcoded and cap-pierceable vials 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.**

ONLINE CLASSES

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

TRAINING CENTERS EUROPE

UK, High Wycombe.

- Products: Navios/Navios EX and AQUIOS training with an instructor.
- Language: English.
- Dedicated to UK, Netherlands, Sweden.

Germany, Krefeld.

- Products: Navios/Navios EX.
- Language: German, English.
- Dedicated to Germany, Austria, Switzerland (German speakers), Distributors.
- AQUIOS trainings are done on site.

France, Villepinte.

- Products: Navios/Navios EX and AQUIOS training with an instructor.
- Language: French. Dedicated to France, Switzerland (French speakers).

Spain, Madrid.

- Products: Navios/Navios EX with an instructor.
- Language: Spanish. Dedicated to Spain.

Italy, Portugal

- All trainings are done on site.

General:

- All Astrios trainings, CytoFlex trainings and Kaluza trainings are done on site.
- FC500 training available on demand

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.
REMOTE TECHNICAL SUPPORT:	Unlimited support from Beckman Coulter trained product specialists.
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**.
BECKMANCONNECT REMOTE CONNECTIVITY:	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:
    - Panel Design
    - Operator Training, both on-site and at training centers where available
    - Validation Planning
    - 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.

BeckmanConnect – Remote Connectivity

BeckmanConnect was designed to maximize instrument uptime by minimizing your wait time for urgent service/support. Firewall-friendly BeckmanConnect includes policy configurations designed to limit connections only to Beckman Coulter specialists who are trained to protect your data privacy and security. When a Beckman Coulter instrument is linked to BeckmanConnect, our highly trained service specialists can, at your request, get secure, real-time visibility to your system with a greater level of efficiency and accuracy.

Features and Benefits

Efficiency
Secure workstation access & visibility
Real-time troubleshooting & resolutions
Seamless software upgrades, configurations & reloads
Improved system insights for faster onsite support

Productivity
Increased instrument uptime
Minimized workflow disruptions *
Less operator time devoted to support calls
Reduced wait time for avoidable onite visits

Security
Encrypted, permission-based communication controls
Secure sessions with expert Beckman Coulter support experts located within your geography
Policy configurations & customer approval required for each remote support session

How it works

BeckmanConnect is a remote connectivity software that enhances the technical support of your Beckman Coulter systems. BeckmanConnect is a software that can be downloaded easily from our website www.beckman.com/beckmanconnect, and takes 5 minutes to complete installation.

When support is needed, our service specialist can initiate remote troubleshooting through BeckmanConnect upon customer's approval.

BeckmanConnect allows 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 BeckmanConnect-eligible systems.

Secure and confidential

BeckmanConnect enables;

- Encrypted, unidirectional (outbound) TCP connections on standard web-browsing port 443
- 2-factor connection authentication and a complex password configuration unique to each session
- Customer control that's maintained throughout each session with start-up authorization and approval prompts for each remote activity
- Remote support sessions logged locally and on secure servers for audit purposes
- Automatic client security updates and seamless software upgrades, configurations and reloads

Learn more

Please visit www.beckman.com/beckmanconnect to review technical details on BeckmanConnect features and to fill out the registration form to download the BeckmanConnect installer

* Data available upon request at www.beckman.com

Note: BeckmanConnect is not available in all geographies and instruments. Please contact your Beckman Coulter sales or service representative for more information on features and eligible instruments

NOTES

ANTIBODIES & KITS

NOTES

Single Color Conjugated Antibodies

Specificity	FITC	AF 488	PE	ECD	PC5	PC 5.5	PC7	AF 647	APC	AF 700	APC A700	APC A750	PB	KrO	Page
APO2.7			●												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

Others 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

Specificity	FITC	AF 488	PE	ECD	PC5	PC 5.5	PC7	AF 647	APC	AF 700	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	●		●												66
CD55	●		●												67
CD56			●	●	●	●	●		●		●	●			67
CD57	●												●		68
CD58	●		●		●				●						68
CD59	●		●												69
CD61	●		●			●	●								69
CD62L	●		●	●	●		●		●			●	●		70
CD62P	●		●												70
CD63	●		●												71
CD64	●		●	●	●		●					●	●		71
CD65	●												●		72
CD66b	●								●			●			72
CD66c	●		●												73
CD69			●	●	●		●		●						73
CD71	●		●								●	●			74
CD73			●												74
CD79a			●		●	●			●						75
CD79b			●			●			●						75
CD80	●		●				●		●			●			76
CD81	●		●						●				●		76
CD83	●		●		●										77
CD85d			●												77
CD85j			●						●						78
CD85k							●								78
CD86			●			●	●					●			79
CD90	●		●		●							●	●		79

Others 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

Specificity	FITC	AF 488	PE	ECD	PC5	PC 5.5	PC7	AF 647	APC	AF 700	APC A700	APC A750	PB	KrO	Page
CD94			●						●				●		80
CD95			●												80
CD99				●					●						81
CD103	●								●						81
CD105			●				●								82
CD106			●												82
CD107a									●				●		83
CD109			●												83
CD116			●												84
CD117			●	●	●	●	●		●			●			84
CD122							●								85
CD123			●	●		●	●		●		●				85
CD126			●												86
CD127	●		●		●		●		●		●	●			86
CD133									●						87
CD134									●						87
CD135			●												88
CD137				●											88
CD138			●		●	●			●				●	●	89
CD141	●														89
CD144			●												90
CD146			●		●										90
CD152			●												91
CD154			●												91
CD157	●		●												92
CD158a,h			●			●	●		●						92
CD158b1/b2,j			●			●	●		●						93
CD158e1/e2			●						●						93
CD158f			●						●						94
CD158i			●						●						94
CD159a			●				●		●						95
CD160			●												95
CD161			●				●					●			96
CD166			●												96
CD180			●												97
CD183		●													97
CD184			●												98
CD196							●								98
CD197			●				●								99
CD200			●				●					●			99
CD203c			●				●								100
CD206			●				●						●		100

Others 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

Specificity	FITC	AF 488	PE	ECD	PC5	PC 5.5	PC7	AF 647	APC	AF 700	APC A700	APC A750	PB	KrO	Page
CD207			●												101
CD209			●												102
CD235a	●		●				●					●			102
CD243			●												103
CD244						●									103
CD274							●		●						104
CD278			●						●						104
CD279			●			●	●		●						105
CD294	●		●												105
CD300a			●												106
CD305			●												106
CD309			●				●								107
CD314			●						●						107
CD326									●						108
CD328			●												108
CD335			●		●		●								109
CD336			●		●										109
CD337			●		●										110
CD352			●												110
CD370									●						111
Cyclin A2	●		●												111
Cytokeratin	●														112
DAP12			●												112
FMC7	●												●		113
FoxP3			●				●	●					●		113
Granzyme B	●														114
Helios													●		114
HIV-1 core antigen	●		●												114
HLA-ABC	●														115
HLA-DR	●		●	●	●	●	●		●			●	●	●	116
HLA-DR, DP, DQ			●												116
IFN-γ	●		●										●		117
IgD	●		●						●						117
IgM	●		●						●				●		118
IL-2	●														119
IL-4			●				●								119
IL-17A										●			●		120
κ Chain	●								●						120
Ki-67		●													121
λ Chain			●				●								121
Lactoferrin			●												122
Myeloperoxidase	●		●			●									122

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

Specificity	FITC	AF 488	PE	ECD	PC5	PC 5.5	PC7	AF 647	APC	AF 700	APC A700	APC A750	PB	KrO	Page
NG2			●												123
NKp80			●												123
OSCAR			●												124
Perforin													●		124
ROR1			●												125
TCR PAN α/β			●		●				●						125
TCR PAN γ/δ	●		●		●	●	●								126
TCR Vα7.2	●														126
TCR Vα24	●		●				●								127
TCR Vβ1	●		●												127
TCR Vβ2	●		●												128
TCR Vβ3	●														128
TCR Vβ4	●		●												129
TCR Vβ5.1	●		●												129
TCR Vβ5.2	●		●												130
TCR Vβ5.3			●												130
TCR Vβ7.1	●		●												131
TCR Vβ7.2	●		●												131
TCR Vβ8	●		●												132
TCR Vβ9			●												132
TCR Vβ11	●		●						●						133
TCR Vβ12	●		●												133
TCR Vβ13.1	●		●												134
TCR Vβ13.2			●												134
TCR Vβ13.6	●		●												135
TCR Vβ14	●		●												135
TCR Vβ16	●														136
TCR Vβ17	●		●												136
TCR Vβ18			●												137
TCR Vβ20	●		●												137
TCR Vβ21.3	●														138
TCR Vβ22	●		●												138
TCR Vβ23			●												139
TCR Vδ1							●								139
TCR Vδ2	●												●		140
TCR Vγ9	●				●										140
TCR ζ			●												141
TdT	●														141
Thrombin receptor			●												142
TIA-1			●												142
TNFα			●							●					143
ZAP-70			●												143

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

NOTES

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 performances in various cellular analysis areas such as hemato-oncology, immune monitoring or stem cell studies.

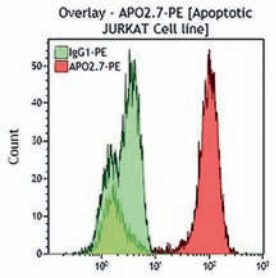
Our comprehensive conjugated antibody portfolio is designed with proprietary, state-of-the-art chemistry for reduced background and maximum signal. Our tandem-dye design ensures stability, minimal spillover, and reproducible results over time. Beckman Coulter's quality control processes and manufacturing 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 305-310

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.



Apoptotic Jurkat cell line.

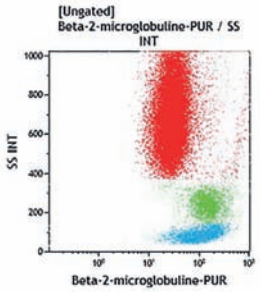
Clone: 2.7A6A3 (IgG1 Mouse)

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	cGMP

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 bound, 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.



Lysed normal whole blood sample.

Clone: B1G6 (IgG2a Mouse)

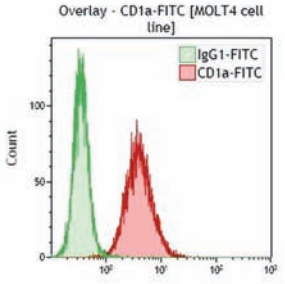
The B1G6 monoclonal antibody is specific for human β2-microglobulin. It does not react with β2-microglobulin from other species. It recognizes the β2-microglobulin, free or associated with human HLA class I molecules.

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

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

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 β2-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 GMCSF 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.



MOLT4 cell line.

Clone: SFCI19Thy1A8 (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	cGMP

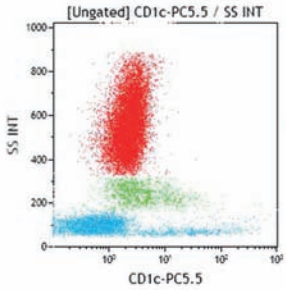
Clone: BL6 (IgG1 Mouse)

The BL6 antibody recognizes the C epitope of the CD1a molecule. BL6 cross reacts with: Ovine, Equine.

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

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 β2-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.



Lysed normal whole blood sample.

Clone: L161 (IgG1 Mouse)

L161 cross reacts with: Ovine.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PC5.5	0.5 mL	Liquid	**B46036**	ASR	IOTest	cGMP

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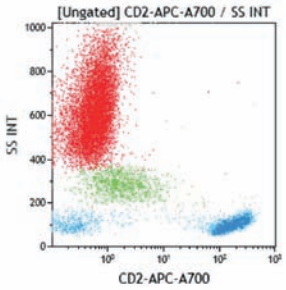
CD2

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.



Lysed normal whole blood sample.

Clone: SFCI3Pt2H9 (IgG1 Mouse)

SFCI3Pt2H9 inhibits sheep erythrocyte rosette formation. It has been used as a CD2 reference monoclonal antibody during HLDA 6 (ref.6T-CD2.6). SFCI3Pt2H9 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Common Marmoset, Squirrel Monkey.

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

Clone: 39C1.5 (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). 39C1.5 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Common Marmoset, Squirrel Monkey and Equine.

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

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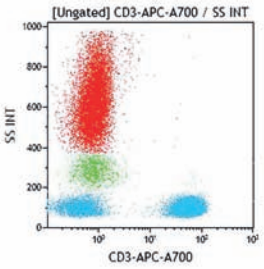
CD3

CD3ζ see TCRζ.
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 γFcR 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 (IgG1 Mouse)

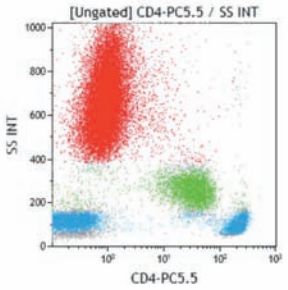
UCHT1 reacts with the ε-chain of the CD3 complex. It was used as a CD3 reference mAb (ref.6T-CD3.1) during HLDA 6. After permeabilization with saponin-based permeabilization reagent IntraPrep, it may be used to detect intracytoplasmic CD3 by flow cytometry.

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

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

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.



Lysed normal whole blood sample.

Clone: 13B8.2 (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 cross reacts with: Hamadyras Baboon, Olive Baboon.

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

Clone: SFCI12T4D11 (IgG1 Mouse)

SFCI12T4D11 monoclonal antibody antagonizes HIV effects ***in vitro***. SFCI12T4D11 cross reacts with: Hamadyras Baboon, Olive Baboon.

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

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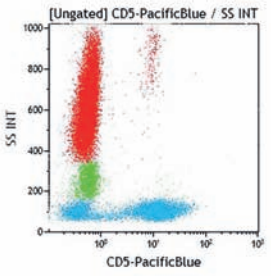
CD5

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.



Lysed normal whole blood sample.

Clone: BL1a (IgG2a Mouse)

BL1a monoclonal antibody (ref. 6T-CD5.5) was used as a CD5 reference monoclonal antibody during HLDA 6. BL1a cross reacts with: Bovine, Equine.

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

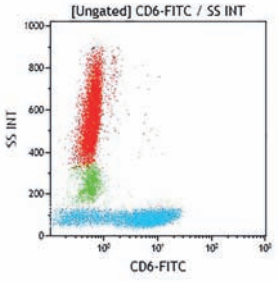
Clone: CLB-T1/1 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
ECD	0.5 mL	Liquid	**B55387**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B55386**	ASR	IOTest	cGMP

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

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.



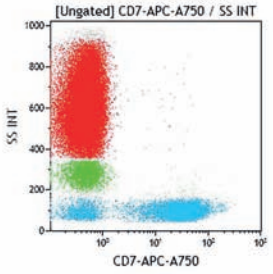
Lysed normal whole blood sample.

Clone: 2H46D3B (IgG2a Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**B16492**	ASR	IOTest	cGMP

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 (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	cGMP
RD1	0.5 mL	Liquid	**6603822**	ASR	CYTO-STAT	cGMP
RD1	0.5 mL	Liquid	**6603827**	ASR	COULTER CLONE	cGMP

Clone: 8H8.1 (IgG2a Mouse)

8H8.1 cross reacts with: Equine.

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

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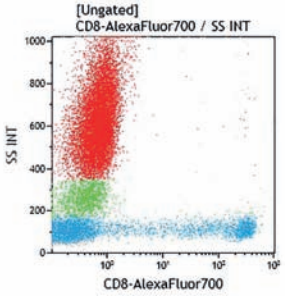
CD8

The CD8 antigen is a disulfide-linked dimer, which exists either as a CD8α homodimer or as a CD8α/β heterodimer. CD8α is required for surface expression of CD8β. The molecular weight of each monomer of α or β is approximately 32-34 kDa. CD8 binds to a non-polymorphic domain (α3 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. CD8α homodimer is expressed by NK cells and γ/δ+ 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.



Lysed normal whole blood sample.

Clone: B9.11 (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/IVD	IOTest	98/79/EC
PB	0.5 mL	Liquid	**A82791**	ASR	IOTest	cGMP
KrO	0.5 mL	Liquid	**B00067**	ASR	IOTest	cGMP
FITC	100 tests	Liquid	**A07756**	CE/IVD	IOTest	98/79/EC
FITC	2 mL	Liquid	**IM0451U**	ASR	IOTest	cGMP
PE	100 tests	Liquid	**A07757**	CE/IVD	IOTest	98/79/EC
PE	2 mL	Liquid	**IM0452U**	ASR	IOTest	cGMP
ECD	0.5 mL	Liquid	**B08467**	ASR	IOTest	cGMP
PC5	100 tests	Liquid	**A07758**	CE/IVD	IOTest	98/79/EC
PC5	1 mL	Liquid	**IM2638U**	ASR	IOTest	cGMP
PC5.5	0.5 mL	Liquid	**B21205**	ASR	IOTest	cGMP
APC	100 tests	Liquid	**IM2469**	CE/IVD	IOTest	98/79/EC
APC	1 mL	Liquid	**IM2469U**	ASR	IOTest	cGMP
AF700	0.5 mL	Liquid	**B76279**	ASR	IOTest	cGMP
APC-A700	50 tests	Liquid	**B49181**	CE/IVD	IOTest	98/79/EC
APC-A700	0.5 mL	Liquid	**A66332**	ASR	IOTest	cGMP
APC-A750	50 tests	Liquid	**A94683**	CE/IVD	IOTest	98/79/EC
APC-A750	0.5 mL	Liquid	**A94686**	ASR	IOTest	cGMP

Clone: SFCI21Thy2D3 (IgG1 Mouse)

SFCI21Thy2D3 monoclonal antibody recognizes the α chain of the CD8 molecule. SFCI21Thy2D3 cross reacts with: Common Marmoset.

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

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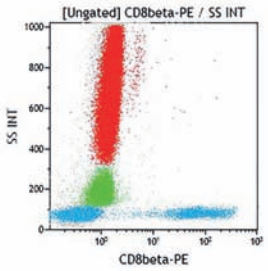
CD8β

Along with CD8α, the CD8β polypeptide molecule is one of the two chains which can be expressed within the CD8 dimer. CD8α is required for surface expression of CD8β. The α and β glycoproteins have similar molecular weights of 32-34 kDa each. They form homodimeric (CD8α/α) or heterodimeric (CD8α/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 CD8α. Consequently, CD8α can form homodimer but CD8β cannot.



Lysed normal whole blood sample.

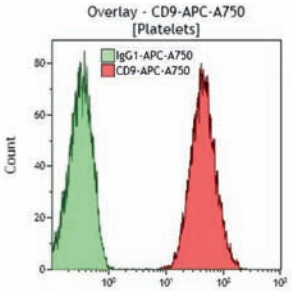
Clone: 2ST8.5H7 (IgG2a Mouse)

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	cGMP
PE	2 mL	Liquid	**IM2217U**	ASR	IOTest	cGMP
ECD	100 tests	Liquid	**6607123**	RUO	IOTest	cGMP
UNLB	0.2 mg	Freeze-dried	**IM2014**	RUO	-	cGMP

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 α6/β4 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 (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	cGMP
FITC	2 mL	Liquid	**IM1755U**	ASR	IOTest	cGMP
APC-A750	0.5 mL	Liquid	**B13649**	ASR	IOTest	cGMP
UNLB	0.2 mg	Freeze-dried	**IM0117**	RUO	-	cGMP

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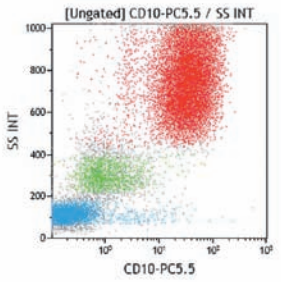
CD10

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.



Lysed normal whole blood sample.

Clone: J5 (IgG2a Mouse)

J5 cross reacts with: Bovine, Ovine, Equine, Mink, Guinea Pig.

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

Clone: ALB1 (IgG1 Mouse)

ALB1 cross reacts with: Bovine, Equine.

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

Clone: ALB2 (IgG2a Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM0471U**	ASR	IOTest	cGMP

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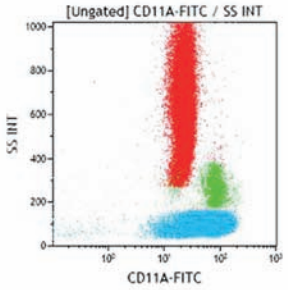
CD11a

CD11a (αL 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 β2 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).



Lysed normal whole blood sample.

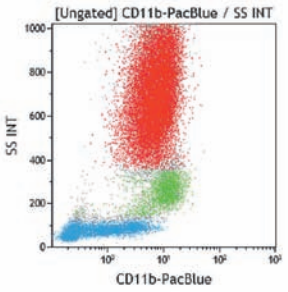
Clone: 25.3 (IgG1 Mouse)

25.3 cross reacts with: Equine, Feline, Mink.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM0860U**	ASR	IOTest	cGMP
PE	2 mL	Liquid	**IM1433U**	ASR	IOTest	cGMP

CD11b

The CD11b antigen is also known as the integrin αM subunit. It combines with the CD18 antigen (integrin β2 subunit) to build the integrin Mac-1 (CD11b/CD18, αMβ2, 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 β2 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.



Lysed normal whole blood sample.

Clone: 94 (IgM Mouse)

94 cross reacts with: Indian Rhesus.

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

Clone: Bear1 (IgG1 Mouse)

Bear1 is a non blocking monoclonal antibody. Bear1 cross reacts with: Ovine, Equine, Canine.

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

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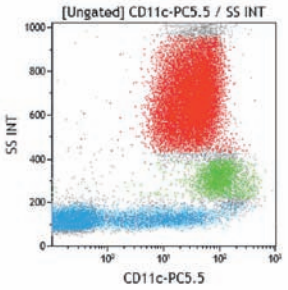
CD11c

CD11c (integrin αX 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 β2 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.



Lysed normal whole blood sample.

Clone: BU15 (IgG1 Mouse)

The BU15 antibody was used as a CD11c reference mAb (ref.6) during HLDA 6. BU15 cross reacts with: Canine.

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

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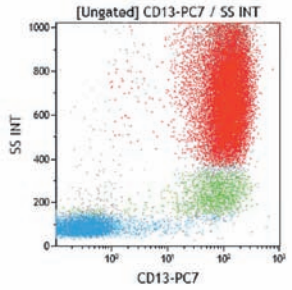
CD13

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.



Lysed normal whole blood sample.

Clone: 366 (IgG1 Mouse)

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

Clone: SJ1D1 (IgG1 Mouse)

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

Clone: Immu103.44 (IgG1 Mouse)

Immu103.44 cross reacts with: Olive Baboon.

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

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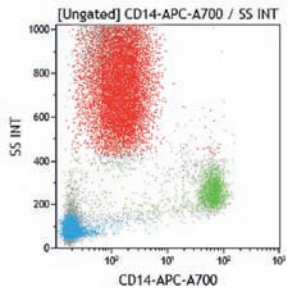
CD14

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.



Lysed normal whole blood sample.

Clone: 116 (IgM Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	50 tests	Liquid	**6604114**	IVD	CYTO-STAT	cGMP
RD1	50 tests	Liquid	**6604500**	IVD	CYTO-STAT	cGMP

Clone: 322A-1 (IgG2b Mouse)

322A-1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Capuchin Monkey, Squirrel Monkey.

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

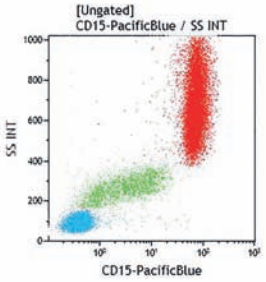
Clone: RMO52 (IgG2a Mouse)

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

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

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.



Lysed normal whole blood sample.

Clone: 80H5 (IgM Mouse)

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

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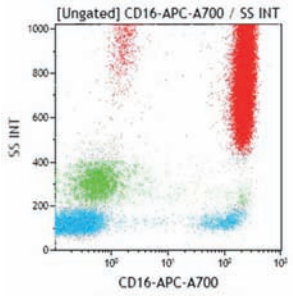
CD16

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 FcεRIγchain.



Lysed normal whole blood sample.

Clone: 3G8 (IgG1 Mouse)

The 3G8 monoclonal antibody is inappropriate for western blot use. 3G8 binds to both isoforms of the CD16 molecule. 3G8 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Common Marmoset, Squirrel Monkey and Equine, Canine.

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

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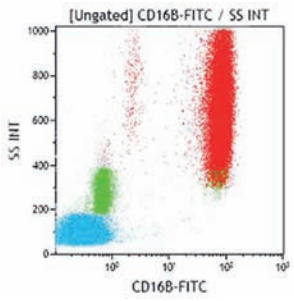
CD16b

Fc-γRIII (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-γRIIIA) is expressed on NK cells, monocytes and macrophages. The IIIB mRNA encodes FcγRIIIB, a glycoprotein anchored to the outer leaflet of the membrane by a glycosylphosphatidyl-inositol (GPI) moiety and is transcribed only in human neutrophils. FcγRIIIB (CD16b) may act with FcγRIIA (CD32) expressed on neutrophils to mediate antibody-dependent cytotoxicity (ADCC) and phagocytocis. The GPI-linked receptor exists in a soluble form (sCD16) revealing an immunoregulatory function through interaction with complement receptors.



Lysed normal whole blood sample.

Clone: 1D3 (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 FcγRIIIB 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	cGMP

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 β2-chain which forms non-covalently-bound heterodimers with one of four α subunits. The four alpha subunits are: CD11a (αL) (all leukocytes), CD11b (αM) (granulocytes, monocytes, some macrophages), CD11c (αX) (granulocytes, monocytes, dendritic antigen presenting cells), CD11d (αD) (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 (IgG1 Mouse)

7E4 is a blocking monoclonal antibody in cell adhesion assays. 7E4 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon and Bovine, Ovine, Porcine, Equine, Canine, Feline, Mink, Llama.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM1568U**	ASR	IOTest	cGMP
PE	2 mL	Liquid	**IM1570U**	ASR	IOTest	cGMP

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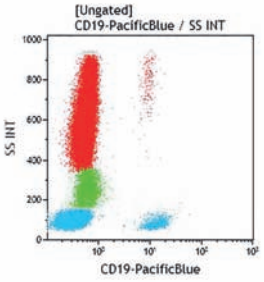
CD19

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.



Lysed normal whole blood sample.

Clone: 89B (IgG1 Mouse)

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

Clone: J3-119 (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/IVD	IOTest	98/79/EC
PB	0.5 mL	Liquid	**A86355**	ASR	IOTest	cGMP
KrO	0.5 mL	Liquid	**A96418**	ASR	IOTest	cGMP
FITC	100 tests	Liquid	**A07768**	CE/IVD	IOTest	98/79/EC
FITC	2 mL	Liquid	**IM1284U**	ASR	IOTest	cGMP
PE	100 tests	Liquid	**A07769**	CE/IVD	IOTest	98/79/EC
PE	2 mL	Liquid	**IM1285U**	ASR	IOTest	cGMP
ECD	100 tests	Liquid	**A07770**	CE/IVD	IOTest	98/79/EC
ECD	1 mL	Liquid	**IM2708U**	ASR	IOTest	cGMP
PC5	100 tests	Liquid	**A07771**	CE/IVD	IOTest	98/79/EC
PC5	1 mL	Liquid	**IM2643U**	ASR	IOTest	cGMP
PC5.5	50 tests	Liquid	**B49211**	CE/IVD	IOTest	98/79/EC
PC5.5	0.5 mL	Liquid	**A66328**	ASR	IOTest	cGMP
PC7	100 tests	Liquid	**IM3628**	CE/IVD	IOTest	98/79/EC
PC7	1 mL	Liquid	**IM3628U**	ASR	IOTest	cGMP
APC	100 tests	Liquid	**IM2470**	CE/IVD	IOTest	98/79/EC
APC	1 mL	Liquid	**IM2470U**	ASR	IOTest	cGMP
AF700	0.5 mL	Liquid	**B76283**	ASR	IOTest	cGMP
APC-A700	50 tests	Liquid	**B49212**	CE/IVD	IOTest	98/79/EC
APC-A700	0.5 mL	Liquid	**A78837**	ASR	IOTest	cGMP
APC-A750	50 tests	Liquid	**A94681**	CE/IVD	IOTest	98/79/EC
APC-A750	0.5 mL	Liquid	**A78838**	ASR	IOTest	cGMP
UNLB	0.2 mg	Freeze-dried	**IM1313**	ASR	-	cGMP

Clone: HD237 (IgG2b Mouse)

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

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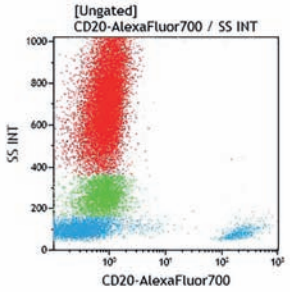
CD20

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 (IgG2a Mouse)

All monoclonal antibodies directed to the extracellular domain of the CD20 molecule are likely to bind closely related epitopes. B9E9 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Pigtailed Macaque, Hamadyras Baboon, Olive Baboon, Sooty Mangabey.

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

Clone: H299 (IgG2a Mouse)

H299 cross reacts with: African Green, Chimpanzee, Common Marmoset, Cotton-topped Tamarin, Squirrel Monkey.

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

Clone: FMC7 (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/IVD	IOTest	98/79/EC
PB	0.5 mL	Liquid	**B08466**	ASR	IOTest	cGMP
FITC	100 tests	Liquid	**A07791**	CE/IVD	IOTest	98/79/EC
FITC	1 mL	Liquid	**IM1364U**	ASR	IOTest	cGMP

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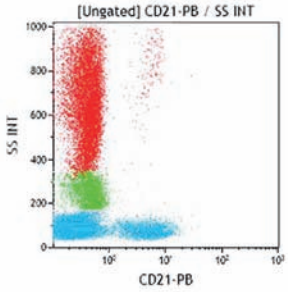
CD21

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 (IFNα) 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.



Lysed normal whole blood sample.

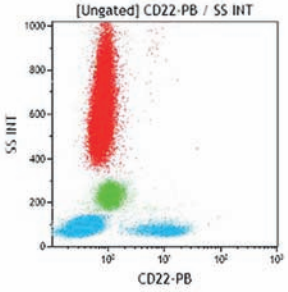
Clone: BL13 (IgG1 Mouse)

BL13 cross reacts with: Bovine, Ovine, Equine, Canine, Rabbit.

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

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.



Lysed normal whole blood sample.

Clone: HD239 (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	cGMP

Clone: SJ10.1H11 (IgG1 Mouse)

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

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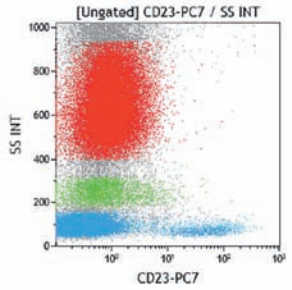
CD23

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 phenomenom.



Lysed normal whole blood sample.

Clone: HD50 (IgG2b Mouse)

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

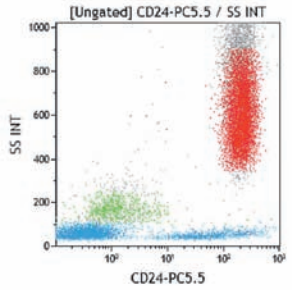
Clone: 9P25 (IgG1 Mouse)

9P25 blocks the binding of IgE. 9P25 cross reacts with: Bovine, Ovine, Equine.

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

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.



Lysed normal whole blood sample.

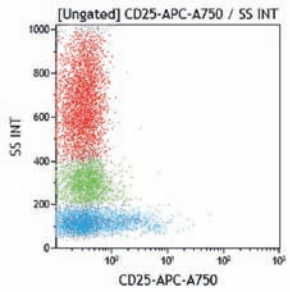
Clone: ALB9 (IgG1 Mouse)

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

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

CD25

The CD25 antigen (IL-2Rα 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-2Rα or IL -2R1). In conjunction with CD122 (IL-2Rβ, p75) and CD132 (IL-2Rγ, 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.



Lysed normal whole blood sample.

Clone: 1HT44H3 (IgG2a Mouse)

1HT44H3 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon.

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

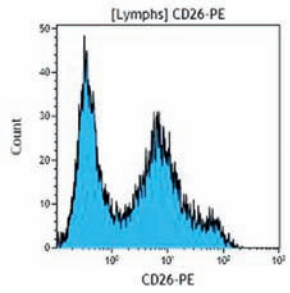
Clone: B1.49.9 (IgG2a Mouse)

The B1.49.9 monoclonal antibody does not block the binding of IL-2 to its receptor. B1.49.9 cross reacts with: Squirrel Monkey and Ovine, Mink.

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

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 CD3ζ (TCRζ 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.



Lysed normal whole blood sample gated on lymphocytes.

Clone: 4EL-1C7 (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	cGMP

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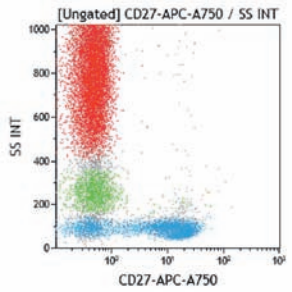
CD27

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.



Lysed normal whole blood sample.

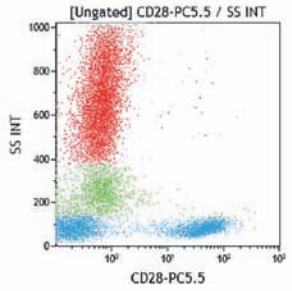
Clone: 1A4CD27 (IgG1 Mouse)

1A4CD27 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon.

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

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.



Lysed normal whole blood sample.

Clone: CD28.2 (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	cGMP
PE	2 mL	Liquid	**IM2071U**	ASR	IOTest	cGMP
ECD	100 tests	Liquid	**6607111**	RUO	IOTest	cGMP
PC5	100 tests	Liquid	**6607108**	RUO	IOTest	cGMP
PC5.5	0.5 mL	Liquid	**B24027**	ASR	IOTest	cGMP
PC7	0.5 mL	Liquid	**B23313**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B10244**	ASR	IOTest	cGMP
APC-A700	0.5 mL	Liquid	**B12696**	ASR	IOTest	cGMP
APC-A750	0.5 mL	Liquid	**B08757**	ASR	IOTest	cGMP
UNLB	0.2 mg	Freeze-dried	**IM1376**	ASR	-	cGMP

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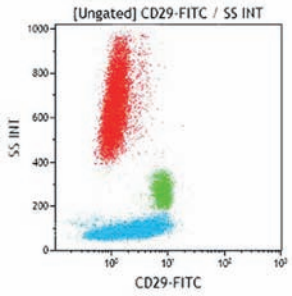
CD29

The CD29 antigen is the 130 kDa integrin β1 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.



Lysed normal whole blood sample.

Clone: 4B4LDC9LDH8 (IgG1 Mouse)

4B4LDC9LDH8 is a blocking monoclonal antibody in CD29 mediated adhesion. This antibdy was used as CD29 reference monoclonal antibody during HLDA 6. 4B4LDC9LDH8 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Squirrel Monkey.

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

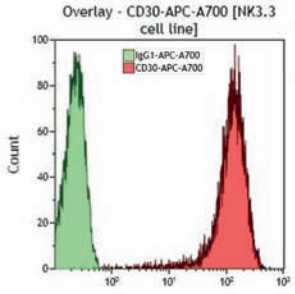
Clone: K20 (IgG2a Mouse)

K20 is a non blocking monoclonal antibody in CD29 mediated adhesion. K20 cross reacts with: Bovine, Caprine, Porcine, Equine, Canine, Mink.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM0791U**	ASR	IOTest	cGMP

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.



NK3.3 cell line.

Clone: HRS4 (IgG1 Mouse)

HRS4 recognizes a formaldehyde-resistant epitope. HRS4 cross reacts with: Cynomolgus Monkey, Indian Rhesus.

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

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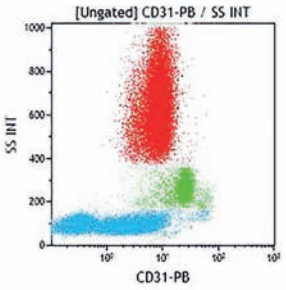
CD31

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 αvβ3 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.



Lysed normal whole blood sample.

Clone: 1F11 (IgG1 Mouse)

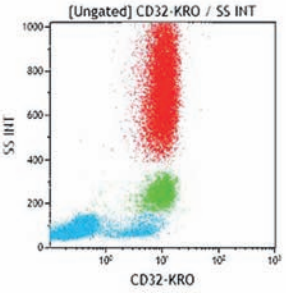
Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	100 tests	Liquid	**IM2409**	RUO	IOTest	cGMP

Clone: 5.6E (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PB	0.5 mL	Liquid	**B13035**	ASR	IOTest	cGMP
FITC	2 mL	Liquid	**IM1431U**	ASR	IOTest	cGMP

CD32

FcγRII 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 FcγRIIA and FcγRIIC contains an activatory ITAM motif whereas FcγRIIB contains an inhibitory ITIM motif. Differential splicing of FcγRIIB gene yields to 2 isoforms FcγRIIBb1 and FcγRIIBb2. Monocytes carry all forms of FcγRII, neutrophils carry FcγRIIA and C. FcγRIIB is expressed by B lymphocytes and mast cells.



Lysed normal whole blood sample.

Clone: 2E1 (IgG2a Mouse)

The 2E1 antibody recognizes the antigen isoforms expressed on basophils, neutrophils, eosinophils, platelets and B cells. 2E1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon and Bovine, Ovine, Equine, Mink.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**IM1935**	ASR	IOTest	cGMP

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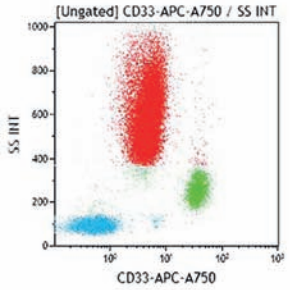
CD33

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.



Lysed normal whole blood sample.

Clone: 906 (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	cGMP
RD1	0.5 mL	Liquid	**6604121**	ASR	CYTO-STAT	cGMP

Clone: D3HL60.251 (IgG1 Mouse)

The D3HL60.251 monoclonal antibody eacts 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	cGMP
PE	100 tests	Liquid	**A07775**	CE/IVD	IOTest	98/79/EC
PE	2 mL	Liquid	**IM1179U**	ASR	IOTest	cGMP
PC5	100 tests	Liquid	**IM2647**	CE/IVD	IOTest	98/79/EC
PC5	1 mL	Liquid	**IM2647U**	ASR	IOTest	cGMP
PC5.5	50 tests	Liquid	**B36289**	CE/IVD	IOTest	98/79/EC
PC5.5	0.5 mL	Liquid	**A70198**	ASR	IOTest	cGMP
PC7	100 tests	Liquid	**B92408**	CE/IVD	IOTest	98/79/EC
PC7	1 mL	Liquid	**A54824**	ASR	IOTest	cGMP
APC	100 tests	Liquid	**IM2471**	CE/IVD	IOTest	98/79/EC
APC	1 mL	Liquid	**IM2471U**	ASR	IOTest	cGMP
APC-A750	0.5 mL	Liquid	**A70200**	ASR	IOTest	cGMP

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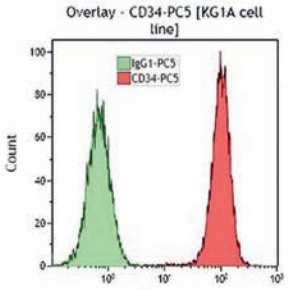
CD34

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.



KG1A cell line.

Clone: Immu133 (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	cGMP

Clone: QBEnd10 (IgG1 Mouse)

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

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

Clone: 581 (IgG1 Mouse)

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

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

Clone: QBEnd10 + Immu133 + Immu409 (IgG Mouse)

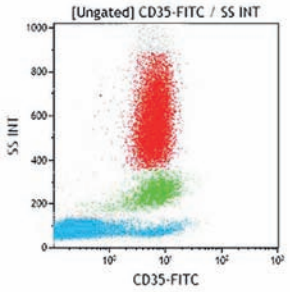
The CD34 Pool Kit includes two vials. The one labeled CD34 Pool-PE contains a mixture of QBEnd10, Immu133 and Immu409. The one labeled Isotypic Control IgG (1+2a)-PE is its matching negative control. As QBEnd10 and Immu133 are of the mouse IgG1 isotype and Immu409 of the IgG2a isotype, this control is 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	cGMP

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

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 (CR1) 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.



Lysed normal whole blood sample.

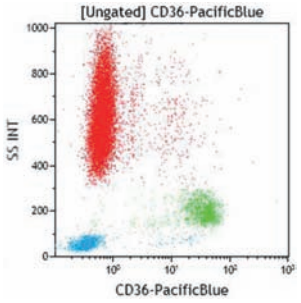
Clone: J3D3 (IgG1 Mouse)

The J3D3 monoclonal antibody inhibits CR1-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	cGMP
UNLB	0.2 mg	Freeze-dried	**IM0195**	RUO	-	cGMP

CD36

The CD36 antigen (platelet GPIV, or GPIIIb) 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.



Lysed normal whole blood sample.

Clone: FA6.152 (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	cGMP
FITC	100 tests	Liquid	**B49201**	CE/IVD	IOTest	98/79/EC
FITC	2 mL	Liquid	**IM0766U**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**A87786**	ASR	IOTest	cGMP
APC-A700	0.5 mL	Liquid	**B46022**	ASR	IOTest	cGMP
UNLB	0.2 mg	Freeze-dried	**IM0765**	RUO	-	cGMP

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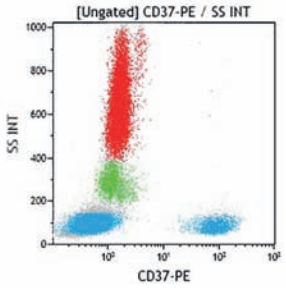
CD37

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.



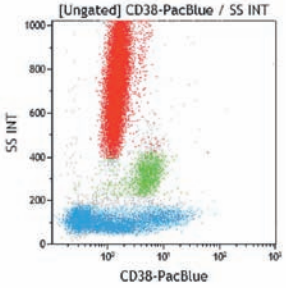
Lysed normal whole blood sample.

Clone: BL14 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**IM0458**	ASR	IOTest	cGMP

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 (IgG1 Mouse)

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

Clone: LS198-4-3 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PB	50 tests	Liquid	**B92396**	CE/IVD	IOTest	98/79/EC
PB	0.5 mL	Liquid	**B09683**	ASR	IOTest	cGMP
PE	100 tests	Liquid	**A07779**	CE/IVD	IOTest	98/79/EC
PE	2 mL	Liquid	**IM2371U**	ASR	IOTest	cGMP
RD1	0.5 mL	Liquid	**6604928**	ASR	CYTO-STAT	cGMP
ECD	0.5 mL	Liquid	**A99022**	ASR	IOTest	cGMP
PC5	100 tests	Liquid	**A07780**	CE/IVD	IOTest	98/79/EC
PC5	1 mL	Liquid	**IM2651U**	ASR	IOTest	cGMP
PC5.5	50 tests	Liquid	**B49199**	CE/IVD	IOTest	98/79/EC
PC5.5	0.5 mL	Liquid	**A70205**	ASR	IOTest	cGMP
PC7	50 tests	Liquid	**B49198**	CE/IVD	IOTest	98/79/EC
PC7	0.5 mL	Liquid	**A54189**	ASR	IOTest	cGMP
APC	1 mL	Liquid	**A60792**	ASR	IOTest	cGMP
APC-A700	0.5 mL	Liquid	**B23489**	ASR	IOTest	cGMP
APC-A750	50 tests	Liquid	**B49200**	CE/IVD	IOTest	98/79/EC
APC-A750	0.5 mL	Liquid	**A86049**	ASR	IOTest	cGMP

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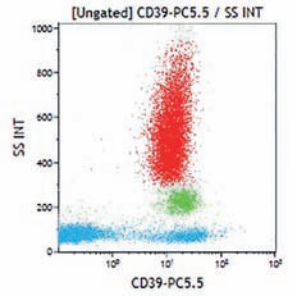
CD39

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.



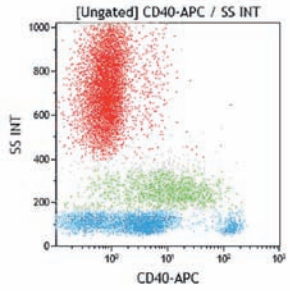
Lysed normal whole blood sample.

Clone: BA54 (IgG1 Mouse)

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

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.



Lysed normal whole blood sample.

Clone: MAB89 (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	cGMP
PC5.5	0.5 mL	Liquid	**B20025**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B30636**	ASR	IOTest	cGMP
UNLB	0.2 mg	Freeze-dried	**IM1374**	ASR	-	cGMP

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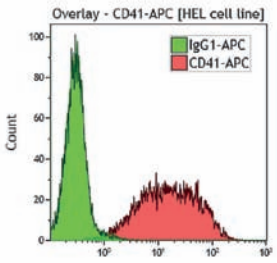
CD41

The CD41 antigen (platelet GPIIb; IIb integrin) is a transmembrane glycoprotein composed of two chains GPIIbα (120 kDa) and GPIIbβ (23 kDa) linked by one disulfide bond. CD41 is always non-covalently associated with CD61 (platelet GPIIIa, β3 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.



HEL cell line.

Clone: P2 (IgG1 Mouse)

The P2 antibody reacts with the α chain of CD41a (GPIIbα) 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	cGMP
PE	100 tests	Liquid	**A07781**	CE/IVD	IOTest	98/79/EC
PE	2 mL	Liquid	**IM1416U**	ASR	IOTest	cGMP
ECD	100 tests	Liquid	**6607117**	RUO	IOTest	cGMP
PC5	100 tests	Liquid	**6607116**	RUO	IOTest	cGMP
PC7	100 tests	Liquid	**6607115**	RUO	IOTest	cGMP
APC	0.5 mL	Liquid	**B16894**	ASR	IOTest	cGMP
UNLB	0.2 mg	Freeze-dried	**IM0145**	RUO	-	cGMP

Clone: SZ22 (IgG1 Mouse)

The SZ22 monoclonal antibody reacts with the α chain of CD41 (GPIIbα) 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	cGMP

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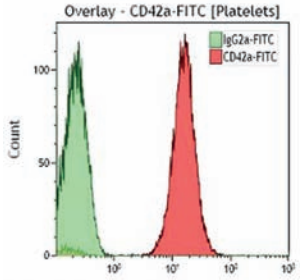
CD42a

The CD42a antigen (GPIX) is a single-chain transmembrane glycoprotein of 22 kDa that forms a noncovalent complex with CD42b, CD42c and CD42d (GPIbα, GPIbβ, 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 αMβ2, 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.

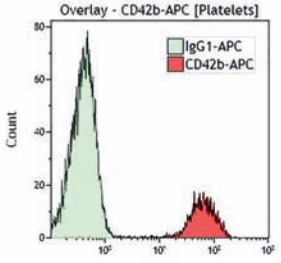
Clone: SZ1 (IgG2a Mouse)

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	cGMP
UNLB	0.2 mg	Freeze-dried	**IM0538**	RUO	-	cGMP

CD42b

The CD42b antigen (GPIbα) is a membrane glycoprotein of 135 kDa, that forms a disulfide linked 160 kDa membrane protein with the CD42c (GP1bβ) known as GP1b. GP1b 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 (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	cGMP
PE	2 mL	Liquid	**IM1417U**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B13980**	ASR	IOTest	cGMP
UNLB	0.2 mg	Freeze-dried	**IM0409**	RUO	-	cGMP

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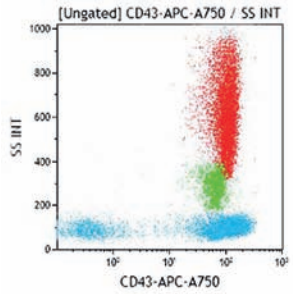
CD43

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.



Lysed normal whole blood sample.

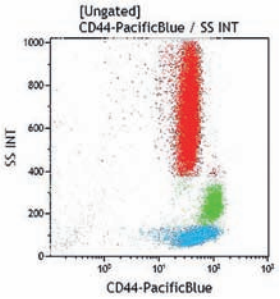
Clone: DFT1 (IgG1 Mouse)

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 parrafin-embedded tissue sections. The DFT1 antibody is also able to induce homotypic adhesion of leucocytes. DFT1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon and Ovine.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM3264U**	ASR	IOTest	cGMP
PE	2 mL	Liquid	**A32560**	ASR	IOTest	cGMP
APC-A750	50 tests	Liquid	**B49195**	CE/IVD	IOTest	98/79/EC
APC-A750	0.5 mL	Liquid	**A89307**	ASR	IOTest	cGMP

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.



Lysed normal whole blood sample.

Clone: J.173 (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***. J.173 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon.

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

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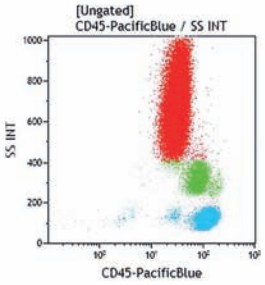
CD45

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.



Lysed normal whole blood sample.

Clone: KC56 (IgG1 Mouse)

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

Clone: ALB12 (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	cGMP

Clone: Immu19.2 (IgG1 Mouse)

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

Clone: J33 (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/IVD	IOTest	98/79/EC
PB	1 mL	Liquid	**A74765**	ASR	IOTest	cGMP
KrO	100 tests	Liquid	**B36294**	CE/IVD	IOTest	98/79/EC
KrO	1 mL	Liquid	**A96416**	ASR	IOTest	cGMP
FITC	100 tests	Liquid	**A07782**	CE/IVD	IOTest	98/79/EC
FITC	2 mL	Liquid	**IM0782U**	ASR	IOTest	cGMP
PE	100 tests	Liquid	**A07783**	CE/IVD	IOTest	98/79/EC
PE	2 mL	Liquid	**IM2078U**	ASR	IOTest	cGMP
ECD	100 tests	Liquid	**A07784**	CE/IVD	IOTest	98/79/EC
ECD	1 mL	Liquid	**IM2710U**	ASR	IOTest	cGMP
PC5	100 tests	Liquid	**A07785**	CE/IVD	IOTest	98/79/EC
PC5	1 mL	Liquid	**IM2653U**	ASR	IOTest	cGMP
PC5.5	100 tests	Liquid	**A62835**	CE/IVD	IOTest	98/79/EC
PC5.5	1 mL	Liquid	**A54139**	ASR	IOTest	cGMP
PC7	100 tests	Liquid	**IM3548**	CE/IVD	IOTest	98/79/EC
PC7	1 mL	Liquid	**IM3548U**	ASR	IOTest	cGMP
APC	100 tests	Liquid	**IM2473**	CE/IVD	IOTest	98/79/EC
APC	1 mL	Liquid	**IM2473U**	ASR	IOTest	cGMP
AF647	1 mL	Liquid	**A94246**	ASR	IOTest	cGMP
APC-A700	100 tests	Liquid	**A79390**	CE/IVD	IOTest	98/79/EC
APC-A700	1 mL	Liquid	**A71117**	ASR	IOTest	cGMP
APC-A750	100 tests	Liquid	**A79392**	CE/IVD	IOTest	98/79/EC
APC-A750	1 mL	Liquid	**A71119**	ASR	IOTest	cGMP

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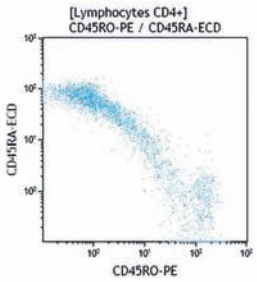
CD45RA

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 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PB	0.5 mL	Liquid	**A82946**	ASR	IOTest	cGMP
RD1	100 tests	Liquid	**6603181**	RUO	COULTER CLONE	cGMP
ECD	100 tests	Liquid	**B49193**	CE/IVD	IOTest	98/79/EC
ECD	1 mL	Liquid	**IM2711U**	ASR	IOTest	cGMP
PC7	0.5 mL	Liquid	**B10821**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B14807**	ASR	IOTest	cGMP
AF700	0.5 mL	Liquid	**B90396**	ASR	IOTest	cGMP
APC-A750	50 tests	Liquid	**B49194**	CE/IVD	IOTest	98/79/EC
APC-A750	0.5 mL	Liquid	**A86050**	ASR	IOTest	cGMP

Clone: ALB11 (IgG1 Mouse)

ALB11 cross reacts with: Ovine, Equine.

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

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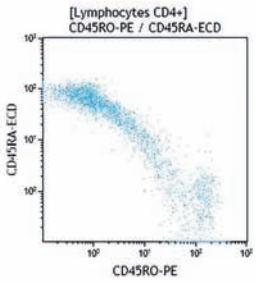
CD45RO

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 .

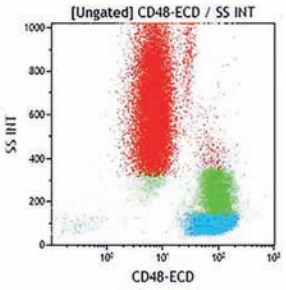
Clone: UCHL1 (IgG2a Mouse)

UCHL1 cross reacts with: Mink, Trout, Carp.

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

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.

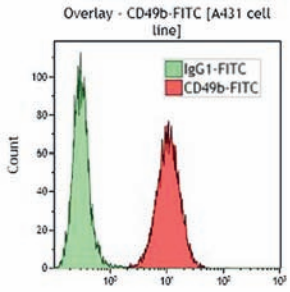
Clone: J4.57 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM1837U**	ASR	IOTest	cGMP
ECD	0.5 mL	Liquid	**B06026**	ASR	IOTest	cGMP

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

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 α2β1 integrin serves as a receptor for many matrix and nonmatrix molecules. Extensive anlayses have defined distinct conformations that lead to inactive, partially active or highly active ligand binding. The mechanisms by which the α2β1 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.



A431 cell line.

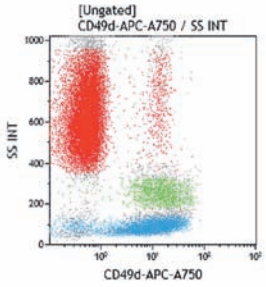
Clone: Gi9 (IgG1 Mouse)

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	cGMP
UNLB	0.2 mg	Freeze-dried	**IM0717**	RUO	-	cGMP

CD49d

CD49d is the integrin α4 chain that non-covalently pairs with CD29 (β1 chain) to form the very late activation antigen 4 (VLA-4), or with the integrin β7 chain. CD49d is a transmembrane glycoprotein of 145 kDa devoid of disulfide bond. Complexed to β1 or β7 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.



Lysed normal whole blood sample.

Clone: HP2/1 (IgG1 Mouse)

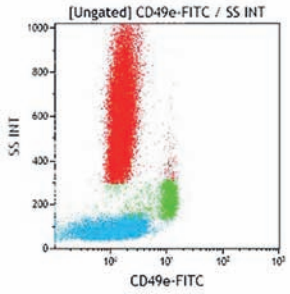
The HP2/1 antibody blocks the interaction of VLA-4 with VCAM-1. HP2/1 was used as a CD49d reference monoclonal antibody during the HLDA 6. HP2/1 cross reacts with: Indian Rhesus and Bovine, Ovine, Caprine, Equine, Canine, Feline, Mink, Llama, Rabbit, Carp.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM1404U**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B01682**	ASR	IOTest	cGMP
APC-A750	0.5 mL	Liquid	**B16893**	ASR	IOTest	cGMP

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

CD49e

The CD49e antigen is the 160 kDa integrin α5-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 β1-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.



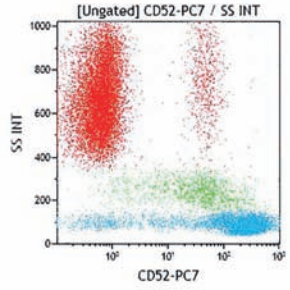
Lysed normal whole blood sample.

Clone: SAM1 (IgG2b Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM1854U**	ASR	IOTest	cGMP

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.



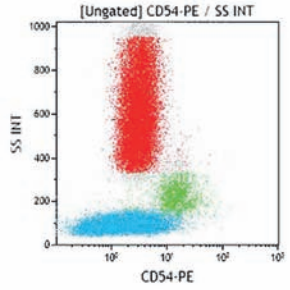
Lysed normal whole blood sample.

Clone: HI186 (IgG2b Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PC7	0.5 mL	Liquid	**B68152**	ASR	IOTest	cGMP

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 (IgG1 Mouse)

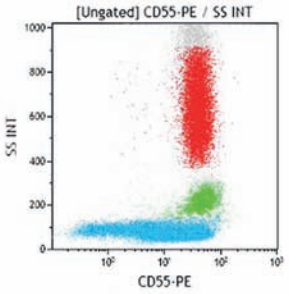
84H10 antibody inhibits ICAM-1 mediated adhesion to LFA-1. 84H10 cross reacts with: Canine.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM0726U**	ASR	IOTest	cGMP
PE	2 mL	Liquid	**IM1239U**	ASR	IOTest	cGMP

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

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.



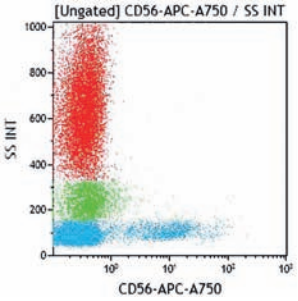
Lysed normal whole blood sample.

Clone: JS11KSC2.3 (IgG1 Mouse)

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

CD56 (N-CAM)

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.



Lysed normal whole blood sample.

Clone: N901 (IgG1 Mouse)

The N901 (NKH-1) antibody was used as a CD56 reference mAb during HLDA 6. N901 cross reacts with: Hamadryas Baboon.

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

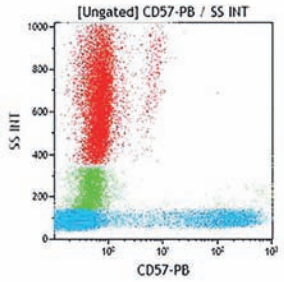
Clone: C218 (IgG1 Mouse)

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

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

CD57

The CD57 antigen (HNK-1 antigen carbohydrate moiety) is an oligosaccharide with sulfated glucoronic 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.



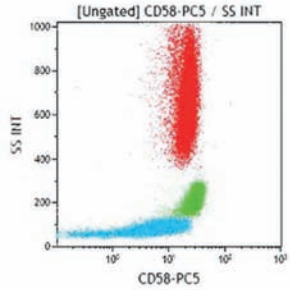
Lysed normal whole blood sample.

Clone: NC1 (IgM Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PB	0.5 mL	Liquid	**A74779**	ASR	IOTest	cGMP
FITC	100 tests	Liquid	**B49188**	CE/IVD	IOTest	98/79/EC
FITC	2 mL	Liquid	**IM0466U**	ASR	IOTest	cGMP

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 cytolysis of target cells by cytotoxic T lymphocytes (CTL) and NK cells. This antigen is widely expressed on leucocytes, erythrocytes and endothelial cells.



Lysed normal whole blood sample.

Clone: AICD58 (IgG2a Mouse)

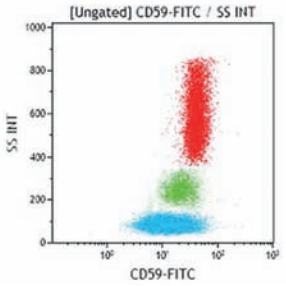
The AICD58 antibody is a blocking antibody in LFA-3 mediated adhesion. This antibody was used as a CD58 reference mAb during HLDA 6.

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

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

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.



Lysed normal whole blood sample.

Clone: P282E (IgG2a Mouse)

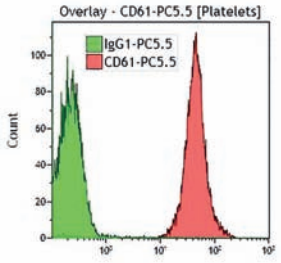
Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	100 tests	Liquid	**B49187**	CE/IVD	IOTest	98/79/EC
FITC	2 mL	Liquid	**IM3457U**	ASR	IOTest	cGMP

Clone: MEM-43 (IgG2a Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**B68140**	ASR	IOTest	cGMP

CD61

The CD61 antigen (platelet glycoprotein GPIIIa) is the 110 kDa integrin β3 subunit, covalently associated with the integrin αIIb chain (CD41, platelet GPIIb) to form the GPIIb-IIIa complex (αIIb-β3 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.



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

Clone: SZ21 (IgG1 Mouse)

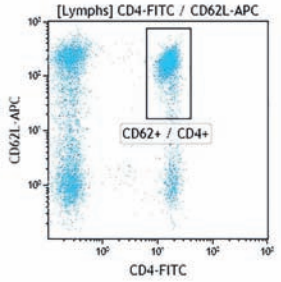
The SZ21 antibody is specific for the PlA1, not the PlA2 form of GPIIIa. It inhibits platelet aggregation and secretion induced by collagen, arachidonic acid, and thrombin. This antibody also inhibits fibrinogen binding to human platelets induced by ADP, arachidonic acid and PAF.

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

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

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.

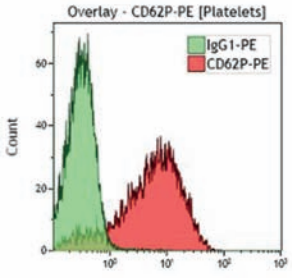
Clone: DREG56 (IgG1 Mouse)

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. DREG56 cross reacts with: Chimpanzee and Bovine.

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

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 (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/IVD	IOTest	98/79/EC
PE	2 mL	Liquid	**IM1759U**	ASR	IOTest	cGMP

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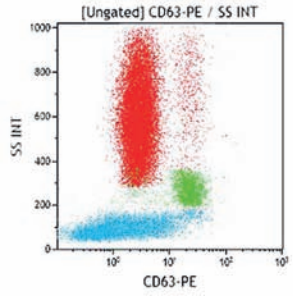
CD63

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 phenomenom is also reported for basophils.



Lysed normal whole blood sample.

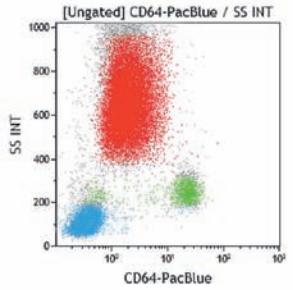
Clone: CLB-Gran/12 (IgG1 Mouse)

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/IVD	IOTest	98/79/EC
FITC	2 mL	Liquid	**IM1165U**	ASR	IOTest	cGMP
PE	2 mL	Liquid	**IM1914U**	ASR	IOTest	cGMP

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).



Lysed normal whole blood sample.

Clone: 22 (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. 22 cross reacts with: Indian Rhesus.

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

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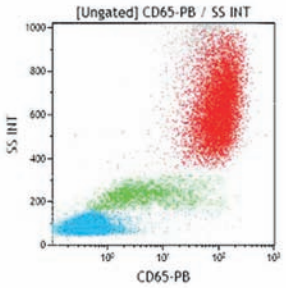
CD65

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: Galβ1-4GlcNacβ1-3Galβ1-4GlcNac(Fucα1-3)β1-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.

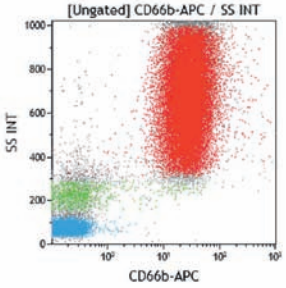
Clone: 88H7 (IgM Mouse)

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	cGMP
FITC	100 tests	Liquid	**B36299**	CE/IVD	IOTest	98/79/EC
FITC	2 mL	Liquid	**IM1654U**	ASR	IOTest	cGMP

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 (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	cGMP
APC	0.5 mL	Liquid	**B15091**	ASR	IOTest	cGMP
APC-A750	0.5 mL	Liquid	**B08756**	ASR	IOTest	cGMP

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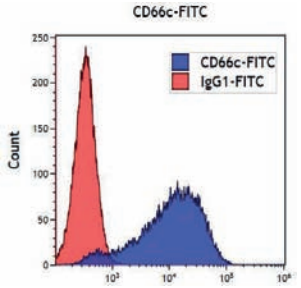
CD66c (KOR-SA3544)

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.



Abnormal bone marrow sample. Graph kindly provided by The University of Tokyo Hospital.

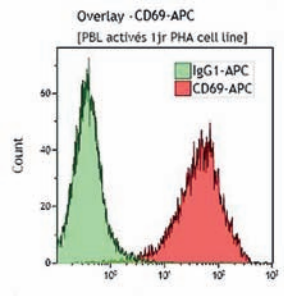
Clone: KOR-SA3544 (IgG1 Mouse)

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	-	cGMP
PE	1 mL	Liquid	**IM2357U**	ASR	-	cGMP

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.



PHA cell line.

Clone: TP1.55.3 (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	cGMP
ECD	100 tests	Liquid	**6607110**	RUO	IOTest	cGMP
PC5	100 tests	Liquid	**IM2656**	CE/IVD	IOTest	98/79/EC
PC7	1 mL	Liquid	**A80710**	ASR	IOTest	cGMP
APC	1 mL	Liquid	**A80711**	ASR	IOTest	cGMP

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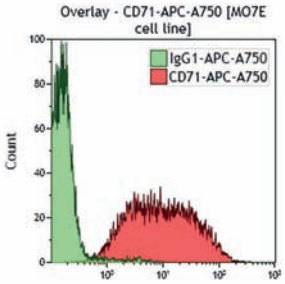
CD71

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.



MO7E cell line.

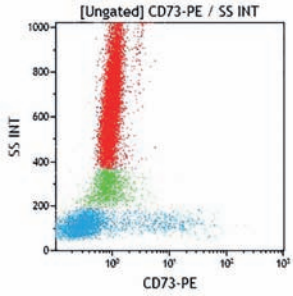
Clone: YDJ1.2.2 (IgG1 Mouse)

YDJ1.2.2 cross reacts with: Cynomolgus Monkey.

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

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.



Lysed normal whole blood sample.

Clone: AD-2 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**B68176**	ASR	IOTest	cGMP

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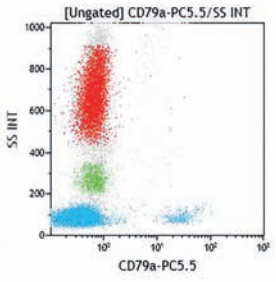
CD79a

The CD79a molecule (MB-1, Igα) 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.



Permeabilized normal whole blood sample.

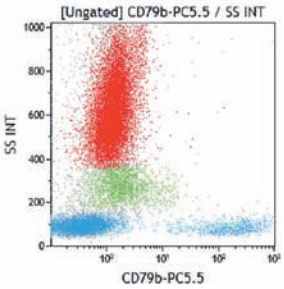
Clone: HM47 (IgG1 Mouse)

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. HM47 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Chimpanzee, Olive Baboon.

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

CD79b

The CD79b molecule (B29, Igβ) 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.



Lysed normal whole blood sample.

Clone: CB3-1 (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. CB3-1 cross reacts with: Mink.

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

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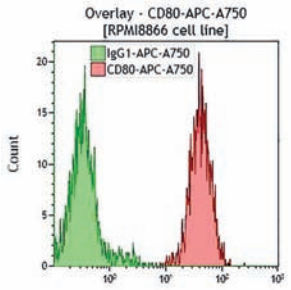
CD80

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.



RPMI8866 cell line.

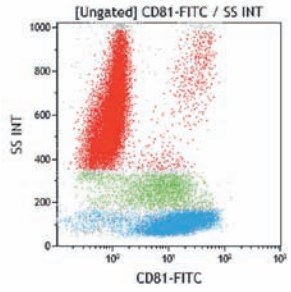
Clone: MAB104 (IgG1 Mouse)

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	cGMP
PE	2 mL	Liquid	**IM1976U**	ASR	IOTest	cGMP
PC7	0.5 mL	Liquid	**B30644**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B30642**	ASR	IOTest	cGMP
APC-A750	0.5 mL	Liquid	**B30643**	ASR	IOTest	cGMP

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 (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. JS64 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon.

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

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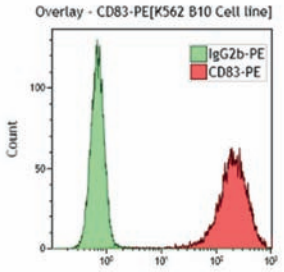
CD83

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.

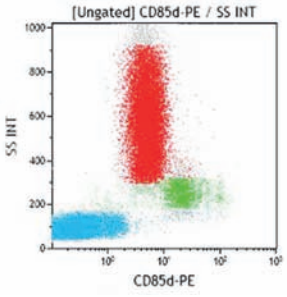
Clone: HB15a (IgG2b Mouse)

HB15a cross reacts with: Indian Rhesus, Common Marmoset, Squirrel Monkey.

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

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.



Lysed normal whole blood sample.

Clone: 42D1 (IgG2a Rat)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	100 tests	Liquid	**A22334**	RUO	IOTest	cGMP

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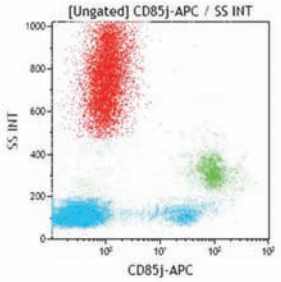
CD85j (ILT2)

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.



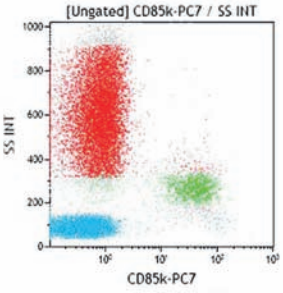
Lysed normal whole blood sample.

Clone: HP-F1 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**A07408**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B30645**	ASR	IOTest	cGMP

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 FcRγ; 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.



Lysed normal whole blood sample.

Clone: ZM3.8 (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	cGMP

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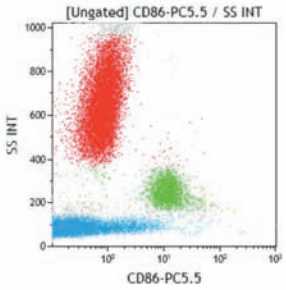
CD86

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.



Lysed normal whole blood sample.

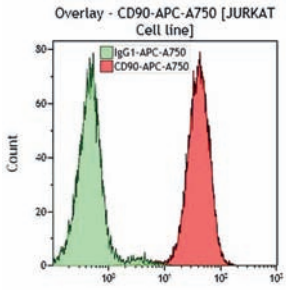
Clone: HA5.2B7 (IgG2b Mouse)

HA5.2B7 cross reacts with: Ovine, Caprine, Porcine, Mink.

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

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 (IgG1 Mouse)

F15-42-1-5 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadryas Baboon, Olive Baboon.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM1839U**	ASR	IOTest	cGMP
PE	2 mL	Liquid	**IM1840U**	ASR	IOTest	cGMP

Clone: Thy1/310 (IgG1 Mouse)

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

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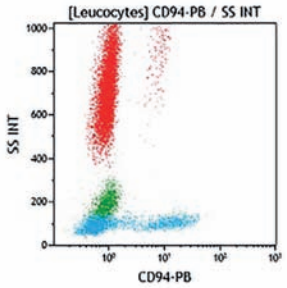
CD94 (NKG2a)

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 **γδ** TCR+ T-cells and **αβ** TCR+ CD8+ CD56+ T-cells, mainly Vα2/Vδ2.



Lysed normal whole blood sample.

Clone: HP-3B1 (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	cGMP
PE	100 tests	Liquid	**IM2276**	RUO	IOTest	cGMP
APC	0.5 mL	Liquid	**B09980**	ASR	IOTest	cGMP

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 (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	-	cGMP

Clone: UB2 (IgG1 Mouse)

UB2 cross reacts with: Carp.

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

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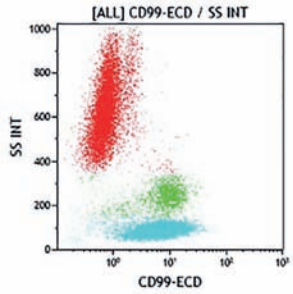
CD99

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.



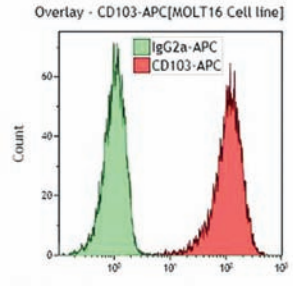
Lysed normal whole blood sample.

Clone: HCD99 (IgG2a Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
ECD	0.5 mL	Liquid	**B76291**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B76270**	ASR	IOTest	cGMP

CD103

The CD103 antigen was originally described as the human mucosal antigen 1 (HML-1) and was subsequently proved to be the integrin αE 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 β7 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. αEβ7 binds to E-cadherin on epithelial cells. Activation and TGFβ-1 induce CD103 expression.



MOLT16 Cell line.

Clone: 2G5 (IgG2a Mouse)

The 2G5 antibody stains a few bone marrow cells and, rarely, peripheral blood lymphocytes. 2G5 cross reacts with: Indian Rhesus, Sooty Mangabey.

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

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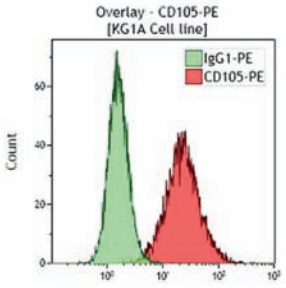
CD105

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) β1 and β3. 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-β1 cell cycle effects from its other effects on cell survival and differentiation.



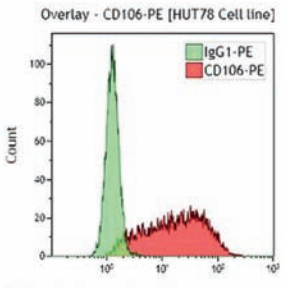
KG1A Cell line.

Clone: TEA3/17.1.1 (IgG1 Mouse)

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

CD106

The CD106 antigen, also known as Vascular Cell Adhesion Molecule-1 (VCAM-1), is an adhesion molecule which binds to integrin α4/β1 (VLA-4) and integrin α4/β7 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.



HUT78 Cell line.

Clone: 1G11 (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	cGMP

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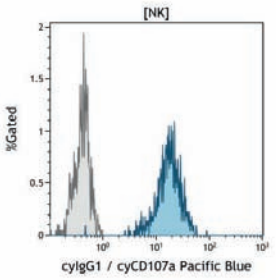
CD107a (LAMP-1)

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.



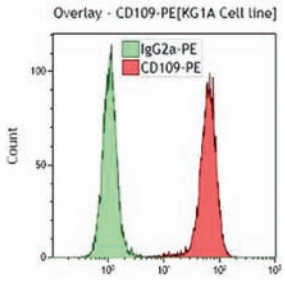
Lysed normal whole blood sample gated on NK cells.

Clone: H4A3 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PB	0.5 mL	Liquid	**B13978**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B12934**	ASR	IOTest	cGMP

CD109 (E123)

The CD109 antigen is a monomeric glycosyl phosphatidylinositol (GPI)-linked glycoprotein of 170 kDa. It is a novel member of the α2 macroglobulin (α2M) / 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.



KG1A Cell line.

Clone: 8A3 (IgG2a Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	100 tests	Liquid	**A08933**	RUO	IOTest	cGMP

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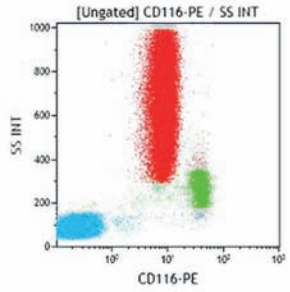
CD116 (GM-CSFR)

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.



Lysed normal whole blood sample.

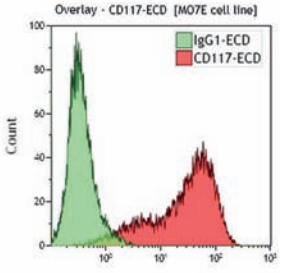
Clone: SCO6 (IgG1 Mouse)

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	cGMP

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 haematopoeitic 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.



M07E cell line.

Clone: 95C3 (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	cGMP
PC5	1 mL	Liquid	**IM2657U**	ASR	IOTest	cGMP

Clone: 104D2D1 (IgG1 Mouse)

104D2D1 cross reacts with: Bovine.

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

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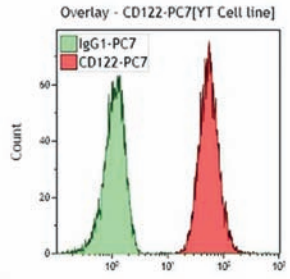
CD122 (IL-2Rß)

The CD122 antigen is the human IL-2 receptor β chain (p75). CD122 associates with CD25 and CD132 (IL-2Rγ) 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.



YT Cell line.

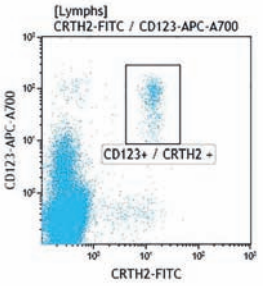
Clone: CF1 (IgG1 Mouse)

CF1 is a non blocking antibody. CF1 cross reacts with: Cynomolgus Monkey, Indian Rhesus.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PC7	1 mL	Liquid	**A53365**	ASR	IOTest	cGMP

CD123 (IL-3Rα)

The CD123 antigen, alias Interleukin-3 alpha receptor (IL-3Rα), 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 (IgG1 Mouse)

The SSDCLY107D2 monoclonal antibody reacts with plasmacytoid dendritic cells in situ (PDCs). SSDCLY107D2 cross reacts with: Cynomolgus Monkey.

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

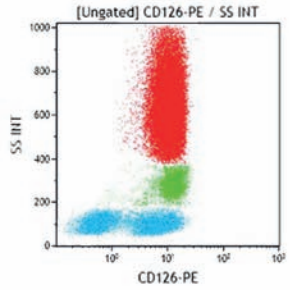
Clone: 9F5 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**B14808**	ASR	IOTest	cGMP

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

CD126 (IL-6Rα)

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.

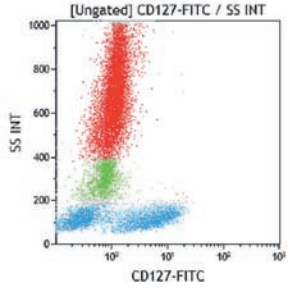
Clone: M91 (IgG1 Mouse)

The M91 antibody recognizes the membrane and soluble form of IL-6Rα chain. It binds to the amino terminal immunoglobulin domain of IL-6Rα. It binds to IL-6/IL-6Rα 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	cGMP

CD127 (IL-7Rα)

The CD127 antigen is a 75-80 kDa type I transmembrane glycoprotein also known as IL-7 receptor α chain or IL-7Rα. It forms a heterodimer with the common γ chain CD132 (IL-2Rγ), 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.



Lysed normal whole blood sample.

Clone: R34.34 (IgG1 Mouse)

The R34.34 antibody inhibits binding of IL-7 to CD127. R34.34 cross reacts with: Indian Rhesus, Pigtailed Macaque.

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

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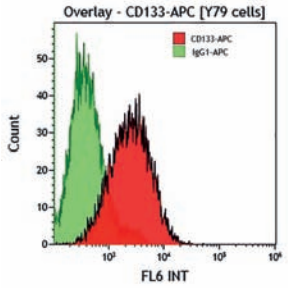
CD133

CD133, also known as AC133 or PROML1, 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.



Y79 cell line.

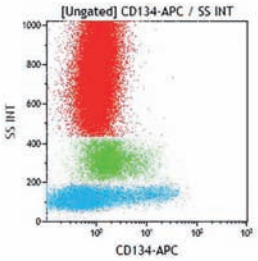
Clone: W6B3C1 (IgG1 Mouse)

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	cGMP

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-κB, 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 (IgG1 Mouse)

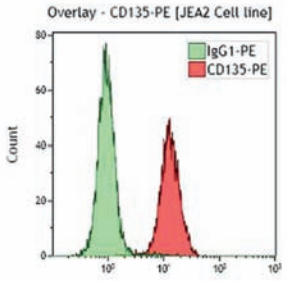
Ber-ACT35 cross reacts with: Feline.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
APC	0.5 mL	Liquid	B30629	ASR	IOTest	cGMP

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

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 CD34bright, 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.

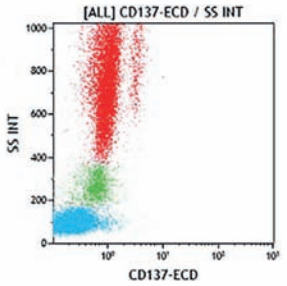
Clone: SF1.340 (IgG1 Mouse)

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	cGMP

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 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.



Lysed normal whole blood sample.

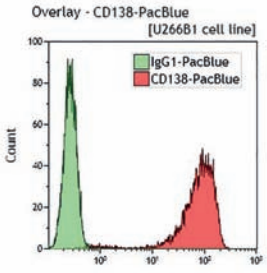
Clone: 4B4-1 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
ECD	0.5 mL	Liquid	**B76262**	ASR	IOTest	cGMP

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

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.



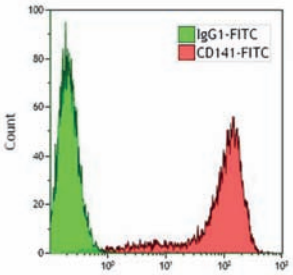
U266B1 cell line.

Clone: B-A38 (IgG1 Mouse)

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

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 monocytoid 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.



Overlay - CD141-FITC
K562 Transfected cell line.

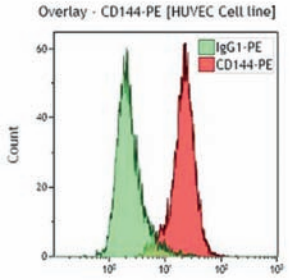
Clone: M80 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**B43289**	ASR	IOTest	cGMP

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

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.



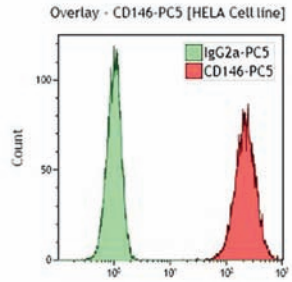
HUVEC Cell line.

Clone: TEA 1/31 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**A07481**	ASR	IOTest	cGMP

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.



HELA Cell line.

Clone: TEA 1/34 (IgG2a Mouse)

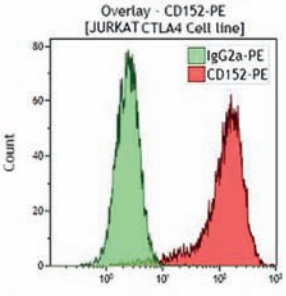
The TEA 1/34 monoclonal antibody was assigned to the CD146 (Code: E077) during the HLDA 6.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**A07483**	ASR	IOTest	cGMP
PC5	1 mL	Liquid	**A22364**	ASR	IOTest	cGMP

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

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.



JURKAT CTLA4 Cell line.

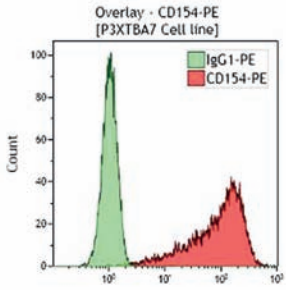
Clone: BNI3 (IgG2a Mouse)

The BNI3 antibody can be used to detect intracytoplasmic CD152 (CTLA4) by flow cytometry after permeabilization with IntraPrep Permeabilization Reagent. BNI3 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Chimpanzee, Olive Baboon and Ovine, Porcine.

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

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.



P3XTBA7 Cell line.

Clone: TRAP-1 (IgG1 Mouse)

The TRAP-1 antibody inhibits activation induced by full-length soluble human CD154. TRAP-1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**IM2216U**	ASR	IOTest	cGMP

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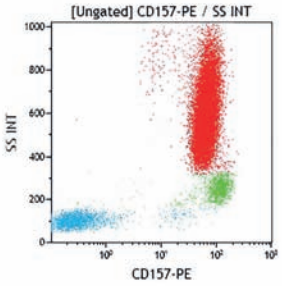
CD157

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.



Lysed normal whole blood sample.

Clone: RF3 (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.

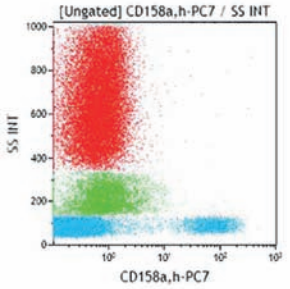
Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	0.05 mg	Liquid	**IM2557**	RUO	-	cGMP

Clone: SY/11B5 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**B68160**	ASR	IOTest	cGMP

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.



Lysed normal whole blood sample.

Clone: EB6B (IgG1 Mouse)

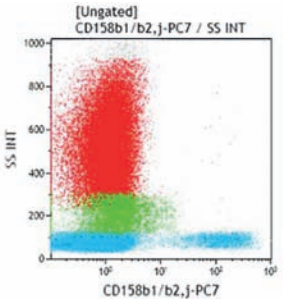
The EB6B antibody reacts with both CD158a (p58.1 or KIR2DL1) and CD158h (p50.1 or KIR2DS1). The antibody restores the ability of p58.1$^+$ NK clones to lyse targets expressing HLA-C molecules.

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

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

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.



Lysed normal whole blood sample.

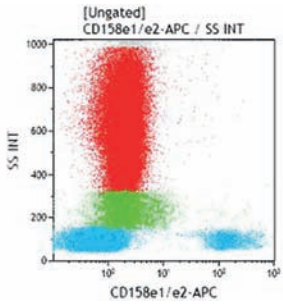
Clone: GL183 (IgG1 Mouse)

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	cGMP
PC5.5	0.5 mL	Liquid	**A66900**	ASR	IOTest	cGMP
PC7	0.5 mL	Liquid	**A66901**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**A22333**	ASR	IOTest	cGMP
UNLB	0.2 mg	Freeze-dried	**IM1846**	RUO	-	cGMP

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 NKB1 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.



Lysed normal whole blood sample.

Clone: Z27.3.7 (IgG1 Mouse)

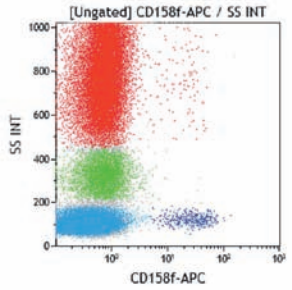
The anti-KIR/p70 antibody Z27 restores the ability of p70+ NK clones to lyse HLA-Bw4 targets.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**IM3292**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**A60795**	ASR	IOTest	cGMP

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

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 D0–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 proteintyrosine phosphatase-2 and, to a lesser extent, Src homology region 2-containing protein tyrosinephosphatase-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.



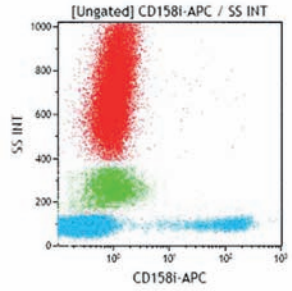
Lysed normal whole blood sample.

Clone: UP-R1 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**B19715**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B19716**	ASR	IOTest	cGMP

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 (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	cGMP
APC	0.5 mL	Liquid	**A60796**	ASR	IOTest	cGMP

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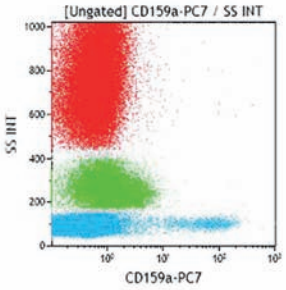
CD159a (NKG2a)

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 Immunoglobin (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.

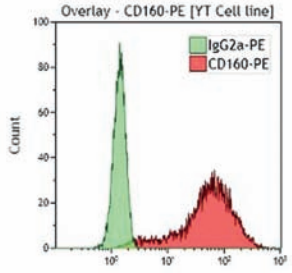
Clone: Z199 (IgG2b Mouse)

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. Z199 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Pigtailed Macaque, African Green, Chimpanzee, Olive Baboon, Common Marmoset.

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

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– TCRγδ+ 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.



YT Cell line.

Clone: BY55 (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. BY55 cross reacts with: Sooty Mangabey.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**IM3657**	ASR	IOTest	cGMP

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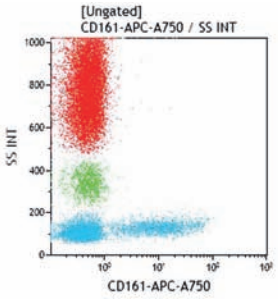
CD161 (NKR-P1A)

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.



Lysed normal whole blood sample.

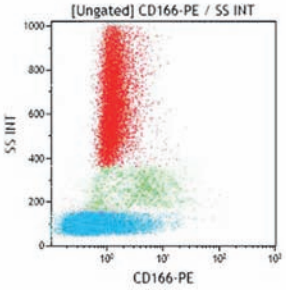
Clone: 191B8 (IgG2a Mouse)

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	cGMP
PC7	0.5 mL	Liquid	**B30631**	ASR	IOTest	cGMP
APC-A750	0.5 mL	Liquid	**B30630**	ASR	IOTest	cGMP

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



Lysed normal whole blood sample.

Clone: 3A6 (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	cGMP

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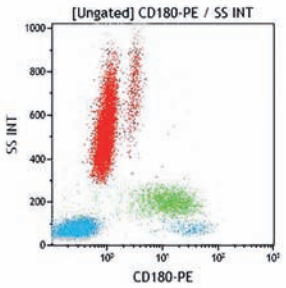
CD180

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 costimultory 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.



Lysed normal whole blood sample.

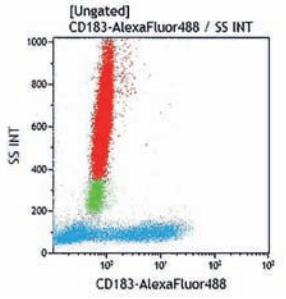
Clone: MHR73-11 (IgG1 Mouse)

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	cGMP

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.



Lysed normal whole blood sample.

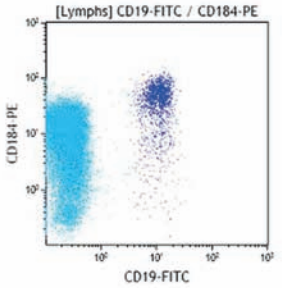
Clone: G025H7 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
AF488	0.5 mL	Liquid	**B68144**	ASR	IOTest	cGMP

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

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.



Lysed normal whole blood sample. Gated on lymphocytes. Dual staining with CD19-FITC.

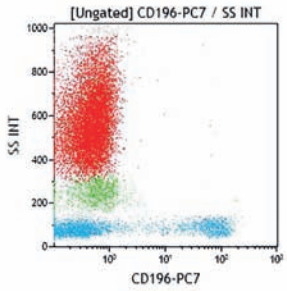
Clone: 12G5 (IgG2a Mouse)

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. 12G5 cross reacts with: Cynomolgus Monkey, Olive Baboon and Bovine, Ovine, Canine.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**A07409**	ASR	IOTest	cGMP

CD196 (CCR6)

CD196, also known as CCR6, is G-proteincoupled 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 Peyers 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.



Lysed normal whole blood sample.

Clone: B-R35 (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	cGMP

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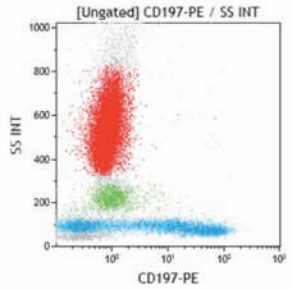
CD197 (CCR7)

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.



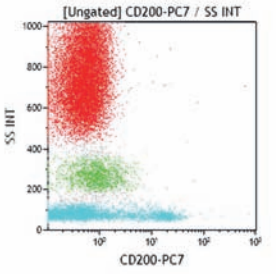
Lysed normal whole blood sample.

Clone: G043H7 (IgG2a Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**B30632**	ASR	IOTest	cGMP
PC7	0.5 mL	Liquid	**B46025**	ASR	IOTest	cGMP

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-b synthesis. CD200/CD200R are required for maintaining selftolerance. Many studies have demonstrated the importance of CD200 in controlling autoimmunity, inflammation, inhibitory activities, hypersensitivity.



Lysed normal whole blood sample.

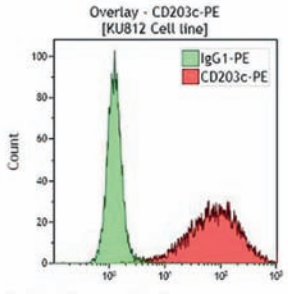
Clone: OX-104 (IgG1 Mouse)

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

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

CD203c

The CD203c molecule is a type II transmembrane protein that belongs to the ectonucleotide pyrophosphatase / phosphosdiesterase 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.



KU812 Cell line.

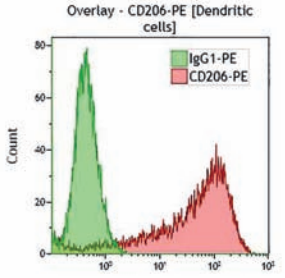
Clone: 97A6 (IgG1 Mouse)

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/IVD	IOTest	98/79/EC
PE	2 mL	Liquid	**IM3575**	ASR	IOTest	cGMP
PC7	1 mL	Liquid	**A66906**	ASR	IOTest	cGMP

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 (IgG1 Mouse)

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

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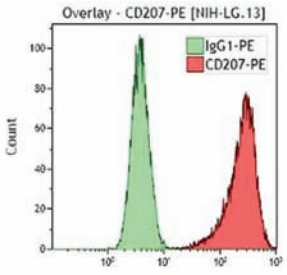
CD207 (Langerin)

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.

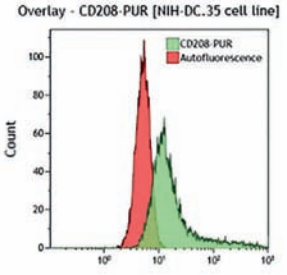
Clone: DCGM4 (IgG1 Mouse)

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	cGMP

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.



NIH-DC.35 cell line.

Clone: 104.G4 (IgG1 Mouse)

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

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

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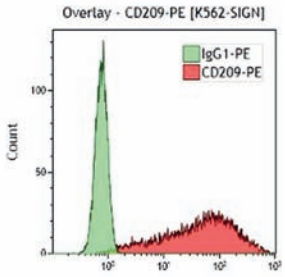
CD209 (DC-SIGN)

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 noticable 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.



K562-SIGN Cell line.

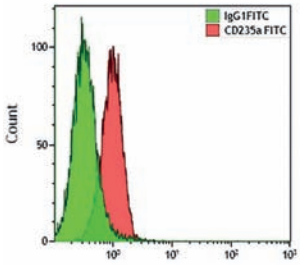
Clone: AZND1 (IgG1 Mouse)

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, immunoprecipation 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	cGMP

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. Glycophorins 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 serves as receptor for cytokines and pathogens, including the malaria parasite, Plasmodium falciparum and some viruses, including influenza virus and hepatitis A virus.



HEL Cell line.

Clone: 11E4B-7-6 (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/IVD	IOTest	98/79/EC
FITC	2 mL	Liquid	**IM2212U**	ASR	IOTest	cGMP
PE	100 tests	Liquid	**A07792**	CE/IVD	IOTest	98/79/EC
PE	2 mL	Liquid	**IM2211U**	ASR	IOTest	cGMP
PC7	1 mL	Liquid	**A71564**	ASR	IOTest	cGMP
APC-A750	0.5 mL	Liquid	**A89314**	ASR	IOTest	cGMP

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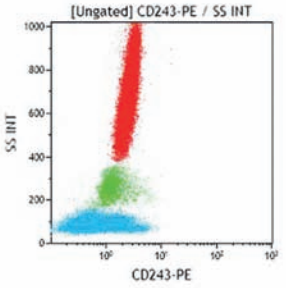
CD243 (P-glycoprotein)

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.

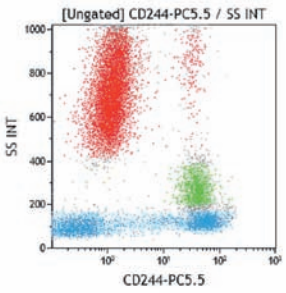
Clone: UIC2 (IgG2a Mouse)

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	cGMP

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 γδ TCR T cells and appoximately half of peripheral αβ 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.



Lysed normal whole blood sample.

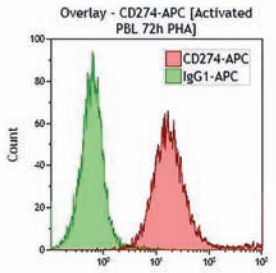
Clone: C1.7 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PC5.5	0.5 mL	Liquid	**B21171**	ASR	IOTest	cGMP

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

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.



Activated PBL 72h PHA.

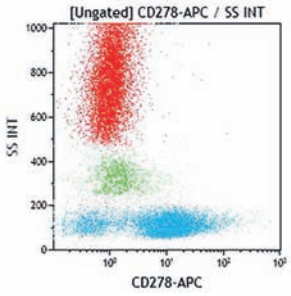
Clone: PD-L1 (IgG1 Mouse)

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	cGMP
APC	0.5 mL	Liquid	**B36126**	ASR	IOTest	cGMP

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.



Lysed normal whole blood sample.

Clone: ISA-3 (IgG1 Mouse)

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

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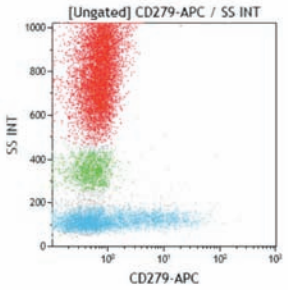
CD279 (PD-1)

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.



Lysed normal whole blood sample.

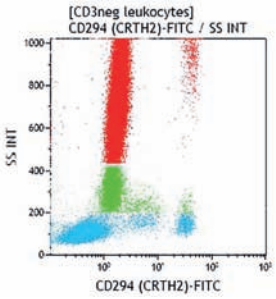
Clone: PD1.3 (IgG2b Mouse)

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	cGMP
PC5.5	0.5 mL	Liquid	**B36123**	ASR	IOTest	cGMP
PC7	0.5 mL	Liquid	**A78885**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B30633**	ASR	IOTest	cGMP

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 IFNγ. On normal whole blood leucocytes, 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.



Lysed normal whole blood sample. Gating on CD3 negative leukocytes.

Clone: BM16 (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	cGMP
PE	100 tests	Liquid	**A07413**	RUO	IOTest	cGMP

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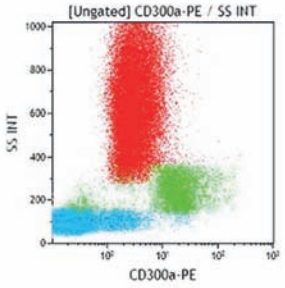
CD300a (IRp60)

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.



Lysed normal whole blood sample.

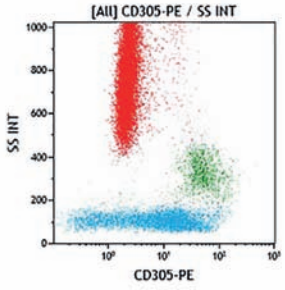
Clone: E59.126 (IgG1 Mouse)

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	cGMP

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.



Lysed normal whole blood sample.

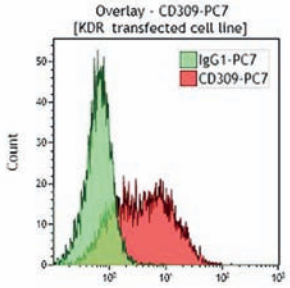
Clone: NKTA255 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**B68156**	ASR	IOTest	cGMP

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

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.



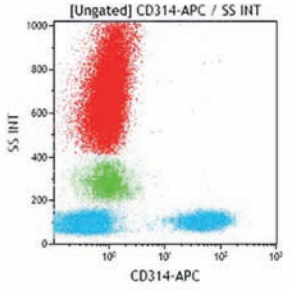
KDR transfected Cell line.

Clone: KDR-1 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**A64615**	ASR	IOTest	cGMP
PC7	1 mL	Liquid	**A64616**	ASR	IOTest	cGMP

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 (DAP10) 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 γδ T cells and by virtually all CD8+αβ 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 1 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.



Lysed normal whole blood sample.

Clone: ON72 (IgG1 Mouse)

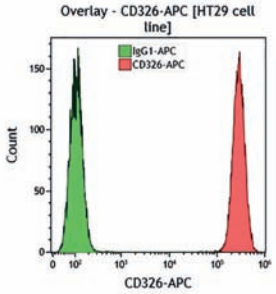
The ON72 antibody has been used in flow cytometry to analyze the expression of NKG2D on NK cells. ON72 cross reacts with: African Green, Chimpanzee, Common Marmoset.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**A08934**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**A22329**	ASR	IOTest	cGMP

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

CD326 (EpCAM)

CD326 also known as EpCAM (Epithelial Cell Adhesion Molecule) is a 40 kDA type I transmembrane glycoprotein expressed at the cell surface of a variety of epithelial cells. CD326 is a hemophilic Ca2+ independent cell-cell adhesion molecule which plays a major role in intercellular adhesion. Additionally it has been described to play an important role in cell signaling, proliferation, differentiation and maintenance of organ morphology. In the field of oncology, CD326 is a key marker for the isolation and identification of circulating tumor cells.



HT29 cell line.

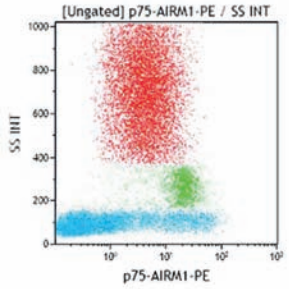
Clone: VU1D9 (IgG1 Mouse)

The monoclonal antibody VU1D9 recognizes an epitope within EGF like domain I of CD326.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*	
APC	0.5 mL	Liquid	B90408	ASR	IOTest	cGMP	NEW

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.



Lysed normal whole blood sample.

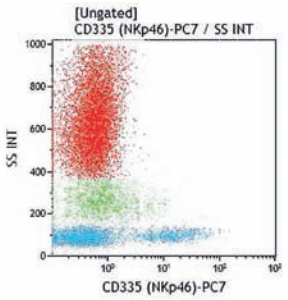
Clone: Z176 (IgG2b Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	50 tests	Liquid	A22330	RUO	IOTest	cGMP

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

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 CD3ζ and FcεRIγ. Although this association is likely to be essential for signal transduction via NKp46, CD3ζ 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.



Lysed normal whole blood sample.

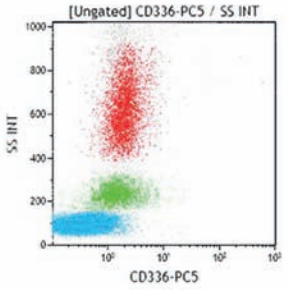
Clone: BAB281 (IgG1 Mouse)

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. BAB281 cross reacts with: Cynomolgus Monkey, African Green, Chimpanzee, Olive Baboon, Common Marmoset.

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

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.



Lysed normal whole blood sample.

Clone: Z231 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	IM3710	ASR	IOTest	cGMP
PC5	0.5 mL	Liquid	A66903	ASR	IOTest	cGMP

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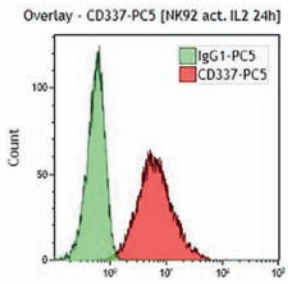
CD337 (NKp30)

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 CD3ζ 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.



NK92 act. IL2 24h Cell line.

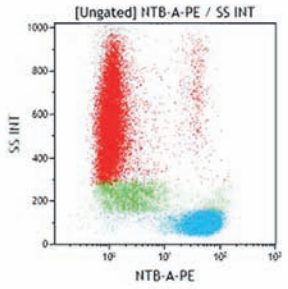
Clone: Z25 (IgG1 Mouse)

The Z25 antibody has been used in flow cytometry to analyze the expression of NKp30 on NK cells. Z25 cross reacts with: Cynomolgus Monkey, Indian Rhesus, African Green, Chimpanzee, Olive Baboon, Common Marmoset.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**IM3709**	ASR	IOTest	cGMP
PC5	0.5 mL	Liquid	**A66904**	ASR	IOTest	cGMP

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 an 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.



Lysed normal whole blood sample.

Clone: MA127 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	50 tests	Liquid	**A40926**	RUO	IOTest	cGMP

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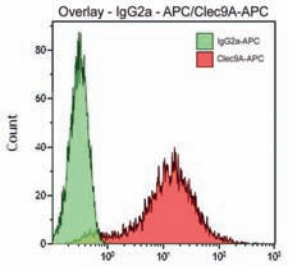
CD370 (Clec9A)

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.



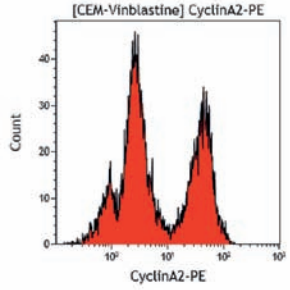
K562 Clec9A cell line.

Clone: 8F9 (IgG2a Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
APC	0.5 mL	Liquid	B43291	ASR	IOTest	cGMP

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.



Human lymphoid cell line (CEM) + Vinblastine.

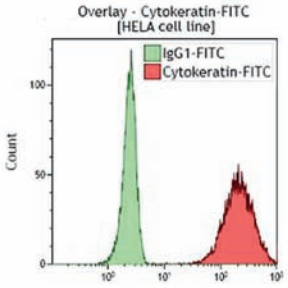
Clone: 11B2G3 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	A22327	ASR	IOTest	cGMP
PE	1 mL	Liquid	B15092	ASR	IOTest	cGMP

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

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 1) and the neutral to basic (positively charged) cytokeratin (type II). They are typically expressed as pairs, consisting of one acidic and one basic molecule.



HELA Cell line.

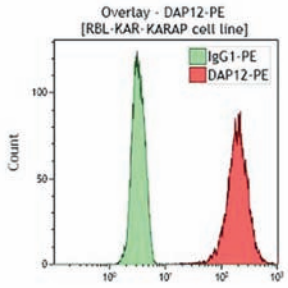
Clone: J1B3 (IgG1 Mouse)

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	cGMP

DAP12 (DNAX / KARAP / TYROBP)

The DAP12 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 DAP12 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 DAP12 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 DAP12 plays a role in the stimulation of NK cells and T cells. On the contrary, the DAP12 association with other receptors such as Fc receptor γ-chain and CD3ζ may lead to the regulation of T cell immune response.



RBL-KAR-KARAP Cell line.

Clone: H10E12F4 (IgG1 Rat)

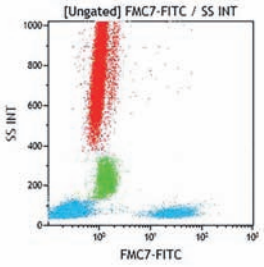
The H10E12F4 monoclonal antibody recognizes monocytes, neutrophils, dendritic cells, NK cells and to a lesser extend basophils, and B lymphocytes. It does not recognize CD4 and CD8 T cells or B cells.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	100 tests	Liquid	**A78886**	RUO	IOTest	cGMP

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

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 antgen expresses surface immunoglobulins, thus defining a stage of maturation of the B lymphocytes distinct from FMC7– B lymphocytes.



Lysed normal whole blood sample.

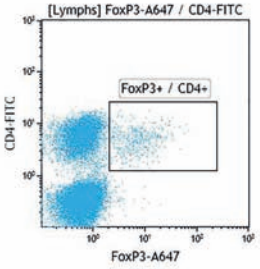
Clone: FMC7 (IgM Mouse)

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/IVD	IOTest	98/79/EC
PB	0.5 mL	Liquid	**B08466**	ASR	IOTest	cGMP
FITC	100 tests	Liquid	**A07791**	CE/IVD	IOTest	98/79/EC
FITC	1 mL	Liquid	**IM1364U**	ASR	IOTest	cGMP

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 reponses 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 (IgG1 Mouse)

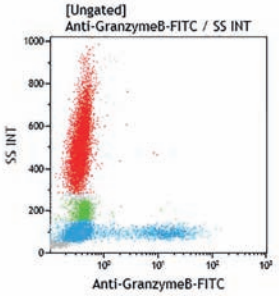
The monoclonal antibody 259D detects endogenous levels of human FoxP3 transcription factor.

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

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

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 (pecs). 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.



Lysed normal whole blood sample.

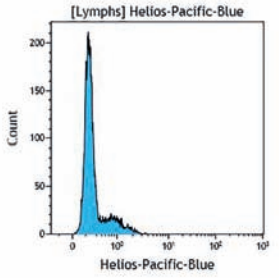
Clone: GB11 (IgG1 Mouse)

GB11 cross reacts with: Mouse, Rat.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**B46038**	ASR	IOTest	cGMP

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.



Lysed normal whole blood sample.

Clone: 22F6 (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	cGMP

HIV-1 core antigen

Clone: KC57 (IgG1 Mouse)

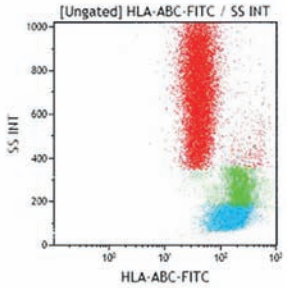
The KC57 antibody identifies the 55, 39, 33 and 24 kDa proteins of the core antigens of the human immunodeficiency virus type 1 (HIV-1). The 55 kDa protein is the precursor protein for the core antigen. The 39 and 33 kDa proteins are intermediate products and the 24 kDa protein is the core protein.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	100 tests	Liquid	**6604665**	RUO	COULTER CLONE	cGMP
RD1	100 tests	Liquid	**6604667**	RUO	COULTER CLONE	cGMP

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

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 glycoproteic α-chain, noncovalently combined to the invariant β2-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.



Lysed normal whole blood sample.

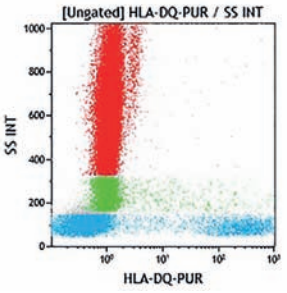
Clone: B9.12.1 (IgG2a Mouse)

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. B9.12.1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon.

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

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 heteterodimers. 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 (α2 and β2) support the two polymorphic amino-terminal domains (α1 and β1) 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.



Lysed normal whole blood sample.

Clone: SPVL3 (IgG2a Mouse)

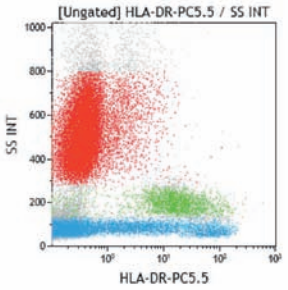
The monoclonal antibody SPVL3 recognizes a monomorphic determinant of human class II HLA-DQ molecules The SPVL3 antibody has been used in studies of inhibition of antigen-specific cytolytic T cell clones.

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

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

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.



Lysed normal whole blood sample.

Clone: B8.12.2 (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. B8.12.2 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon, Common Marmoset, Cotton-topped Tamarin, Squirrel Monkey.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**IM0463U**	ASR	IOTest	cGMP
PE	2 mL	Liquid	**IM0464U**	ASR	IOTest	cGMP

Clone: Immu-357 (IgG1 Mouse)

Immu-357 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Cotton-topped Tamarin.

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

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 (IgG2a Mouse)

9-49 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Squirrel Monkey.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
RD1	0.5 mL	Liquid	**6604366**	ASR	CYTO-STAT	cGMP

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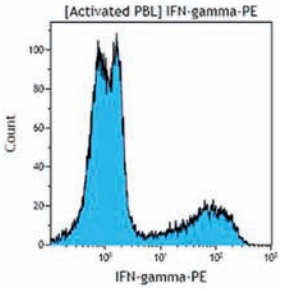
IFN-γ

Human Interferon-γ (IFN-γ) is a 20-25 kDa (monomer) pleiotrophic 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).

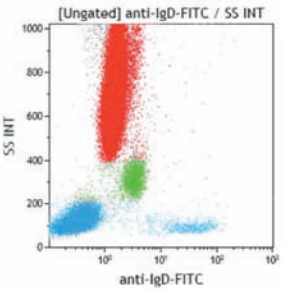
Clone: 45.15 (IgG1 Mouse)

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. 45.15 cross reacts with: Indian Rhesus.

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

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 (Cμ) and Cδ exons.



Pre-washed lysed normal whole blood sample.

Clone: IA6-2 (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	cGMP
PE	50 tests	Liquid	**B30653**	RUO	IOTest	cGMP
APC	50 tests	Liquid	**B30651**	RUO	IOTest	cGMP

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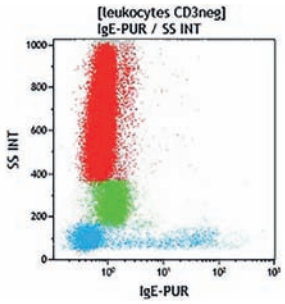
IgE (Dε2)

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".



Lysed normal whole blood sample.

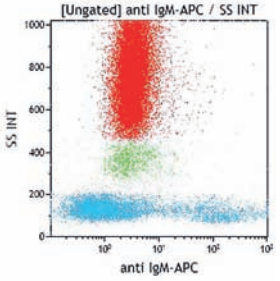
Clone: E124.2.8 (IgG1 Mouse)

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	-	cGMP

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.



Pre-washed lysed normal whole blood sample.

Clone: SA-DA4 (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	cGMP
FITC	50 tests	Liquid	**B30655**	RUO	IOTest	cGMP
PE	50 tests	Liquid	**B30657**	RUO	IOTest	cGMP
APC	50 tests	Liquid	**B30654**	RUO	IOTest	cGMP

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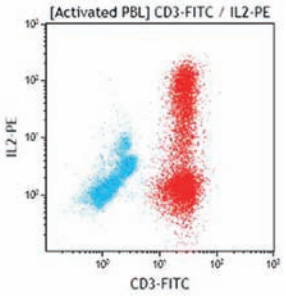
IL-2

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.



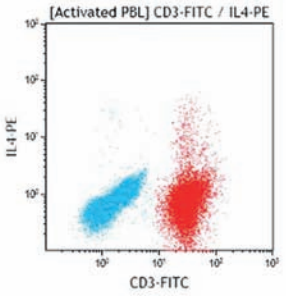
Activated peripheral blood lymphocytes (PBL).

Clone: IL2.39.1 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*	
FITC	1 mL	Liquid	**B90436**	ASR	IOTest	cGMP	NEW

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 (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	cGMP

Clone: MP4-25D2 (IgG1 Rat)

MP4-25D2 cross reacts with: Porcine, Equine.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PC7	0.5 mL	Liquid	**B90441**	ASR	IOTest	cGMP

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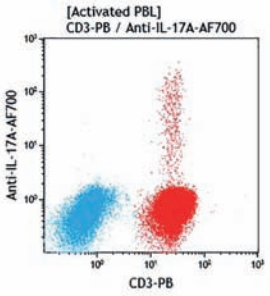
IL-17A

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 refer 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 γδ 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.



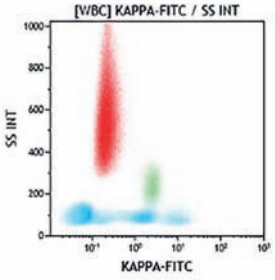
Peripheral blood lymphocytes (PBL) activated with PMA/Ionomycin/Brefeldin A, permeabilized and fixed with PerFix-nc reagent.

Clone: BL168 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PB	50 tests	Liquid	**B76266**	RUO	IOTest	cGMP
AF700	50 tests	Liquid	**B90428**	RUO	IOTest	cGMP

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.

Clone: Polyclonal (F(ab')$_2$ Goat)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	2 mL	Liquid	**C15623**	ASR	IOTest	cGMP
APC	0.5 mL	Liquid	**B90420**	ASR	IOTest	cGMP

Clone: Polyclonal (F(ab')$_2$ Rabbit)

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

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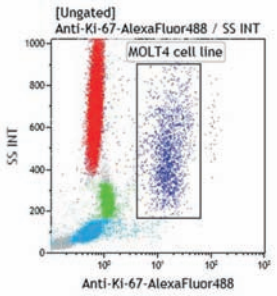
Ki-67

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.



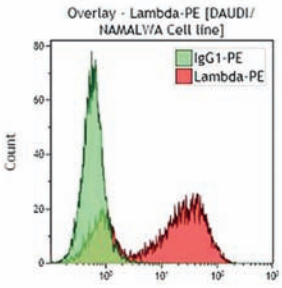
Lysed normal whole blood sample spiked with MOLT4 cell line.

Clone: Ki-67 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
AF488	0.5 mL	Liquid	**B68180**	ASR	IOTest	cGMP

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 (F(ab')$_2$ Goat)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**C15189**	ASR	IOTest	cGMP
PC7	0.5 mL	Liquid	**B90416**	ASR	IOTest	cGMP

Clone: Polyclonal (F(ab')$_2$ Rabbit)

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

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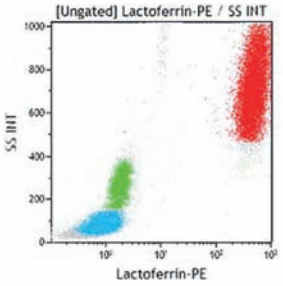
Lactoferrin

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 myeloperoxydase, 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.



Lysed normal whole blood sample.

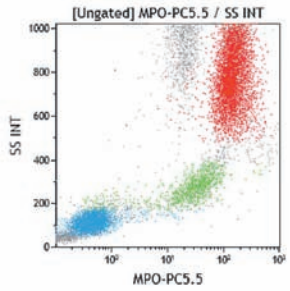
Clone: CLB13.17 (IgG1 Mouse)

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	cGMP

Myeloperoxidase

Myeloperoxidase (MPO) is an heterodimeric glycoprotein of 150 kDa with an α2/β2 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). Intranuclear MPO may also help to protect DNA against damage resulting from oxygen radicals produced during cell maturation and function.



Permeabilized normal whole blood sample.

Clone: CLB-MPO-1 (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 or PerFix-nc permeabilization reagent.

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

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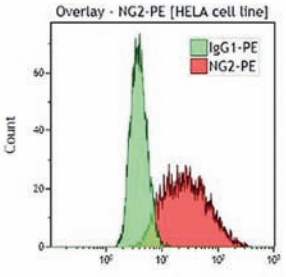
NG2 (7.1)

Human melanoma-associated chondroitin suflate proteoglycan (MCSP), known as the homolog rat NG2 antigen, is a 250 kDa glycoprotein that is though 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.



HELA cell line.

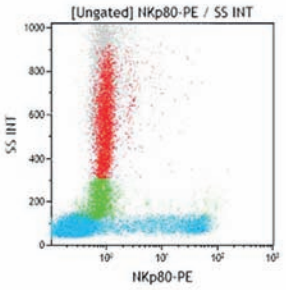
Clone: 7.1 (IgG1 Mouse)

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/IVD	IOTest	98/79/EC
PE	2 mL	Liquid	**IM3454U**	ASR	IOTest	cGMP

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.



Lysed normal whole blood sample.

Clone: MA152 (IgG1 Mouse)

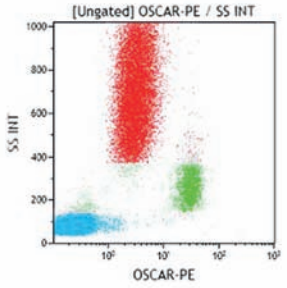
The monoclonal antibody MA152 recognizes NK cells, a subset of T lymphocytes. It does not react with NK92, NK3.3 and YT cell lines.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**A52635**	ASR	IOTest	cGMP

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

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-adapter FcRγ 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.



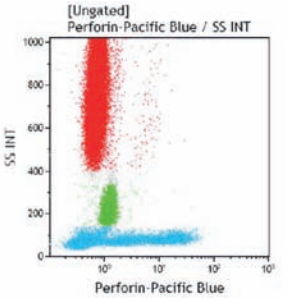
Lysed normal whole blood sample.

Clone: 11.1CN5 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	100 tests	Liquid	**A24987**	RUO	IOTest	cGMP

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.



Lysed normal whole blood sample.

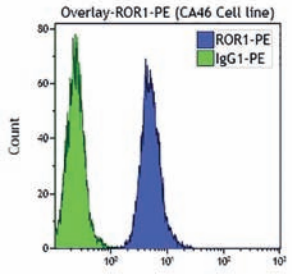
Clone: dG9 (IgG2b Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PB	0.5 mL	Liquid	**B46030**	ASR	IOTest	cGMP

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

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.



CA46 Cell Line.

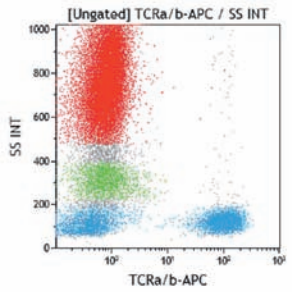
Clone: 2A2 (IgG1 Mouse)

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	cGMP

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 (IgG1 Mouse)

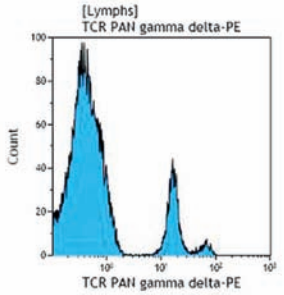
The IP26A antibody recognizes a monomorphic determinant of the human α/β chain of the TcR complex.

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

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

TCR PAN γ/δ

The TCR is a molecular complexe wich 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 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.



Lysed normal whole blood sample.

Clone: IMMU510 (IgG1 Mouse)

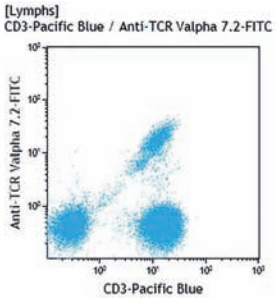
The IMMU510 monoclonal antibody recognizes all γ/δ T cells, regardless of their variable chains. It stains 1.6% to 8.9% of peripheral $CD3^+$ cells from healthy donors. In Western blot, it recognizes the δ chain in reducing conditions. It immunoprecipitates the three isoforms of the γ/δ T cell receptor. 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/IVD	IOTest	98/79/EC
FITC	1 mL	Liquid	IM1571U	ASR	IOTest	cGMP
PE	50 tests	Liquid	B49176	CE/IVD	IOTest	98/79/EC
PE	1 mL	Liquid	IM1418U	ASR	IOTest	cGMP
PC5	50 tests	Liquid	IM2662	CE/IVD	IOTest	98/79/EC
PC5	0.5 mL	Liquid	IM2662U	ASR	IOTest	cGMP
PC5.5	0.5 mL	Liquid	A99021	ASR	IOTest	cGMP
PC7	0.5 mL	Liquid	B10247	ASR	IOTest	cGMP
UNLB	0.1 mg	Freeze-dried	IM1349	RUO	-	cGMP

TCR Vα7.2

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.



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

Clone: 3C10 (IgG1 Mouse)

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

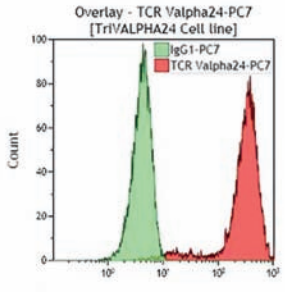
Form	Size	Format	Part#	Status	Line	Quality Standard
FITC	50 tests	Liquid	B90400	RUO	IOTest	cGMP

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

TCR Vα24

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

Vα24 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 Vα24/Vβ11 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).



Tri VAlpha24 Cell line.

Clone: C15 (IgG1 Mouse)

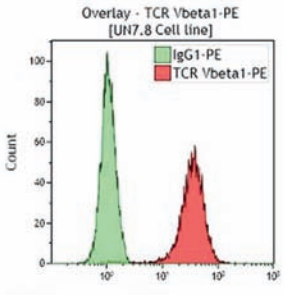
The C15 antibody recognizes the IGRa02 sequence, the only described member of this family.

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

TCR Vβ1

Also called TCRBV1S1 and S2

Vβ1 is the human variable β1 chain of the T cell receptor. It is expressed by appoximately 6% of peripheral CD3+ cells in normal blood. This sequence is also referred to as TRBV9 (based on the IMGT gene nomenclature).



UN7.8 Cell line.

Clone: BL37.2 (IgG1 Rat)

The BL37.2 antibody recognizes both Vβ1.1 and Vβ1.2 allele products (HBVT73 cDNA and 46W/Q cDNA, respectively). None of the other Vβ specific antibodies from the TCR Workshop (San Francisco, CA, 1995) gave significant staining on the sorted cell lines. BL37.2 cross reacts with: Indian Rhesus.

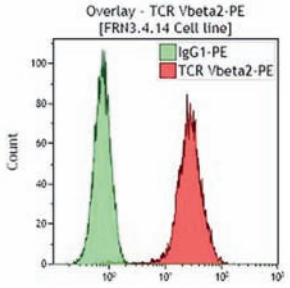
Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM2406**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM2355**	ASR	IOTest	cGMP

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

TCR Vβ2

Also called TCRBV2S1

Vβ2 is the human variable β2 chain of the T cell receptor. It is expressed by 10% of peripheral CD3+ cells in normal blood. Vβ2 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).



FRN3.4.14. Cell line.

Clone: MPB2D5 (IgG1 Mouse)

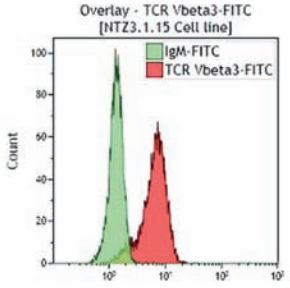
The MPB2D5 antibody recognizes all the members (Molt4 identical to PL2.13, PH34 and TCRVBV2S13 sequences) of the Vβ2 subfamily that are in fact alleles.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM2407**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM2213**	ASR	IOTest	cGMP

TCR Vβ3

Also called TCRBV3S1

Vβ3 is the human variable β3 chain of the T cell receptor. Vβ3 is the target of Staphylococcal Enterotoxin B (SEB) superantigen. This sequence is also referred to as TRBV28 (based on the IMGT gene nomenclature).



NTZ3.1.15 Cell line.

Clone: CH92 (IgM Mouse)

The CH92 antibody recognizes the unique member of the Vβ3 subfamily (PL4.4 identical to HBVT22 sequences). CH92 antibody recognizes the major subset of Vβ3 cells.

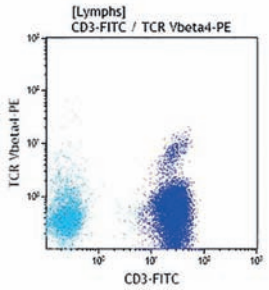
Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM2372**	ASR	IOTest	cGMP

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

TCR Vβ4

Also called TCRBV4

Vβ4 is the human variable β4 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 (IgM Rat)

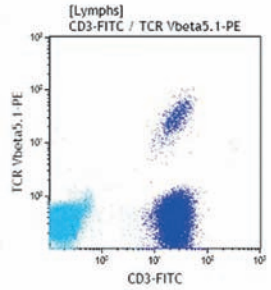
The WJF24 antibody recognizes the Vβ allele product.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**B07084**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM3602**	ASR	IOTest	cGMP

TCR Vβ5.1

Also called TCRBV5S1

Vβ5 is a multimembered subfamily of the T cell receptor. Vβ5.1 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 (IgG2a Mouse)

Immu157 recognizes the Vβ5.1 (HBP51 sequence) member of this subfamily. Vβ5.2 and Vβ5.3 (PL25 and 12A1 sequences) are not recognized. Recognition of other members of the Vβ5 subfamily has not been found, but cannot be formally excluded.

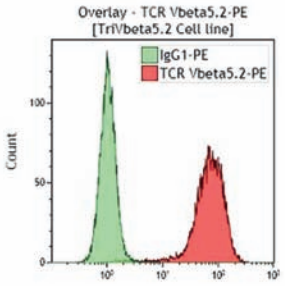
Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1552**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM2285**	ASR	IOTest	cGMP

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

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).



Tri Vbeta 5.2-PE Cell line.

Clone: 36213 (IgG1 Mouse)

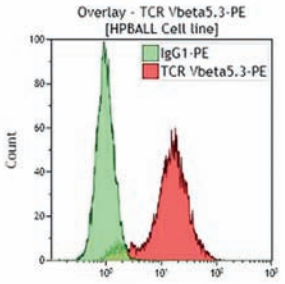
The 36213 antibody recognizes the PL25 sequence. Vβ5.1 (HBP51 sequence) and Vβ5.3 (IGRb08 sequence) are not recognized. Recognition of other members of the Vβ5 subfamily has not been found, but cannot be formally excluded.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1482**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM2286**	ASR	IOTest	cGMP

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).



HPBALL Cell line.

Clone: 3D11 (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.

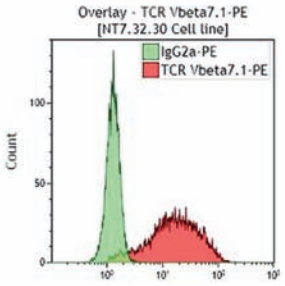
Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**IM2002**	ASR	IOTest	cGMP

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

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 (based on the IMGT gene nomenclature).



NT7.32.30 Cell line.

Clone: ZOE (IgG2a Mouse)

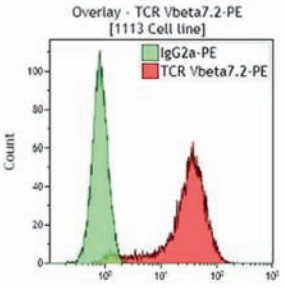
The ZOE antibody recognizes Vβ7.1 (PL4.9 sequence). It does not react with Vβ7.2, but the reactivity on other Vβ7 members like Vβ7.3 (HT267.2 sequence) has not been found, but cannot be formally excluded.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM2408**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM2287**	ASR	IOTest	cGMP

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.



1113 Cell line.

Clone: ZIZOU4 (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).

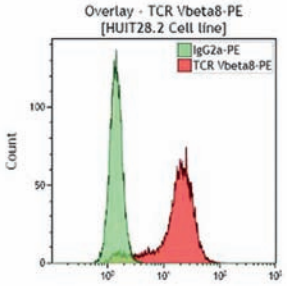
Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**B06666**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM3604**	ASR	IOTest	cGMP

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

TCR Vβ8

Also called TCRBV8S1 and S2

Vβ8 is the human variable β8 chain of the T cell receptor. It is expressed by 2.6% to 5.1% of peripheral CD3+ cells in normal blood. Vβ8 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).



HUIT 28.2 Cell line.

Clone: 56C5.2 (IgG2a Mouse)

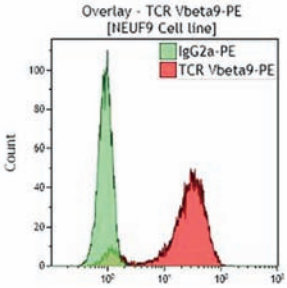
The 56C5.2 antibody recognizes Vβ8.1 and Vβ8.2 (YT35 and PL3.3 sequences). Other Vβ8 sequences are believed to be pseudogenes.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1233**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM2289**	ASR	IOTest	cGMP

TCR Vβ9

Also called TCRBV9S1

Vβ9 is the human variable β9 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).



NEUF9 Cell line.

Clone: FIN9 (IgG2a Mouse)

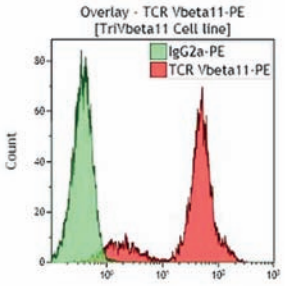
Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**IM2003**	ASR	IOTest	cGMP

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

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).



Tri Vbeta 11 Cell line.

Clone: C21 (IgG2a Mouse)

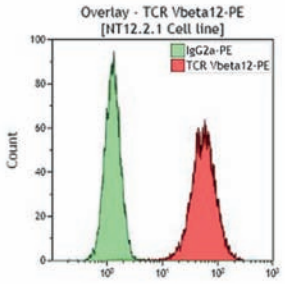
The C21 recognizes the gene product of PL3.12 and PH15 sequences. The specificity of this antibody has been confirmed at the First Human TcR Monoclonal Antibody Workshop in San Francisco in 1995.

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

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).



NT12.2.1 Cell line.

Clone: VER2.32.1 (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	cGMP
PE	1 mL	Liquid	**IM2291**	ASR	IOTest	cGMP

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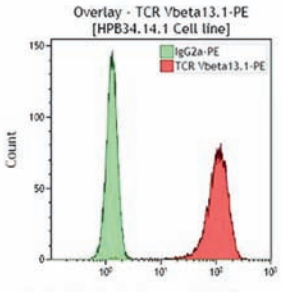
TCR Vβ13.1

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).



HPB34.14.1 Cell line.

Clone: IMMU 222 (IgG2b Mouse)

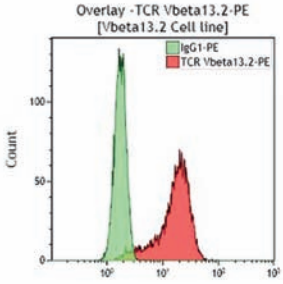
The IMMU 222 antibody recognizes Vβ13.1 member (HBP34 sequence). Vβ13.3 (IGRb14 sequence) is not recognized. Reactivity with other members of this subfamily has not been found, but cannot be formally excluded. It has been recently shown that Immu 222 can recognize the Vβ13.4 and Vβ13.6 (IGRb16 sequence)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

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1554**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM2292**	ASR	IOTest	cGMP

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.



Vbeta13.2 Cell line.

Clone: H132 (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	cGMP

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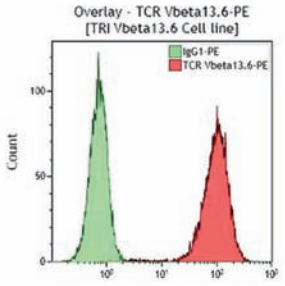
TCR Vβ13.6

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).



TRI Vbeta 13.6 Cell line.

Clone: JU74.3 (IgG1 Mouse)

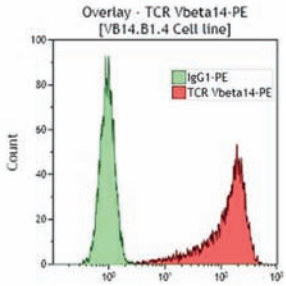
The JU74.3 antibody recognizes the Vβ13.6 sequence (IGRb16 sequence). Vβ13.1 (HBP34 sequence) is not recognized. The reactivity of the other members of this complex subfamily has not been found, but cannot be formally excluded.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1330**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**B07225**	ASR	IOTest	cGMP

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).



VB14.B1.4 Cell line.

Clone: CAS1.1.3 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1558**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM2047**	ASR	IOTest	cGMP

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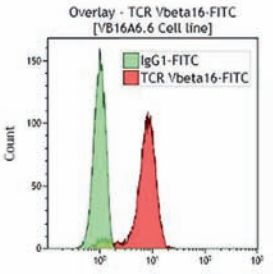
TCR Vβ16

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).



VB16A6.6 Cell line.

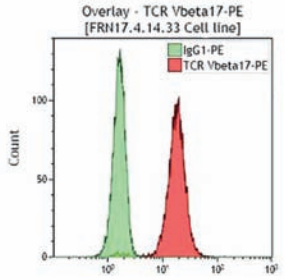
Clone: TAMAYA1.2 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1560**	ASR	IOTest	cGMP

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).



FRN17.4.14.33 Cell line.

Clone: E17.5F3.15.13 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1234**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM2048**	ASR	IOTest	cGMP

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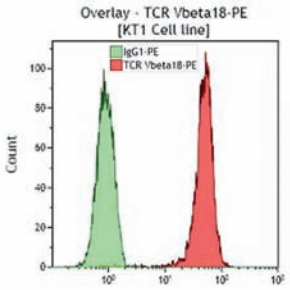
TCR Vβ18

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).



KT1 Cell line.

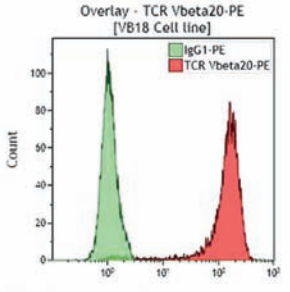
Clone: BA62.6 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**IM2049**	ASR	IOTest	cGMP

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 wheareas 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).



VB18 Cell line.

Clone: ELL1.4 (IgG2a Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1562**	ASR	IOTest	cGMP
PE	1 mL	Liquid	**IM2295**	ASR	IOTest	cGMP

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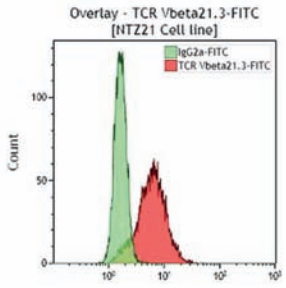
TCR Vβ21.3

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).



NTZ21 Cell line.

Clone: IG125 (IgG2a Mouse)

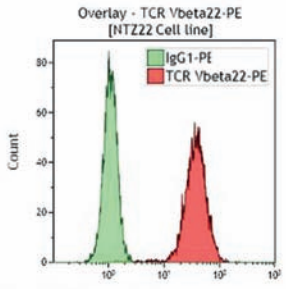
The IG125 antibody recognizes the IGRb01 sequence identical to TCR BV21.3 sequence. Recognition of other sequences within this subfamily has not been found, but cannot be formally excluded.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1483**	ASR	IOTest	cGMP

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).



NTZ22 Cell line.

Clone: IMMU 546 (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	cGMP
PE	1 mL	Liquid	**IM2051**	ASR	IOTest	cGMP

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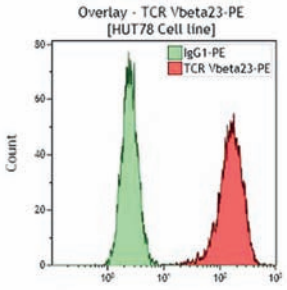
TCR Vβ23

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).



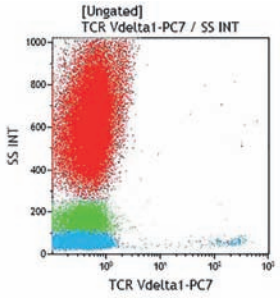
HUT78 Cell line.

Clone: AF23 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	1 mL	Liquid	**IM2004**	ASR	IOTest	cGMP

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).



Lysed normal whole blood sample.

Clone: R9.12 (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	cGMP
UNLB	0.1 mg	Freeze-dried	**IM1761**	RUO	-	cGMP

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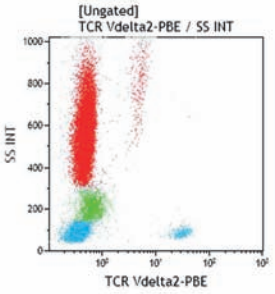
TCR Vδ2

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).



Lysed normal whole blood sample.

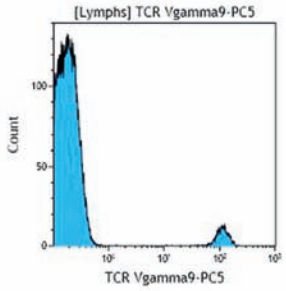
Clone: IMMU 389 (IgG1 Mouse)

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 immunoprecipates the γδ complex of Vδ2⁺ T cell clones.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PB	0.5 mL	Liquid	**B49310**	ASR	IOTest	cGMP
FITC	1 mL	Liquid	**IM1464**	ASR	IOTest	cGMP

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).



Lysed normal whole blood sample gated on lymphocytes.

Clone: IMMU 360 (IgG1 Mouse)

IMMU 360 may be used in flow cytometry, immunoprecipitation, Western blot and immunohistochemistry techniques. IMMU 360 cross reacts with: Squirrel Monkey.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	1 mL	Liquid	**IM1463**	ASR	IOTest	cGMP
PC5	0.5 mL	Liquid	**A63663**	ASR	IOTest	cGMP

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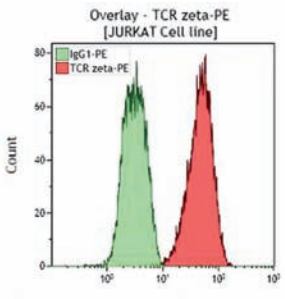
TCR ζ

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 (FcγRIII).



JURKAT Cell line.

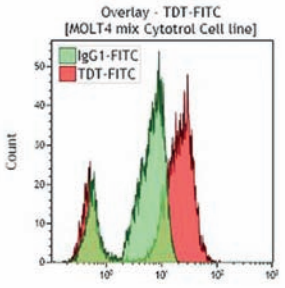
Clone: 2H2D9 (IgG1 Mouse)

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	cGMP

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.



MOLT4 Mix Cytotrol Cell line.

Clone: HT1 + HT4 + HT8 + HT9 (IgG Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
FITC	50 tests	Liquid	**IM3524**	CE/IVD	-	98/79/EC
FITC	1 mL	Liquid	**IM3524U**	ASR	-	cGMP

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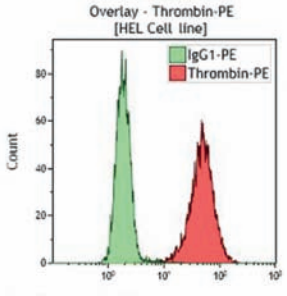
Thrombin receptor

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.



HEL Cell line.

Clone: SPAN 12 (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	cGMP

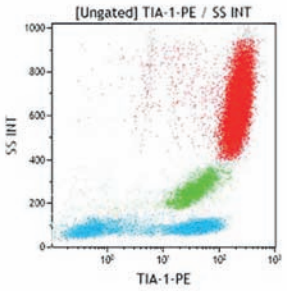
Clone: WEDE15 (IgG1 Mouse)

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	cGMP

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.



Lysed normal whole blood sample.

Clone: 2G9A10F5 (IgG1 Mouse)

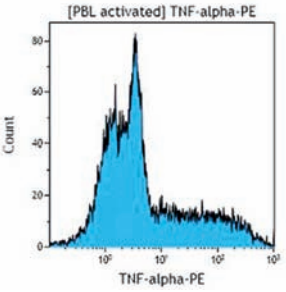
The 2G9 antibody is a useful reagent for detecting cytolytic effector cells in tissue infiltrates. It was evaluated during HLDA 5 in the section of monoclonal antibodies reactive with intracellular antigens. It may be used to detect intracytoplasmic TIA-1 in flow cytometry after permeabilization with IntraPrep permeabilization reagent.

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**IM3293**	ASR	IOTest	cGMP
UNLB	0.2 mg	Freeze-dried	**IM2550**	ASR	-	cGMP

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

TNFα

Tumor necrosis factor α (TNFα) or cachectin is a cytokine that was first identified based on its cytotoxic activity against various cell lines and tumor cells. Human TNFα 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, TNFα forms a homotrimeric protein. This cytokine is primarily produced by mononuclear phagocytes, and by activated lymphocytes. Immunostaining allows intracellular detection of TNFα before it can be detected by a bioassay. TNFα acts on target cells by binding to two types of receptors, the TNFα receptor I (TNF-RI or CD120a) and the TNFα receptor II (TNF-RII or CD120b). TNFα 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.



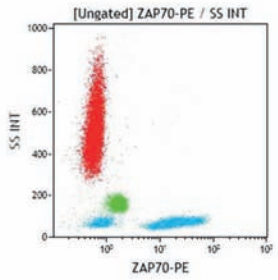
Activated PBL.

Clone: IPM2 (IgG1 Mouse)

Form	*Size*	*Format*	*Part#*	*Status*	*Line*	*Quality Standard*
PE	2 mL	Liquid	**IM3279U**	ASR	IOTest	cGMP
AF700	0.5 mL	Liquid	**B76295**	ASR	IOTest	cGMP

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 (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	cGMP
UNLB	50 tests	Liquid	**B10739**	RUO	-	cGMP

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

NOTES

Isotype Controls

IgG1 Mouse

Form	Size	Format	Line	Status	Part #
PB	1 mL	Liquid	IOTest	ASR	A74766
PB	100 tests	Liquid	IOTest	CE/IVD	A74764
KrO	1 mL	Liquid	IOTest	ASR	A96415
FITC	2 mL	Liquid	IOTest	ASR	IM0639U
FITC	100 tests	Liquid	IOTest	CE/IVD	A07795
FITC	50 tests	Liquid	CYTO-STAT	IVD	6603864
FITC	100 tests	Freeze-dried	COULTER CLONE	IVD	6602928
PE	2 mL	Liquid	IOTest	ASR	IM0670U
PE	100 tests	Liquid	IOTest	CE/IVD	A07796
RD1	100 tests	Liquid	COULTER CLONE	IVD	6602884
ECD	1 mL	Liquid	IOTest	ASR	IM2714U
ECD	100 tests	Liquid	IOTest	CE/IVD	A07797
ECD	50 tests	Liquid	CYTO-STAT	RUO	6604548
PC5	1 mL	Liquid	IOTest	ASR	IM2663U
PC5	100 tests	Liquid	IOTest	CE/IVD	A07798
PC5	50 tests	Liquid	CYTO-STAT	RUO	6607012
PC5.5	100 tests	Liquid	IOTest	CE/IVD	A62833
PC5.5	1 mL	Liquid	IOTest	ASR	A62834
PC7	100 tests	Liquid	IOTest	RUO	6607099
PC7	100 tests	Liquid	IOTest	CE/IVD	737662
APC	100 tests	Liquid	IOTest	CE/IVD	IM2475
APC	1 mL	Liquid	IOTest	ASR	IM2475U
APC-A700	1 mL	Liquid	IOTest	ASR	A71118
APC-A700	100 tests	Liquid	IOTest	CE/IVD	A79391
APC-A750	1 mL	Liquid	IOTest	ASR	A71120
APC-A750	100 tests	Liquid	IOTest	CE/IVD	A79393

IgG2a Mouse

Form	Size	Format	Line	Status	Part #
FITC	2 mL	Liquid	IOTest	ASR	A12690
FITC	100 tests	Liquid	IOTest	CE/IVD	A12689
FITC	50 tests	Liquid	CYTO-STAT	IVD	6603855
PE	2 mL	Liquid	IOTest	ASR	A09141
PE	100 tests	Liquid	IOTest	CE/IVD	A09142
RD1	50 tests	Liquid	CYTO-STAT	IVD	6604119
ECD	1 mL	Liquid	IOTest	ASR	A09144
PC5	1 mL	Liquid	IOTest	ASR	A09147
PC5	100 tests	Liquid	IOTest	CE/IVD	A09148
PC7	1 mL	Liquid	IOTest	ASR	A12692
APC	1 mL	Liquid	IOTest	ASR	A12694
APC	100 tests	Liquid	IOTest	CE/IVD	A12693

Isotype Controls

IgG2b Mouse

Form	Size	Format	Line	Status	Part #
FITC	50 tests	Liquid	CYTO-STAT	IVD	6603853
RD1	0.5 mL	Liquid	CYTO-STAT	ASR	6603852
ECD	0.5 mL	Liquid	CYTO-STAT	ASR	6604700

IgM Mouse

Form	Size	Format	Line	Status	Part #
FITC	2 mL	Liquid	IOTest	ASR	IM1269U
UNLB	100 tests	Liquid	-	RUO	IM1268

Specificity	FITC	PE / RD1	ECD	PC5	PC7	Part Number RUO	ASR	CE-IVD	IVD	Page
CD2										
2-color										
	CD2	CD19	-	-	-	**IM1289U**				**157**
	CD19	CD2	-	-	-				**6603801**	**157**
CD3										
4-color										
	CD45	CD4	CD8	CD3	-				**6607013**	**155, 205,**
	CD45	CD56	CD19	CD3	-				**6607073**	**155, 205,**
3-color										
	CD3	CD4	-	CD45	-	**IM1651**				**163**
	CD3	CD8	-	CD45	-	**IM1670**				**163**
	CD3	CD19	-	CD45	-	**IM1671**				**163**
	CD4	CD8	-	CD3	-	**IM1650**				**163**
	CD5	CD7	CD3	-	-					**160**
	CD8	CD4	CD3	-	-					**160**
	CD8	CD4	-	CD3	-				**6607053**	**155**
	CD8	CD4	-	-	CD3	**6607103**				**157**
	CD16	CD56	CD3	-	-					**161**
	CD25	CD4	CD3	-	-					**161**
	CD45	CD4	-	CD3	-				**6607015**	**155**
	CD45	CD8	-	CD3	-				**6607017**	**155**
	CD45	CD19	-	CD3	-				**6607072**	**156**
	MPO	CD79a	CD3	-	-					**162**
	Neg.Ctrl.	Neg.Ctrl.	CD3	-	-					**163**
2-color										
	CD3	CD4	-	-	-					**158**
	CD3	CD4	-	-	-	**IM1382**				**164**
	CD3	CD4	-	-	-				**6604929**	**156**
	CD3	CD8	-	-	-					**158**
	CD3	CD8	-	-	-	**IM1383**				**164**
	CD3	CD8	-	-	-				**6604930**	**156**
	CD3	CD(16+56)	-	-	-	**IM2076**				**158**
	CD3	CD19	-	-	-					**158**
	CD3	CD19	-	-	-	**IM1384**				**164**
	CD3	CD19	-	-	-				**6605015**	**156**
	CD3	CD25	-	-	-	**IM2667U**				**158**
	CD3	-	-	CD56	-	**A07415**				**158**
	CD3	HLA-DR	-	-	-	**IM1295U**				**158**
	CD3	HLA-DR	-	-	-					**158**
	HLA-DR	CD3	-	-	-	**IM1300**				**159**

For abbreviations and product regulatory status see Information section p.1-10

Specificity	FITC	PE / RD1	ECD	PC5	PC7	Part Number RUO	ASR	CE-IVD	IVD	Page
CD4										
4-color										
	CD45	CD4	CD8	CD3	-				**6607013**	**155, 205,**
3-color										
	CD3	CD4	-	CD45	-	**IM1651**				**163**
	CD4	CD8	-	CD3	-	**IM1650**				**163**
	CD8	CD4	CD3	-	-					**160**
	CD8	CD4	-	CD3	-				**6607053**	**155**
	CD8	CD4	-	-	CD3	**6607103**				**157**
	CD25	CD4	CD3	-	-					**161**
	CD45	CD4	-	CD3	-				**6607015**	**155**
2-color										
	CD3	CD4	-	-	-					**158**
	CD3	CD4	-	-	-	**IM1382**				**164**
	CD3	CD4	-	-	-				**6604929**	**156**
	CD4	CD8	-	-	-	**IM0747U**				**158**
	CD4	CD8	-	-	-				**6604614**	**156**
	CD8	CD4	-	-	-	**IM1379U**				**158**
	CD8	CD4	-	-	-				**6603802**	**156**
	CD45RA	CD4	-	-	-	**IM2762**				**159**
CD5										
3-color										
	CD5	CD7	CD3	-	-					**160**
	CD5	CD10	CD19	-	-					**160**
	CD5	CD23	CD19	-	-					**160**
2-color										
	CD19	CD5	-	-	-	**IM1346U**				**159**
CD7										
3-color										
	CD5	CD7	CD3	-	-					**160**
	HLA-DR	CD7	CD45	-	-					**162**

For abbreviations and product regulatory status see Information section p.1-10

Specificity	FITC	PE / RD1	ECD	PC5	PC7	Part Number RUO	Part Number ASR	Part Number CE-IVD	Part Number IVD	Page
CD8										
4-color										
	CD45	CD4	CD8	CD3	-				6607013	155, 205,
3-color										
	CD3	CD8	-	CD45	-	IM1670				163
	CD4	CD8	-	CD3	-	IM1650				163
	CD8	CD4	CD3	-	-					160
	CD8	CD4	-	CD3	-				6607053	155
	CD8	CD4	-	-	CD3	6607103				157
	CD45	CD8	-	CD3	-				6607017	155
2-color										
	CD3	CD8	-	-	-					158
	CD3	CD8	-	-	-	IM1383				164
	CD3	CD8	-	-	-				6604930	156
	CD4	CD8	-	-	-	IM0747U				158
	CD4	CD8	-	-	-				6604614	156
	CD8	CD4	-	-	-	IM1379U				158
	CD8	CD4	-	-	-				6603802	156
	CD8	CD38	-	-	-	IM2695U				159
	CD57	CD8	-	-	-	IM1198				159
	HLA-DR	CD8	-	-	-	IM1199U				159
CD10										
3-color										
	CD5	CD10	CD19	-	-					160
	CD19	CD10	CD45	-	-					161
	CD20	CD10	CD19	-	-					161
CD11c										
3-color										
	CD25	CD11c	CD19	-	-					161
	CD103	CD11c	CD19	-	-					162
CD13										
3-color										
	CD14	CD13	CD45	-	-					161
	HLA-DR	CD13	CD45	-	-					162
CD14										
3-color										
	CD14	CD13	CD45	-	-					161
	CD14	CD16	CD45	-	-					161
2-color										
	CD45	CD14	-	-	-					159
	CD45	CD14	-	-	-	IM1387				164
	CD45	CD14	-	-	-				6603909	157

For abbreviations and product regulatory status see Information section p.1-10

Specificity	FITC	PE / RD1	ECD	PC5	PC7	Part Number RUO	ASR	CE-IVD	IVD	Page
CD(14+16)										
3-color										
	CD(14+16)	CD85k	-	CD33	-					157
	CD(14+16)	CD85k	-	CD123	-					157
CD15										
3-color										
	CD15	CD33	CD45	-	-					161
CD16										
3-color										
	CD14	CD16	CD45	-	-					161
	CD16	CD56	CD3	-	-					161
CD(16+56)										
2-color										
	CD3	CD(16+56)	-	-	-	**IM2076**				158
CD19										
4-color										
	CD45	CD56	CD19	CD3	-				**6607073**	155, 205,
3-color										
	CD3	CD19	-	CD45	-	**IM1671**				163
	CD5	CD10	CD19	-	-					160
	CD5	CD23	CD19	-	-					160
	CD19	CD10	CD45	-	-					161
	CD20	CD10	CD19	-	-					161
	CD25	CD11c	CD19	-	-					161
	CD45	CD19	-	CD3	-				**6607072**	156
	CD103	CD11c	CD19	-	-					162
	Kappa	Lambda	CD19	-	-					162
	FMC7	CD23	CD19	-	-					162
	Neg.Ctrl.	Neg.Ctrl.	CD19	-	-					163
2-color										
	CD2	CD19	-	-	-	**IM1289U**				157
	CD3	CD19	-	-	-					158
	CD3	CD19	-	-	-	**IM1384**				164
	CD3	CD19	-	-	-				**6605015**	156
	CD19	CD2	-	-	-				**6603801**	157
	CD19	CD5	-	-	-	**IM1346U**				159
CD20										
3-color										
	CD20	CD10	CD19	-	-					161
CD23										
3-color										
	CD5	CD23	CD19	-	-					160
	FMC7	CD23	CD19	-	-					162

For abbreviations and product regulatory status see Information section p.1-10

Specificity	FITC	PE / RD1	ECD	PC5	PC7	Part Number RUO	ASR	CE-IVD	IVD	Page
CD25										
3-color										
	CD25	CD4	CD3	-	-					161
	CD25	CD11c	CD19	-	-					161
2-color										
	CD3	CD25	-	-	-	IM2667U				158
CD33										
3-color										
	CD(14+16)	CD85k	-	CD33	-					157
	CD15	CD33	CD45	-	-					161
	CD34	CD33	CD45	-	-					161
	CD71	CD33	CD45	-	-					162
CD34										
3-color										
	CD34	CD33	CD45	-	-					161
	CD34	CD117	CD45	-	-					161
	HLA-DR	CD34	CD45	-	-					162
CD36										
2-color										
	CD36	CD235a	-	-	-	IM2279U				159
CD38										
3-color										
	CD38	CD56	CD45	-	-					162
2-color										
	CD8	CD38	-	-	-	IM2695U				159
CD41										
3-color										
	CD41	CD235a	CD45	-	-					162

For abbreviations and product regulatory status see Information section p.1-10

Multi-Color Antibody Cocktails

Specificity	FITC	PE / RD1	ECD	PC5	PC7	Part Number RUO	Part Number ASR	Part Number CE-IVD	Part Number IVD	Page
CD45										
4-color										
	CD45	CD4	CD8	CD3	-				**6607013**	**155, 205,**
	CD45	CD56	CD19	CD3	-				**6607073**	**155, 205,**
3-color										
	CD3	CD4	-	CD45	-	**IM1651**				**163**
	CD3	CD8	-	CD45	-	**IM1670**				**163**
	CD3	CD19	-	CD45	-	**IM1671**				**163**
	CD14	CD13	CD45	-	-					**161**
	CD14	CD16	CD45	-	-					**161**
	CD15	CD33	CD45	-	-					**161**
	CD19	CD10	CD45	-	-					**161**
	CD34	CD33	CD45	-	-					**161**
	CD34	CD117	CD45	-	-					**161**
	CD38	CD56	CD45	-	-					**162**
	CD41	CD235a	CD45	-	-					**162**
	CD45	CD4	-	CD3	-				**6607015**	**155**
	CD45	CD8	-	CD3	-				**6607017**	**155**
	CD45	CD19	-	CD3	-				**6607072**	**156**
	CD45	IgG1	-	IgG1	-				**6607019**	**156**
	CD71	CD33	CD45	-	-					**162**
	HLA-DR	CD13	CD45	-	-					**162**
	HLA-DR	CD34	CD45	-	-					**162**
	HLA-DR	CD7	CD45	-	-					**162**
	IgG1	IgG1	-	CD45	-	**IM1673**				**164**
	Neg.Ctrl.	Neg.Ctrl.	CD45	-	-					**163**
2-color										
	CD45	CD14	-	-	-					**159**
	CD45	CD14	-	-	-	**IM1387**				**164**
	CD45	CD14	-	-	-				**6603909**	**157**
	CD45	CD235a	-	-	-	**IM2280U**				**159**
CD45RA										
2-color										
	CD45RA	CD4	-	-	-	**IM2762**				**159**
CD56										
4-color										
	CD45	CD56	CD19	CD3	-				**6607073**	**155, 205,**
3-color										
	CD16	CD56	CD3	-	-					**161**
	CD38	CD56	CD45	-	-					**162**
2-color										
	CD3	-	-	CD56	-	**A07415**				**158**
CD57										
2-color										
	CD57	CD8	-	-	-	**IM1198**				**159**

For abbreviations and product regulatory status see Information section p.1-10

Specificity	FITC	PE / RD1	ECD	PC5	PC7	Part Number RUO	ASR	CE-IVD	IVD	Page
CD71										
3-color										
	CD71	CD33	CD45	-	-					162
CD79a										
3-color										
	MPO	CD79a	CD3	-	-					162
CD85k										
3-color										
	CD(14+16)	CD85k	-	CD33	-					157
	CD(14+16)	CD85k	-	CD123	-					157
CD103										
3-color										
	CD103	CD11c	CD19	-	-					162
CD117										
3-color										
	CD34	CD117	CD45	-	-					161
CD123										
3-color										
	CD(14+16)	CD85k	-	CD123	-					157
CD235a										
3-color										
	CD41	CD235a	CD45	-	-					162
2-color										
	CD36	CD235a	-	-	-	**IM2279U**				159
	CD45	CD235a	-	-	-	**IM2280U**				159
FMC7										
3-color										
	FMC7	CD23	CD19	-	-					162
HLA-B7										
2-color										
	HLA-B27	HLA-B7	-	-	-	**IM1502**				159
HLA-B27										
2-color										
	HLA-B27	HLA-B7	-	-	-	**IM1502**				159
HLA-DR										
3-color										
	HLA-DR	CD13	CD45	-	-					162
	HLA-DR	CD34	CD45	-	-					162
	HLA-DR	CD7	CD45	-	-					162
2-color										
	CD3	HLA-DR	-	-	-	**IM1295U**				158
	CD3	HLA-DR	-	-	-					158
	HLA-DR	CD3	-	-	-	**IM1300**				159
	HLA-DR	CD8	-	-	-	**IM1199U**				159

For abbreviations and product regulatory status see Information section p.1-10

Specificity	FITC	PE / RD1	ECD	PC5	PC7	Part Number RUO	ASR	CE-IVD	IVD	Page
Kappa										
3-color										
	Kappa	Lambda	CD19	-	-					162
Lactoferrin										
2-color										
	MPO	Lactoferrin	-	-	-	IM2743				160
Lambda										
3-color										
	Kappa	Lambda	CD19	-	-					162
MPO										
3-color										
	MPO	CD79a	CD3	-	-					162
2-color										
	MPO	Lactoferrin	-	-	-	IM2743				160
Neg.Ctrl.										
3-color										
	Neg.Ctrl.	Neg.Ctrl.	CD3	-	-					163
	Neg.Ctrl.	Neg.Ctrl.	CD19	-	-					163
	Neg.Ctrl.	Neg.Ctrl.	CD45	-	-					163
	Neg.Ctrl.	Neg.Ctrl.	Neg.Ctrl.	-	-					163
IgG1										
3-color										
	CD45	IgG1	-	IgG1	-				6607019	156
	IgG1	IgG1	-	CD45	-	IM1673				164
	IgG1	IgG1	-	IgG1	-	IM1672				164
	IgG1	IgG1	-	IgG1	-				6607054	156
2-color										
	IgG1	IgG1	-	-	-					160
	IgG1	IgG1	-	-	-	IM1388				164
	IgG1	IgG1	-	-	-				6603796	157
	IgG1	IgG2a	-	-	-	A10974				160
	IgG1	IgG2a	-	-	-	A17599				164
	IgG2a	IgG1	-	-	-				6603795	157
	IgG2a	IgG1	-	-	-	B09981				160
IgG2a										
2-color										
	IgG1	IgG2a	-	-	-	A10974				160
	IgG1	IgG2a	-	-	-	A17599				164
	IgG2a	IgG1	-	-	-				6603795	157
	IgG2a	IgG1	-	-	-	B09981				160

For abbreviations and product regulatory status see Information section p.1-10

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 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	SFCI12T4D11	IgG1 (mouse)
CD8-ECD	SFCI21Thy2D3	IgG1 (mouse)
CD3-PC5	UCHT1	IgG1 (mouse)

Size	Format	Line	Status	Part #
50 tests	Liquid	CYTO-STAT	IVD	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	6607073

3 color

CD8-FITC/CD4-PE/CD3-PC5

Combination	Clone	Isotype
CD8-FITC	SFCI21Thy2D3	IgG1 (mouse)
CD4-RD1	SFCI12T4D11	IgG1 (mouse)
CD3-PC5	UCHT1	IgG1 (mouse)

Size	Format	Line	Status	Part #
50 tests	Liquid	CYTO-STAT	IVD	6607053

CD45-FITC/CD4-PE/CD3-PC5

Combination	Clone	Isotype
CD45-FITC	B3821F4A	IgG2b (mouse)
CD4-RD1	SFCI12T4D11	IgG1 (mouse)
CD3-PC5	UCHT1	IgG1 (mouse)

Size	Format	Line	Status	Part #
50 tests	Liquid	CYTO-STAT	IVD	6607015

CD45-FITC/CD8-PE/CD3-PC5

Combination	Clone	Isotype
CD45-FITC	B3821F4A	IgG2b (mouse)
CD8-RD1	SFCI21Thy2D3	IgG1 (mouse)
CD3-PC5	UCHT1	IgG1 (mouse)

Size	Format	Line	Status	Part #
50 tests	Liquid	CYTO-STAT	IVD	6607017

For abbreviations, product line and product regulatory status see Information section p.1-10

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	6607072

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	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	6607054

2 color

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	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	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	6605015

CD4-FITC/CD8-PE

Combination	Clone	Isotype
CD4-FITC	SFCI12T4D11	IgG1 (mouse)
CD8-RD1	SFCI21Thy2D3	IgG1 (mouse)

Size	Format	Line	Status	Part #
50 tests	Liquid	CYTO-STAT	IVD	6604614

CD8-FITC/CD4-PE

Combination	Clone	Isotype
CD8-FITC	SFCI21Thy2D3	IgG1 (mouse)
CD4-RD1	SFCI12T4D11	IgG1 (mouse)

Size	Format	Line	Status	Part #
50 tests	Liquid	CYTO-STAT	IVD	6603802

For abbreviations, product line and product regulatory status see Information section p.1-10

CD19-FITC/CD2-PE

Combination	Clone	Isotype
CD19-FITC	89B	IgG1 (mouse)
CD2-RD1	SFCI3Pt2H9	IgG1 (mouse)

Size	Format	Line	Status	Part #
50 tests	Liquid	CYTO-STAT	IVD	6603801

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	6603909

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	6603796

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	6603795

IOTest

3 color

CD8-FITC/CD4-PE/CD3-PC7

Combination	Clone	Isotype
CD8-FITC	SFCI21Thy2D3	IgG1 (mouse)
CD4-PE	SFCI12T4D11	IgG1 (mouse)
CD3-PC7	UCHT1	IgG1 (mouse)

Size	Format	Line	Status		Part #
50 tests	Liquid	IOTest	RUO	cGMP	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/IVD	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/IVD	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	cGMP	IM1289U

For abbreviations, product line and product regulatory status see Information section p.1-10

Multi-Color Antibody Cocktails

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/IVD	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/IVD	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/IVD		A07735
50 tests	Liquid	IOTest	RUO	cGMP	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/IVD	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	cGMP	IM2667U

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	cGMP	A07415

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	cGMP	IM1295U

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/IVD	A07737

CD4-FITC/CD8-PE

Combination	Clone	Isotype
CD4-FITC	13B8.2	IgG1 (mouse)
CD8-PE	B9.11	IgG1 (mouse)

Size	Format	Line	Status		Part #
50 tests	Liquid	IOTest	RUO	cGMP	IM0747U

CD8-FITC/CD4-PE

Combination	Clone	Isotype
CD8-FITC	B9.11	IgG1 (mouse)
CD4-PE	13B8.2	IgG1 (mouse)

Size	Format	Line	Status		Part #
50 tests	Liquid	IOTest	RUO	cGMP	IM1379U

For abbreviations, product line and product regulatory status see Information section p.1-10

Multi-Color Antibody Cocktails

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	cGMP	IM2695U

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	cGMP	IM1346U

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	cGMP	IM2279U

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/IVD	A07738

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	cGMP	IM2280U

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	cGMP	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	cGMP	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/IVD		A07739
50 tests	Liquid	IOTest	RUO	cGMP	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	cGMP	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	cGMP	IM1199U

For abbreviations, product line and product regulatory status see Information section p.1-10

IOTest 3

3 color

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/IVD		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/IVD		B49179
50 tests	Liquid	IOTest	RUO	cGMP	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	cGMP	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	cGMP	IM2743

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/IVD	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/IVD	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/IVD	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/IVD	A07726

For abbreviations, product line and product regulatory status see Information section p.1-10

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/IVD	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/IVD	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/IVD	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/IVD	A07728

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/IVD	A07713

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/IVD	A07708

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/IVD	A07727

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/IVD	A07711

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/IVD	A07717

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/IVD	A07718

For abbreviations, product line and product regulatory status see Information section p.1-10

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/IVD	A07714

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/IVD	A07723

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/IVD	A07716

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/IVD	A07712

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/IVD	A07709

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/IVD	A07720

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/IVD	A07719

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/IVD	A07724

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/IVD	A07706

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/IVD	A07705

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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/IVD	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/IVD	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/IVD	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/IVD	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	cGMP	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	cGMP	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	cGMP	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	cGMP	IM1650

For abbreviations, product line and product regulatory status see Information section p.1-10

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	cGMP	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	cGMP	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	cGMP	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	cGMP	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	cGMP	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	cGMP	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	cGMP	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	cGMP	A17599

For abbreviations, product line and product regulatory status see Information section p.1-10

DURAClone IM

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.

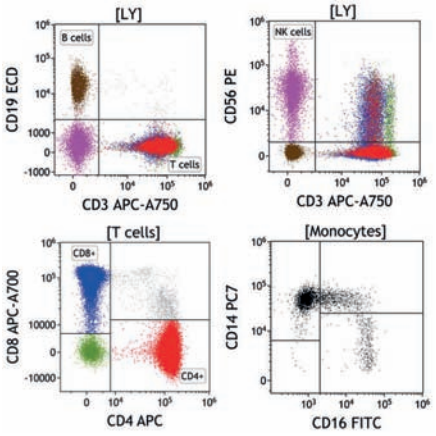
	Size	Status	Part #
DURAClone IM Phenotyping BASIC Tube	25 tests	RUO	B53309

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	RMO52 (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 Panels are available for Research Use Only. Not for use in diagnostics procedures.

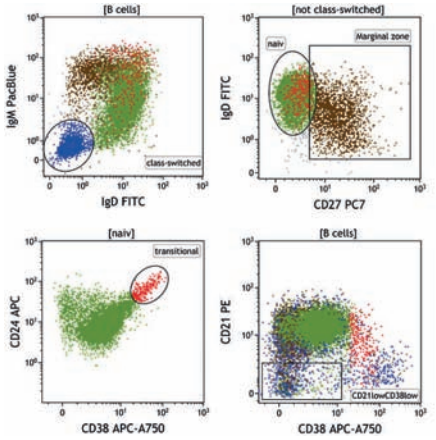
	Size	Status	Part #
DURAClone IM B cell Tube	25 tests	RUO	B53318

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 Panels are available for Research Use Only. Not for use in diagnostics procedures.

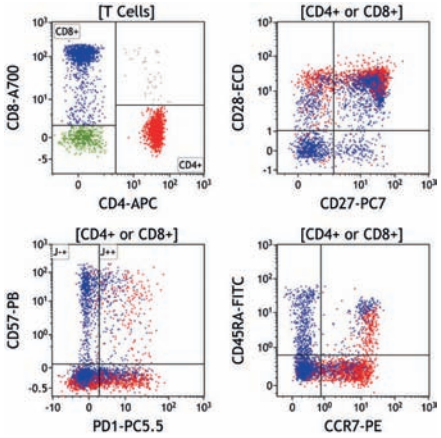
	Size	Status	Part #
DURAClone IM T cell subsets Tube	25 tests	RUO	B53328

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 Panels are available for Research Use Only. Not for use in diagnostics procedures.

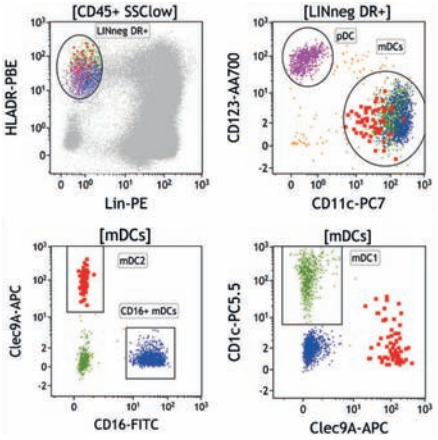
	Size	Status	Part #
DURAClone IM Dendritic cell Tube	25 tests	RUO	B53351

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	-
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)



Lysed normal whole blood sample.

Not available in all geographies. DURAClone Panels are available for Research Use Only. Not for use in diagnostics procedures.

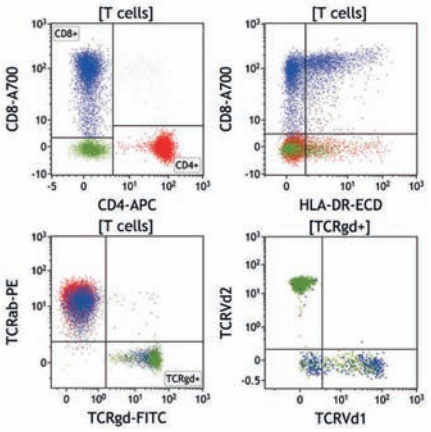
	Size	Status	Part #
DURAClone IM TCRs Tube	25 tests	RUO	B53340

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% **αβ** T cells and 5% **γδ** T cells are commonly found in blood .The largest subset of **γδ** T cells can be identified by the IMMU 389 antibody clone recognizing the **γδ** complex from the V**δ**2+ T cell receptor (TCR**γδ** V**δ**2+), being mostly associated with V**γ**9. A smaller subset of **γδ** T cells is staining positive with the R9.12 antibody clone that binds to the V**δ**1 segment of **γδ** T cells (TCR**γδ** 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)*
TCRγδ	FITC	IMMU510 (IgG1 Mouse)
TCRαβ	PE	IP26A (IgG1 Mouse)
HLA-DR	ECD	Immu-357 (IgG1 Mouse)
TCRVδ1	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)
TCRVδ2	Pacific Blue*	IMMU 389 (IgG1 Mouse)
CD45	Krome Orange	J33 (IgG1 Mouse)



Not available in all geographies. DURAClone Panels are available for Research Use Only. Not for use in diagnostics procedures.

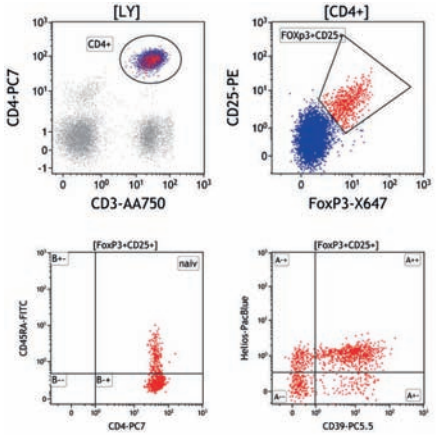
	Size	Status	Part #
DURAClone IM Treg Tube	25 tests	RUO	B53346

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	SFCI12T4D11 (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 Panels are available for Research Use Only. Not for use in diagnostics procedures.

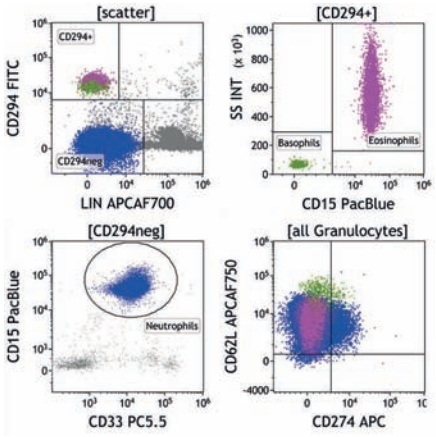
	Size	Status	Part #
DURAClone IM Granulocytes Tube	25 tests	RUO	B88651

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	-
CD62L	APC-Alexa Fluor* 750	DREG56 (IgG1 Mouse)



Not available in all geographies. DURAClone Panels are available for Research Use Only. Not for use in diagnostics procedures.

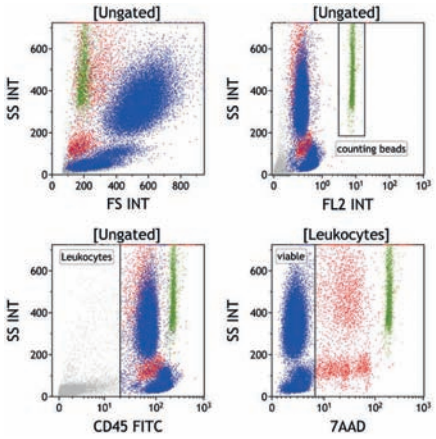
	Size	Status	Part #
DURAClone IM Count	25 tests	RUO	C00162

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 Panels are available for Research Use Only. Not for use in diagnostics procedures.

DURAClone IF

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.

Each DURAClone IF kit contains 25 assay tubes together with 3 single color compensation kits in case compensation is required for the instrument setup.

- Pre-formulated 4-6 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

Please see also the section on DURActive dry stimulation mixes, page 184

	Size	Status	Part #
DURAClone IF T Activation Tube	25 tests	RUO	B88649

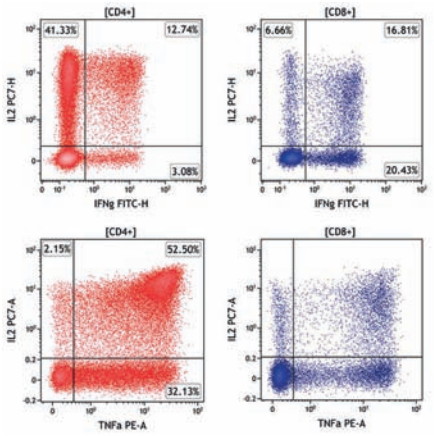
Detection of proinflammatory cytokines in T cells

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 IFNγ, TNFα 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)
TNFα	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 Panels are available for Research Use Only. Not for use in diagnostics procedures.

	Size	Status	Part #
DURAClone IF T Helper Cell	25 tests	RUO	C04666

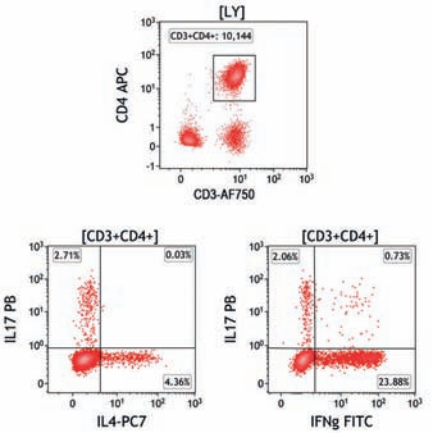
Detection of Th1/Th2/TH17 signature cytokines in T helper cells

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 IFNγ-, 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 Panels are available for Research Use Only. Not for use in diagnostics procedures.

	Size	Status	Part #
DURAClone IF Basophil Activation Tube	25 tests	RUO	C23406

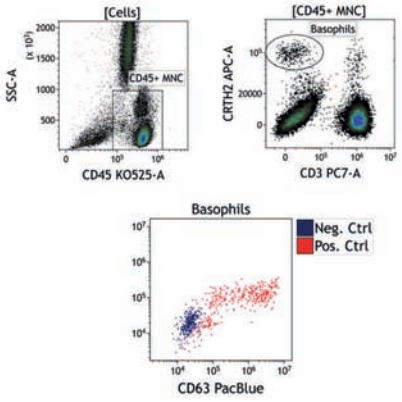
NEW

Characterization of the activation status of basophils.

Basophils play a key role in immediate hypersentivity as primary effector cells. These cells express the high affinity receptor for IgE (FcεR1). Allergens induce basophils activation by cross-linking surface IgE leading to release of mediators and expression of activation markers on the basophils surface such as CD63 and CD203c. The analysis of level of expression of CD63 and CD203c antigen allows the characterization of resting and activated basophils in an IgE-dependent response to allergens in sensitized individuals. Interestingly, CD203c and CD63 expression do not always correlate as they seem to implicate 2 different pathways of basophils activation where CD63 will reflect anaphylactic degranulation and CD203c piecemeal degranulation.

The DURAClone IF Basophil Activation tube kit consists of 25 tubes of a dried optimized five-color combination of fluorescent monoclonal antibodies (CD203c-PE, CD3-PC7, CD63-PBE, CD45-KrO, CRTH2-AF647) as well as 5 tubes of a positive control containing the same dried five color cocktail along to an anti-IgE also dried.

Specificity	*Fluorochrome*	*Clone (Isotype)*
CD203c	PE	97A6 (IgG1 Mouse)
CD3	PC7	UCHT1 (IgG1 Mouse)
CD294	Alexa Fluor* 647	BM16 (IgG2a Rat)
CD63	Pacific Blue*	CLB-Gran/12 (IgG1 Mouse)
CD45	Krome Orange	J33 (IgG1 Mouse)



Not available in all geographies. DURAClone Panels are available for Research Use Only. Not for use in diagnostics procedures.

	Size	Status	Part #
DURAClone IF Monocyte Activation Tube	25 tests	RUO	C21858

NEW

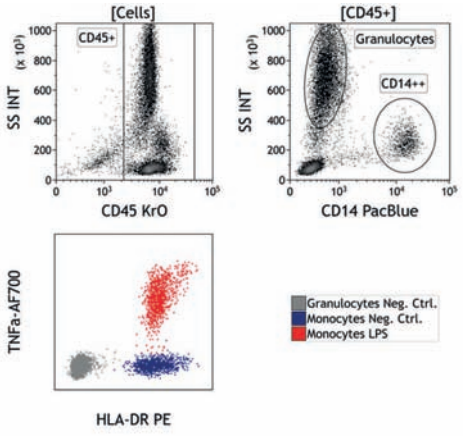
Assessment of innate immune competency in monocytes

Monocyte activation in response to infections is initiated when there is interaction between the pattern recognition receptors (PRRs) and pathogen-associated molecular patterns (PAMPs). This activation leads to the differentiation of the monocytes to macrophages or myeloid dendritic cells and an increase in their ability to phagocytose, present antigen and release proinflammatory cytokines. The increased functionality of CD14+ monocytes can be correlated with increased production of TNFα.

The DURAClone IF Monocyte Activation tube is a 4-color reagent that allows to assess HLA-DR expression and TNFα production in monocytes.

The selected antibody conjugate configuration does not require compensation.

Specificity	*Fluorochrome*	*Clone (Isotype)*
CD14	Pacific Blue*	RMO52 (IgG2a Mouse)
CD45	Krome Orange	J33 (IgG1 Mouse)
HLA-DR	PE	Immu-357 (IgG1 Mouse)
TNFα	Alexa Fluor* 700	IPM2 (IgG1 Mouse)



Lysed normal whole blood sample.

Not available in all geographies. DURAClone Panels are available for Research Use Only. Not for use in diagnostics procedures.

	Size	Status	Part #	
Ca2+ Activation solution	100 tests	RUO	C23407	NEW

The Activation Solution is a calcium enriched buffer that restores physiological concentration of Ca2+ in EDTA anti coagulated blood, thus allowing to conduct Ca2+ dependent functional studies.

EDTA (ethylene-diamine-tetraacetic acid) is a broadly used Ca2+-depleting anti-coagulant for whole blood samples that interferes with functional assays assessing/characterizing Ca2+-dependent cellular functions. Treatment of EDTA-anti-coagulated blood with the Ca2+ Activation Solution can enable certain Ca2+ dependent functional studies. The feasibility of the assay with the Ca2+ Activation solution should be evaluated for each experimental set-up.

Not available in all geographies. DURAClone Panels are available for Research Use Only. Not for use in diagnostics procedures.

DURAClone RE

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 (between 20 and 30°C, in a dry place) 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

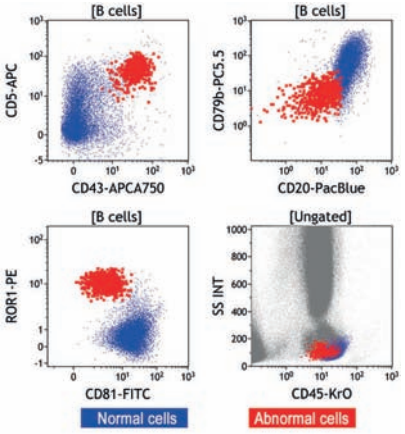
Detection of $CD45^{+}CD19^{+}ROR1^{+}CD5^{++}CD43^{++}CD81^{-}CD20^{-}CD79b^{-}$ B cells.

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 Panels are available for Research Use Only. Not for use in diagnostics procedures.

	Size	Status	Part #
DURAClone RE PC Tube	25 tests	RUO	B80394

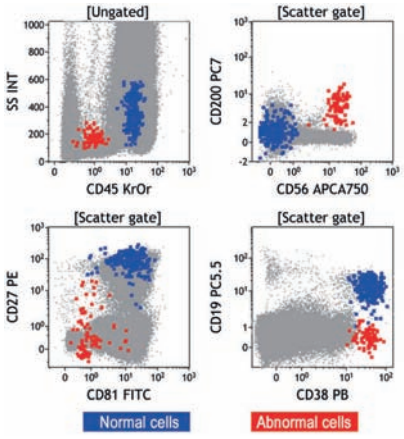
Detection of CD45$^+$CD38$^+$CD138$^+$CD56$^+$CD200$^+$CD19$^-$CD27$^-$CD81$^-$ plasma cells.

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 Panels are available for Research Use Only. Not for use in diagnostics procedures.

	Size	Status	Part #
DURAClone RE ALB Tube	25 tests	RUO	C00163

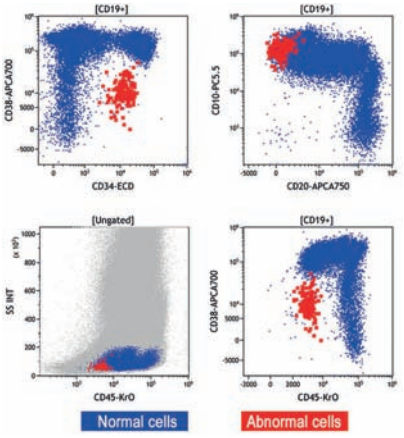
Detection of immature B cells with anomalous pattern of CD10, CD20, CD34, CD38, CD58.

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)



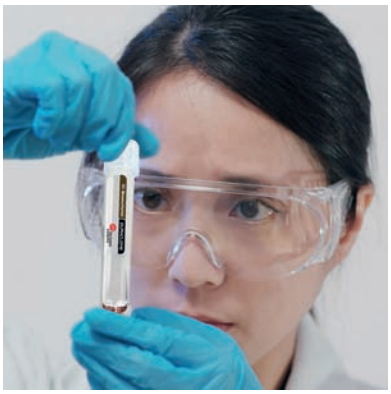
Not available in all geographies. DURAClone Panels are available for Research Use Only. Not for use in diagnostics procedures.

DURAClone SC

The dry DURAClone SC Mesenchymal antibody panel has been optimized for the characterization of human mesenchymal stem cells

The DURAClone SC Mesenchymal tube design accommodates additional antibodies and DNA dyes in liquid format as well as fixable viability dyes to adapt to specific experimental questions and biological materials.

- Pre-formulated 8 color antibody panel
- Unitized dry Beckman Coulter proprietary format
- Expert-proven marker combinations
- 25 tests/package
- Including 3 dye lot-matched compensation kits.



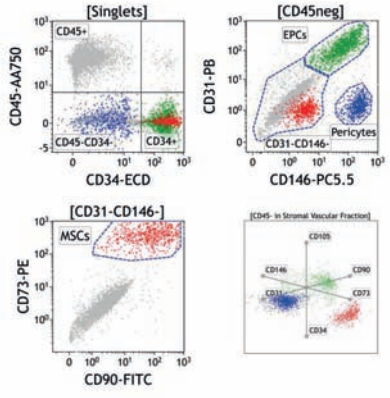
	Size	Status	Part #	
DURAClone SC Mesenchymal	25 tests	RUO	C34369	NEW

Detection of CD73+ CD90+ CD105+/– CD34+/– mesenchymal cells.

Mesenchymal Stem Cells (MSCs) are considered as potent cellular mediators of immunosuppression and tissue remodeling. Unlike other cellular interventions, MSCs can be applied in an allogeneic mode, making them a potent candidate for the development of immunosuppressive cellular products.

While MSCs show negative staining for CD45, CD31, CD14 and CD19, positive staining is observed for CD73 and CD90. Expression of CD34, CD105 and CD146 varies depending on the source materials and the stage of MSC differentiation.

Specificity	*Fluorochrome*	*Clone (Isotype)*
CD90	FITC	F15-42-1-5 (IgG1 Mouse)
CD73		AD-2 (IgG1 Mouse)
CD34	ECD	581 (IgG1 Mouse)
CD146	PC5.5	TEA 1/34 (IgG2a Mouse)
CD105	PC7	TEA3/17.1.1 (IgG1 Mouse)
CD45	APC-Alexa Fluor* 750	J33 (IgG1 Mouse)
CD31	Pacific Blue*	5.6E (IgG1 Mouse)
CD14	Krome Orange	RMO52 (IgG2a Mouse)
CD19	Krome Orange	J3-119 (IgG1 Mouse)



Stromal Vascular Fraction.

Not available in all geographies. DURAClone Panels are available for Research Use Only. Not for use in diagnostics procedures.

NOTES

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

Please see also the section on DURAClone IF antibody panels, page 175

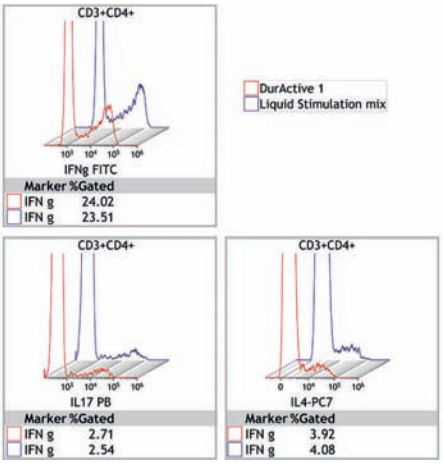
	Size	Status	Part #
DURActive 1	25 tests	RUO	C11101

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



	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 Streptomyces conglobatus

	Size	Status	Part #	
DURActive 3	25 tests	RUO	C21857	NEW

Dry Stimulation Mixes for Immune Functional Assays

Lipopolysaccharide (LPS), a constituent of the membrane of gram-negative bacteria, represents a pathogen-associated molecular pattern (PAMP). Brefeldin A blocks Golgi-apparatus-mediated secretion. A mix of these 2 compounds strongly activates cells of the innate immune system expressing LPS-recognizing surface receptors such as monocytes, and traps newly synthesized biomolecules (e.g., cytokines) inside the cell, indicating the capacity to respond to microbial pathogens.

The DURActive stimulation kits contain optimally dosed physiologically active compounds provided as unitized single tests in 12x75mm tube format.

Components
Lipopolysaccharides from Escherichia coli O127:B8
Brefeldin A

Not available in all geographies. DURAClone Panels are available for Research Use Only. Not for use in diagnostics procedures.

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 in unitized form to standardize testing and reduce hands-on time
- Dried down reagents - No refrigeration

	Size	*Status*	*Part #*
DURAClone Tri T-STAT CD3/CD4/CD8 Reagent Kit	50 tests	CE/IVD	**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.

	Size	Status	Part #
DURAClone B27 Reagent Kit	50 tests	CE/IVD	**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 hematolymphoid neoplasms may be represented, nor are all possible immunophenotypic variants described or demonstrated.

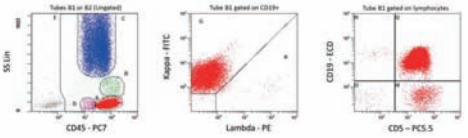
ClearLLab B1

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	IVD	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	IVD	B66810

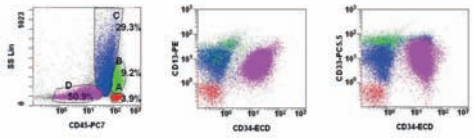
ClearLLab M

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	ClearLLab	IVD	B66812

Examples of dual parameter histograms from an acute myeloid leukemia (AML) bone marrow sample for ClearLLab Myeloid reagents. Note: not all histograms shown.



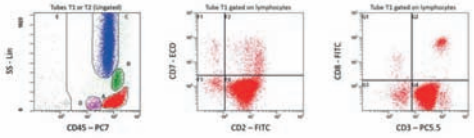
ClearLLab T1

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	ClearLLab	IVD	B66807

Examples of dual parameter histograms from a mature T-cell neoplasm peripheral blood sample for ClearLLab T1 and T2 reagents. Note: not all histograms shown.



ClearLLab T2

CD8-FITC/CD4-PE/CD3-PC5.5/CD45-PC7

Combination	Clone	Isotype
CD8-FITC	B9.11	IgG1 (mouse)
CD4-PE	SFCI12T4D11	IgG1 (mouse)
CD3-PC5.5	UCHT1	IgG1 (mouse)
CD45-PC7	J33	IgG1 (mouse)

Size	Format	Line	Status	Part #
25 tests	Liquid	ClearLLab	IVD	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 hematolymphoid 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 hematolymphoid 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 lymphopoetic 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.

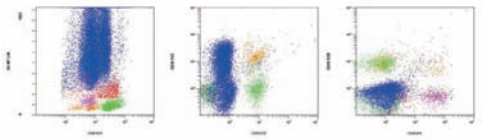
Each case includes a clinical vignette that describes the patient demographics and clinical history, case-specific listmode data files for reanalysis by the user of this casebook, ClearLLab LS-specific analysis protocols to be used with the listmode data, and a report showing the analysis with provided 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 hematolymphoid 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/IVD	B74073

ClearLLab Compensation Kit

Size	*Format*	*Line*	*Status*	*Part #*
5 tests	Dry	ClearLLab	IVD	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.

ClearLLab 10C System

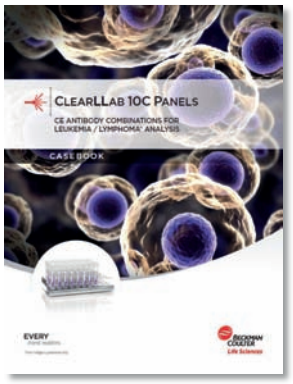
ClearLLab 10C Panels

The ClearLLab 10C system is an integrated L&L* immunophenotyping solution for lymphoid and myeloid lineages that includes:

- ClearLLab CE/IVD 10-color panels
- Fluorescence standardization and color compensation setup kit
- Process controls
- Navios/Navios EX flow cytometer
- Kaluza C analysis software

The ClearLLab 10C Panels are intended for in vitro diagnostic use for qualitative identification of various cell populations by multiparameter immunophenotyping on the Navios and Navios EX flow cytometers. These reagents are used as an aid in the differential diagnosis of hematologically abnormal patients having, or suspected of having, the following hematopoietic neoplasms: 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, Acid Citrate Dextrose (ACD) or Heparin), bone marrow (collected in K2EDTA, ACD or Heparin) and lymph node specimens. Interpretation of the results should be confirmed by a pathologist or equivalent professional in conjunction with other clinical and laboratory findings.
These reagents provide multiparameter, qualitative results for the surface antigens listed below:

- ClearLLab 10C B Cell Tube:
  Kappa, Lambda, CD10, CD5, CD200, CD34, CD38, CD20, CD19, CD45
- ClearLLab 10C T Cell Tube:
  TCRγδ, CD4, CD2, CD56, CD5, CD34, CD7, CD8, CD3, CD45
- ClearLLab 10C M1 Cell Tube:
  CD16, CD7, CD10, CD13, CD64, CD34, CD14, HLA-DR, CD11b, CD45
- ClearLLab 10C M2 Cell Tube:
  CD15, CD123, CD117, CD13, CD33, CD34, CD38, HLA-DR, CD19, CD45



This casebook has been designed to assist in the analysis of flow cytometric immunophenotyping data generated using Beckman Coulter's ClearLLab 10C Panels CE/IVD marked reagent for Leukemia and Lymphoma* analysis on the Beckman Coulter Navios and Navios EX flow cytometers.
Sample 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 whole 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 10C 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 hematolymphoid neoplasms may be represented, nor are all possible immunophenotypic variants described or demonstrated.

ClearLLab 10C B Cell Tube

Kappa-FITC/Lambda-PE/CD10-ECD/CD5-PC5.5/CD200-PC7/CD34-APC/CD38-APC-A700/CD20-APC-A750/CD19-PB/CD45-KrO

Combination	*Clone*	*Isotype*
kappa-FITC	Polyclonal	F(ab')$_2$ (rabbit)
lambda-PE	Polyclonal	F(ab')$_2$ (rabbit)
CD10-ECD	ALB1	IgG1 (mouse)
CD5-PC5.5	BL1a	IgG2a (mouse)
CD200-PC7	OX-104	IgG1 (mouse)
CD34-APC	581	IgG1 (mouse)
CD38-APC-A700	LS198-4-3	IgG1 (mouse)
CD20-APC-A750	B9E9	IgG2a (mouse)
CD19-PB	J3-119	IgG1 (mouse)
CD45-KrO	J33	IgG1 (mouse)

Size	*Format*	*Line*	*Status*	*Part #*	
25 tests	Dry	ClearLLab	IVD	B96805	NEW

* For Non-Hodgkin's lymphoma only

ClearLLab 10C T Cell Tube

TCRγ/δ-FITC/CD4-PE/CD2-ECD/CD56-PC5.5/CD5-PC7/CD34-APC/CD7-APC-A700/CD8-APC-A750/CD3-PB/CD45-KrO

Combination	Clone	Isotype
TCR PAN γ/δ-FITC	IMMU510	IgG1 (mouse)
CD4-PE	13B8.2	IgG1 (mouse)
CD2-ECD	39C1.5	IgG2a (rat)
CD56-PC5.5	N901	IgG1 (mouse)
CD5-PC7	BL1a	IgG2a (mouse)
CD34-APC	581	IgG1 (mouse)
CD7-APC-A700	8H8.1	IgG2a (mouse)
CD8-APC-A750	ALB11	IgG1 (mouse)
CD3-PB	UCHT1	IgG1 (mouse)
CD45-KrO	J33	IgG1 (mouse)

Size	Format	Line	Status	Part #	
25 tests	Dry	ClearLLab	IVD	B96806	NEW

ClearLLab 10C M1 Cell Tube

CD16-FITC/CD7-PE/CD10-ECD/CD13-PC5.5/CD64-PC7/CD34-APC/CD14-APC-A700/HLA-DR-APC-A750/CD11b-PB/CD45-KrO

Combination	Clone	Isotype
CD16-FITC	3G8	IgG1 (mouse)
CD7-PE	8H8.1	IgG2a (mouse)
CD10-ECD	ALB1	IgG1 (mouse)
CD13-PC5.5	Immu103.44	IgG1 (mouse)
CD64-PC7	22	IgG1 (mouse)
CD34-APC	581	IgG1 (mouse)
CD14-APC-A700	RMO52	IgG2a (mouse)
HLA-DR-APC-A750	Immu-357	IgG1 (mouse)
CD11b-PB	Bear1	IgG1 (mouse)
CD45-KrO	J33	IgG1 (mouse)

Size	Format	Line	Status	Part #	
25 tests	Dry	ClearLLab	IVD	B96807	NEW

ClearLLab 10C M2 Cell Tube

CD15-FITC/CD123-PE/CD117-ECD/CD13-PC5.5/CD33-PC7/CD34-APC/CD38-APC-A700/HLA-DR-APC-A750/CD19-PB/CD45-KrO

Combination	*Clone*	*Isotype*
CD15-FITC	W6B3C1	IgG1 (mouse)
CD123-PE	9F5	IgG1 (mouse)
CD117-ECD	104D2D1	IgG1 (mouse)
CD13-PC5.5	Immu103.44	IgG1 (mouse)
CD33-PC7	D3HL60.251	IgG1 (mouse)
CD34-APC	581	IgG1 (mouse)
CD38-APC-A700	LS198-4-3	IgG1 (mouse)
HLA-DR-APC-A750	Immu-357	IgG1 (mouse)
CD19-PB	J3-119	IgG1 (mouse)
CD45-KrO	J33	IgG1 (mouse)

Size	*Format*	*Line*	*Status*	*Part #*	
25 tests	Dry	ClearLLab	IVD	B96808	NEW

ClearLLab Control Cells

ClearLLab Control Cells Normal

Size	*Format*	*Line*	*Status*	*Part #*	
25 tests	Liquid	ClearLLab	IVD	B90002	NEW

ClearLLab Control Cells Abnormal

Size	*Format*	*Line*	*Status*	*Part #*	
25 tests	Liquid	ClearLLab	IVD	B90003	NEW

ClearLLab Control Cells Normal and ClearLLab Control Cells Abnormal are stabilized preparations of assayed, lysable whole blood intended as process controls for the verification of the ClearLLab 10C Panels on the Navios and Navios EX flow cytometers.

Parameters assayed include: Kappa, Lambda, CD5, CD200, CD38, CD20, CD19, CD45, TCRγδ, CD4, CD2, CD56, CD3, CD7, CD8, CD16, CD10, CD13, CD64, CD14, HLA-DR, CD11b, CD15, CD33, CD34, CD117, and CD123

They provide positive cell controls that are processed in the same manner as a whole blood sample. This allows verification of reagent performance and the methods used for staining targeted cells, lysing erythrocytes, and analyzing samples with flow cytometry.

ClearLLab 10C System

ClearLLab Compensation Beads

Size	Format	Line	Status	Part #	
100 tests	Liquid	ClearLLab	IVD	B99883	NEW

ClearLLab Compensation Beads are to be used in conjunction with the ClearLLab Compensation Kit to establish compensation settings on the Navios and Navios EX Flow Cytometer(s) prior to multicolor analysis with the ClearLLab 10C Panels.

ClearLLab Compensation Beads contain two vials of 3.0-3.4 µm beads in suspension at a concentration of approximately 1 x 10^7 particles/mL. The Antibody Capture Negative Beads acts as a negative control and does not bind fluorochrome-conjugated antibodies. The Antibody Capture Positive Beads contains beads coated with an IgG-binding agent that will bind mouse isotypes.

ClearLLab Compensation Kit

Size	Format	Line	Status	Part #
5 tests	Dry	ClearLLab	IVD	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	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	SFCI12T4D11	IgG1 (mouse)
CD8-ECD	SFCI21Thy2D3	IgG1 (mouse)
CD3-PC5	UCHT1	IgG1 (mouse)

AQUIOS Tetra-2+ Panel

Size	*Status*	*Part #*
50 tests	IVD	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 IMMUNO-TROL Cells

Size	Status	Part #
2 x 3 mL	IVD	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

Size	Status	Part #
2 x 3 mL	IVD	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

Size	Status	Part #
100 tests	IVD	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 Sheath Solution

Size	Status	Part #
1 x 10 L	IVD	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

Size	Status	Part #
500 mL	IVD	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

Size	Status	Part #
4 x 50 mL	IVD	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

Size	Status	Part #
Case of 50 plat	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 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/IVD	B42535
8 x 50 tests	CE/IVD	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/IVD	B43611
4 x 100 tests	CE/IVD	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/IVD	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/IVD	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/IVD	B43019
8 x 50 tests	CE/IVD	B43020

The AQUIOS VersaFix Lysing Reagent consists of a rready-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 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/IVD	B69476
1 unit	-	C04893

The AQUIOS Designer Software 2.0 (ADS 2.0) functions 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.

Flow-Check Fluorospheres

Size	Status	Part #
3 x 10 mL	IVD	6605359

Flow-Check Fluorospheres consist of 10 µm (nominal diameter) polystyrene fluorescent microspheres suspended in an aqueous medium containing surfactants and preservatives at 1 x 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/IVD	B43611
4 x 100 tests	CE/IVD	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/IVD	B43019
8 x 50 tests	CE/IVD	B43020

The AQUIOS VersaFix Lysing Reagent consists of a rready-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.

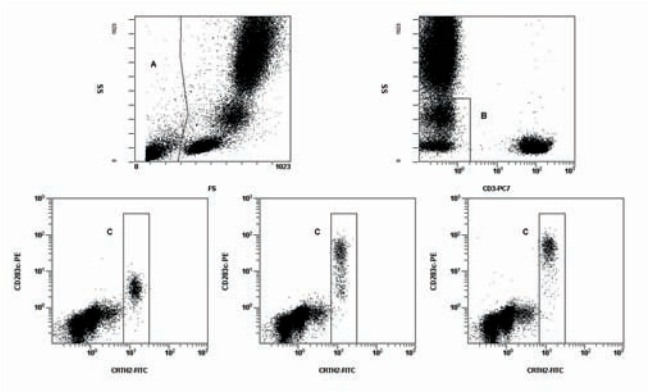
NOTES

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/IVD	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

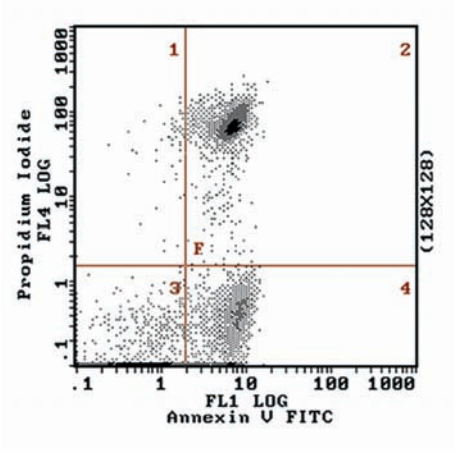
Annexin A5 Kits

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.

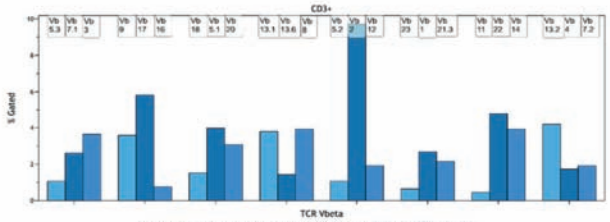


Analysis may be performed on any flow cytometer equipped with a 488nm laser or Arc Lamp depending on the reagent kit chosen. Alternatively, the cells may be examined with a fluorescent microscope or cell imaging system equipped with the appropriate filters.

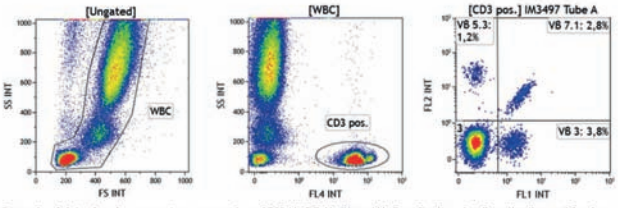
	Size	*Status*	*Part #*
Annexin A5-FITC Kit (20 tests)	20 tests	RUO	IM2375
Annexin A5-FITC	-	1 vial	0.1 mL
Binding Buffer	-	1 vial - 10X	1.7 mL
Propidium Iodide	-	1 vial	Lyophilized
Annexin A5-FITC Kit (200 tests)	200 tests	RUO	IM3546
Annexin A5-FITC	-	1 vial	0.2 mL
Binding Buffer	-	6 vials - 10X	1.7 mL
Propidium Iodide	-	1 vial	Lyopilized
Annexin A5-FITC/7-AAD kit	150 tests	RUO	IM3614
Annexin A5-FITC	-	1 vial	1.7 mL
Binding Buffer	-	5 vials - 10X	1.7 mL
7-AAD	-	1 vial	3 mL

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 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. The IOTest Beta Mark kit includes a control for PMT setting and fluorescence compensation adjustments.



Clonogram representation of the TCR Vβ repertoire in CD3+ T-cells



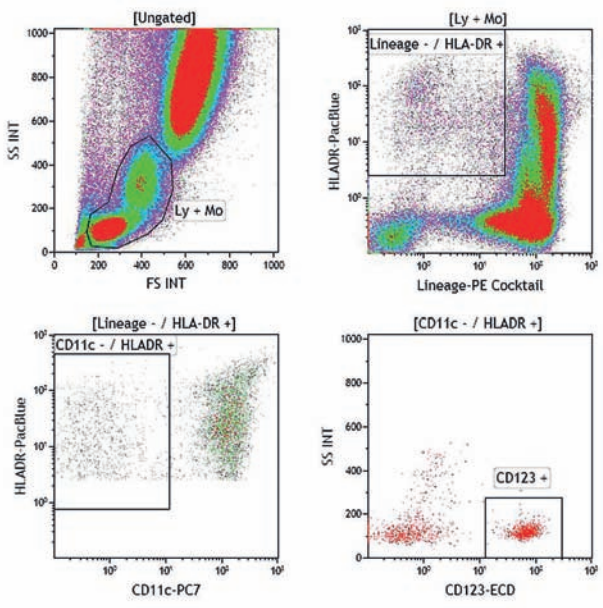
Example of data showing percentage expression of TCR Vβ5.3, Vβ7.1 and Vβ3 on T cells using 3 antibodies and 2 colors

			Size	*Status*	*Part #*
β Mark TCR Vβ Repertoire Kit			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)		

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.

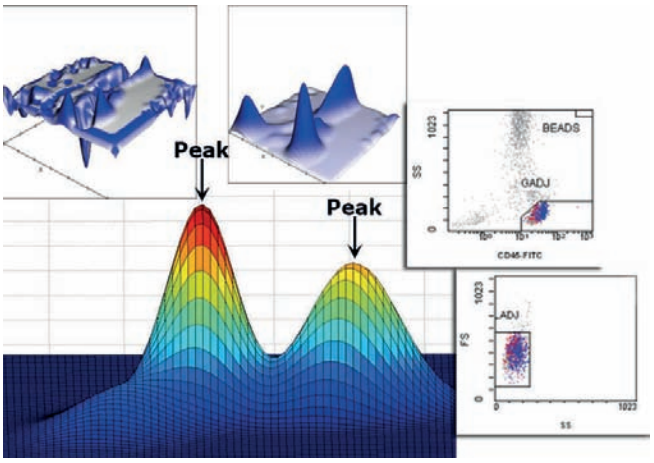
			Size	*Status*	*Part #*
Lineage-PE Cocktail			100 tests	RUO	B29559
	CD3	PE	UCHT1 (IgG1 Mouse)		
	CD14	PE	RMO52 (IgG2a Mouse)		
	CD19	PE	J3-119 (IgG1 Mouse)		
	CD20	PE	B9E9 (IgG2a Mouse)		
	CD56	PE	N901 (IgG1 Mouse)		

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	A63493
	Fluorospheres (10 µm; 6 µm; 3 µm)	-	3 vials	10 mL/vial
Flow-Set Pro Fluorospheres		3 x 10 mL	IVD	A63492
	Fluorospheres (3 µm)	-	3 vials	10 mL/vial
QuickCOMP 4 Kit		50 tests	IVD	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	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	6607077
	Quality Control Product	-	2 vials	3 mL/vial
IMMUNO-TROL Low Cells		60 tests	IVD	6607098
	Quality Control Product	-	2 vials	3 mL/vial
CYTO-TROL Control Cells		50 tests	IVD	6604248
	Cells (≥ 3.5 x 10^6 cells/vial)	-	5 vials	Lyophilized
	Reconstitution buffer	-	5 vials	1 mL/vial
CD45-FITC/CD4-PE/CD8-ECD/CD3-PC5		50 tests	IVD	6607013
CD45-FITC/CD56-PE/CD19-ECD/CD3-PC5		50 tests	IVD	6607073
Flow-Count Fluorospheres		200 tests	IVD	7547053
	Fluorospheres (10 µm)	-	1 vial	20 mL/vial
Navios Tetra Software			IVD	775213

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 µL) 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	175621
Leuko-Trol Platelet Control Kit	200 tests	IVD	175651
Leuko-Trol RBC Control Kit	200 tests	IVD	175658

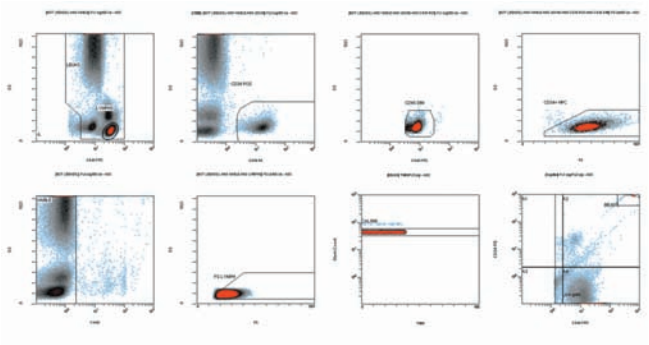
Stem-Kit Reagents

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 #*
HPC Enumeration Kit		50 tests	IVD	IM3630
CD45-FITC/CD34-PE	-	-	1 vial	
CD45-FITC/IsoClonic Control-PE	-	-	1 vial	
7-AAD Viability Dye		-	1 vial	
10X NH_4Cl 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.

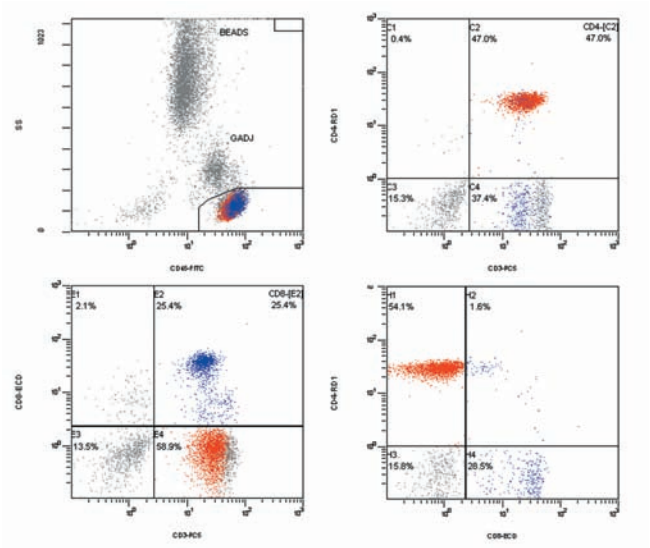


		Size	*Status*	*Part #*
Flow-Check Fluorospheres		3 x 10 mL	IVD	6605359
	Fluorospheres (10 µm)	-	3 vials	10 mL/vial
Flow-Set Fluorospheres		3 x 10 mL	IVD	6607007
	Fluorospheres (3.6 µm)	-	3 vials	10 mL/vial
CYTO-COMP Cell Kit		50 tests	IVD	6607023
	Cells (≥ 3.5 x 10^6 cells/vial)	-	5 vials	Lyophilized
	Reconstitution buffer	-	5 vials	1 mL/vial
QuickCOMP 2 Kit		50 tests	IVD	177018
	CD45-FITC	-	1 vial	50 tests
	CD45-PE	-	1 vial	50 tests
HPC Enumeration Kit		50 tests	IVD	IM3630
	CD45-FITC/CD34-PE -	-	1 vial	
	CD45-FITC/IsoClonic Control-PE -	-	1 vial	
	7-AAD Viability Dye	-	1 vial	
	10X NH_4Cl Lysing Solution	-	2 vials	
	Stem-Count Fluorospheres	-	1 vial	
COULTER Stem-Trol Control Cells		10 tests	IVD	IM3632
	HPC Control Cells 0.2 mL/vial	-	1 vial	10 tests
stemCXP SYSTEM Software		-	IVD	Please call

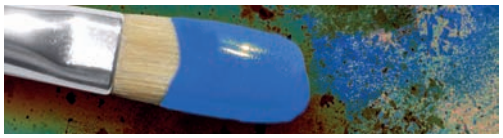
tetraCXP SYSTEM

The tetraCXP SYSTEM provides an 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 #
CD45-FITC/CD4-PE/CD8-ECD/CD3-PC5		50 tests	IVD	6607013
CD45-FITC/CD56-PE/CD19-ECD/CD3-PC5		50 tests	IVD	6607073
Flow-Check Fluorospheres		3 x 10 mL	IVD	6605359
	Fluorospheres (10 µm)	-	3 vials	10 mL/vial
Flow-Set Fluorospheres		3 x 10 mL	IVD	6607007
	Fluorospheres (3.6 µm)	-	3 vials	10 mL/vial
CYTO-COMP Cell Kit		50 tests	IVD	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	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	7547053
	Fluorospheres (10 µm)	-	1 vial	20 mL/vial
CYTO-TROL Control Cells		50 tests	IVD	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	6607077
	Quality Control Product	-	2 vials	3 mL/vial
IMMUNO-TROL Low Cells		60 tests	IVD	6607098
	Quality Control Product	-	2 vials	3 mL/vial
tetraCXP SYSTEM Software		-	IVD	Please call



SUPPORT REAGENTS

NOTES

Fluorospheres and Quality Controls

Beckman Coulter provides a complete comprehensive workflow solution for all your flow cytometry needs.

Description	Utility	Emission Range	Excitation
Fluorospheres			
APC (675/633) Set-Up Kit	Daily verification of optical alignment/fluidic stability	675 nm	633 nm
CytoFlex Daily IR QC Fluorospheres	Used for daily verification of the CytoFLEX flow cytometer's IR (Infrared) laser	> 800 nm	808 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
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	488 nm 635 nm
Flow-Count Fluorospheres	Used to determine absolute counts on the flow cytometer	525 nm – 700 nm 400 nm – 500 nm	488 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
PC7 (770/488) Set-Up Kit	Daily verification of optical alignment/fluidic stability	770 nm	488 nm
VersaComp Antibody Capture Beads	Set compensation to account for spectral overlap in multicolor flow cytometry assays		
Quality Controls			
AQUIOS IMMUNO-TROL Cells	Verification of instrument and reagent performance		
AQUIOS IMMUNO-TROL Low Cells	Allows verification of instrument and reagent performance		
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		
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-Trol Control Cells	Ready-to-use calibrated control cells providing antibody-to-antigen positive control for absolute counting of $CD34^{+}CD45^{dim}$ cells		

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/IVD	737663
2 vials	RUO	6607120

CytoFLEX Daily IR QC Fluorospheres

CytoFLEX Daily IR QC Fluorospheres consists of a suspension of approximatively 2.8 µm to 3.4 µm 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.

	Size	Presentation
Fluorospheres (~3 µm)	10 mL/vial	2 vials

Size	Status	Part #
2 x 10 mL	RUO	C06147

CytoFLEX Daily QC Fluorospheres

CytoFLEX Daily QC Fluorospheres consists of a suspension of approximatively 3 µm 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.

	Size	Presentation
Fluorospheres (~3 µm)	2 mL/vial	1 vial

Size	Status	Part #
1 vial	RUO	B53230

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 x 106 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	6605359

Fluorospheres and Quality Controls

Fluorospheres

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	A63493
3 x 10 mL	RUO	A69183

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.

	Size	Presentation
Fluorospheres (10 µm)	20 mL/vial	1 vial

Size	Status	Part #
200 tests	IVD	7547053

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	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	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.

	Size	Presentation
Fluorospheres	10 mL/vial	5 vials

Size	Status	Part #
5 x 10 mL	IVD	6603473

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/IVD	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

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.

	Size	Presentation
Size	Status	Part #
2 x 3 mL	IVD	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.

	Size	Presentation
Size	Status	Part #
2 x 3 mL	IVD	B25700

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 (≥ 3.5 x 10^6 cells/vial)	Lyophilized	5 vials
Reconstitution buffer	1 mL/vial	5 vials

Size	Status	Part #
50 tests	IVD	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	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 are compatible with directly-conjugated COULTER monoclonal antibodies.

	Size	Presentation
Cells (≥ 3.5 x 10^6 cells/vial)	Lyophilized	5 vials
Reconstitution buffer	1 mL/vial	5 vials

Size	Status	Part #
50 tests	IVD	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	6607077

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.

	Size	Presentation
Quality Control Product	3 mL/vial	2 vials

Size	Status	Part #
60 tests	IVD	6607098

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.

	Size	Presentation
CD45-FITC	50 tests	1 vial
CD45-PE	50 tests	1 vial

Size	Status	Part #
50 tests	IVD	177018

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	177017

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	IM3632

NOTES

Lysing, Fixative and Permeabilizing Solutions

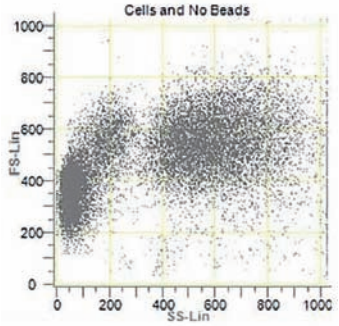
Beckman Coulter provides a complete comprehensive workflow solution for all your flow cytometry needs.

Product	Principle	Sample	Fixation in lysis step	Wash / No-wash	Fixation after lysis	Applications
Lysis without permeabilization						
Versalyse	**Ezyme-based erythrocytes lysis**	**Venous blood, bone marrow**	**Optional (IOTest3 Fixative Solution)**	**Can be used both washed and no-wash**	**Yes**	**Extracellular staining, Low stringency, Gentle to cells**
IOTest 3 **Lysing Solution**	**Ammonium Chloride based erythrocyte lysis**	**Venous blood, bone Marrow**	**No**	**Wash after lysis**	**Optional (IOTest3 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. Automatisation 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 AQUIOS 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.**
IOTest 3 **Fixative Solution**	**Formaldehyde-based fixative, provided as 10X concentrate.**	**Venous blood, bone marrow**	**Yes**	**Not Applicable**	**Yes**	**Optimized to work in combination with IOTest 3 Lysing Solution, VersaLyse Lysing Solution and other systems.**

AQUIOS VersaFix Lysing Reagent

The AQUIOS VersaFix Lysing Reagent consists of a rready-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/IVD	98/79/EC	**B43019**
For the AQUIOS CL Flow Cytometer (8 vials)	8 x 50 tests	CE/IVD	98/79/EC	**B43020**
For the AQUIOS CL Flow Cytometer (1 vial)	50 tests	RUO	cGMP	**C02059**

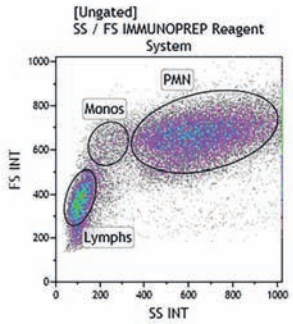


AQUIOS VersaFix

IMMUNOPREP Reagent System

The IMMUNOPREP Reagent System is a rapid, gentle, no-wash erythrocyte lysing system which maintains leukocyte morphology and cell surface integrity. Cell loss due to washing and centrifugation is eliminated. Since these steps are not required, processing time is substantially reduced. Automation further shortens the preparation time allowing more rapid responses in urgent clinical situations.
The IMMUNOPREP Reagent System is a matched, three-reagent system dedicated to a specific preparation Workstation. The reagent combination consists of:
IMMUNOPREP A, an erythrocyte lytic agent;
IMMUNOPREP B, a leukocyte stabilizer; and
IMMUNOPREP C, a cell membrane fixative.

	Size	*Status*	*Quality Standard*	*Part #*
For Q-PREP Workstation	100 tests	IVD	cGMP	**7546946**
For TQ-Prep Workstation	300 tests	IVD	cGMP	**7546999**



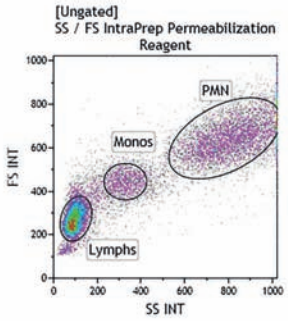
IMMUNOPREP on venous blood. Acquisition with a Navios cytometer using CXP acquisition software and Kaluza analysis software.

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	RUO	cGMP	**IM2388**
Fixative + Permeabilizer (15 mL + 15 mL)	150 tests	RUO	cGMP	**IM2389**
Fixative + Permeabilizer (5 mL + 5 mL)	50 tests	IVD	cGMP	**A07802**
Fixative + Permeabilizer (15 mL + 15 mL)	150 tests	IVD	cGMP	**A07803**

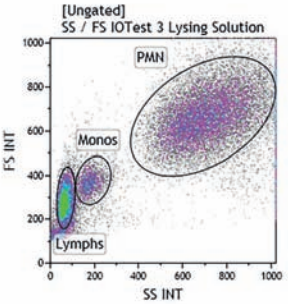


IntraPrep on venous blood. Acquisition with a Navios cytometer using CXP acquisition software and Kaluza analysis software.

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	RUO	cGMP	**IM3514**
Lysing Solution	100 tests	IVD	cGMP	**A07799**



IOTest 3 on venous blood. Acquisition with a Navios cytometer using CXP acquisition software and Kaluza analysis software.

IOTest 3 Fixative Solution

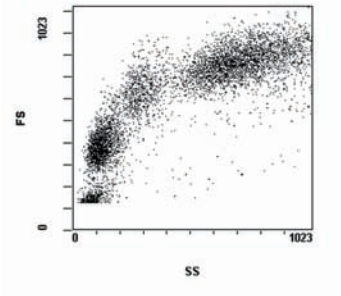
The IOTest3 Fixative Solution allows whole blood or bone marrow specimen preparation by fixing the cell suspension after erythrolysis during immunophenotyping procedures. At least one wash is required between the lysis and the fixation steps. The IOTest3 Fixative Solution is optimized to work in combination 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	RUO	cGMP	**IM3515**
Fixative Solution	100 - 200 tests	IVD	cGMP	**A07800**

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 B	250 tests	RUO	cGMP	**IM1400**
OptiLyse C	200 tests	RUO	cGMP	**A11894**
OptiLyse C	200 tests	IVD	cGMP	**A11895**



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.

PerFix EXPOSE

Fast and Easy Procedure for Cell Signaling

The PerFix EXPOSE kit has been developed to enhance the signal-to-noise ratio of phosho-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	cGMP	**B26976**

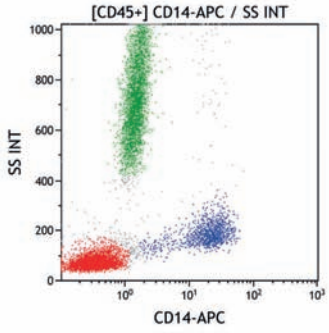


Illustration of leucocyte pattern and surface CD14 staining on a normal whole blood sample, implementing the STRAIGHT procedure (Surface and Phospho-epitopes markers incubated simultaneously).

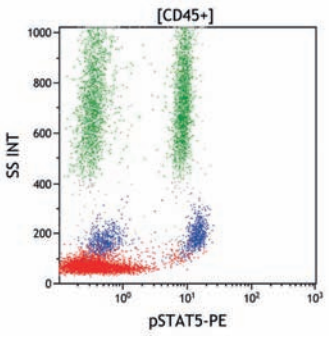


Illustration of leucocyte pattern and Phospho-STAT5 staining on the same normal sample (50/50 mix of GM-CSF activated and non-activated leucocytes), showing a pSTAT5-PE Relative Mean Fluorescence Intensity of more than 30 for both monocytes and granulocytes.

Lysing, Fixative and Permeabilizing Solutions

PerFix-nc (no centrifuge assay kit)

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	RUO	cGMP	**B10825**
Fixative Buffer : 2 vials Permeabilizing Buffer : 2 vials Final 10X Solution : 2 vials	150 tests	RUO	cGMP	**B10826**
Fixative Buffer : 1 vial Permeabilizing Buffer : 1 vial Final 10X Solution : 1 vial	75 tests	IVD	cGMP	**B31167**
Fixative Buffer : 2 vials Permeabilizing Buffer : 2 vials Final 10X Solution : 2 vials	150 tests	IVD	cGMP	**B31168**

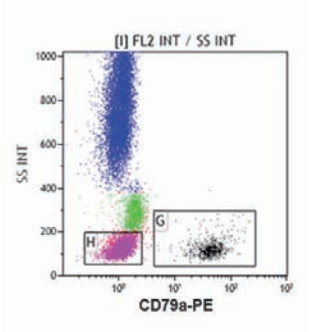
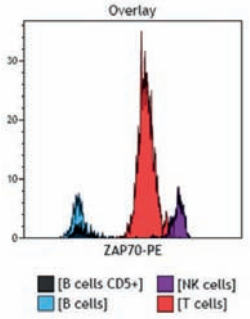


Illustration of leucocyte pattern and intracytoplasmic B-Cell staining on normal sample, implementing the PerFix-nc STRAIGHT protocol.



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	cGMP	**6607130**

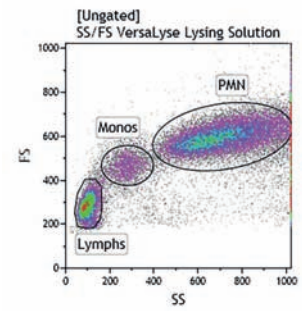
Lysing, Fixative and Permeabilizing Solutions

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 K_3EDTA anticoagulated blood sample lysed with VersaLyse Lysing Solution (No-wash procedure).

	Size	*Status*	*Quality Standard*	*Part #*
Lysing Solution	100 tests	RUO	cGMP	**IM3648**
Lysing Solution	100 tests	IVD	cGMP	**A09777**

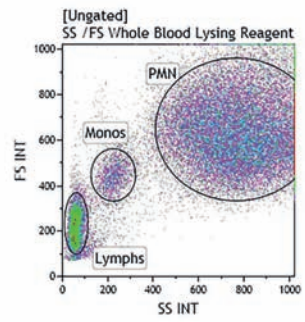


VersaLyse Wash on venous blood. Acquisition with a Navios cytometer using CXP acquisition software and Kaluza analysis software.

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 cytrometry. 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	cGMP	**6602764**
Lysing Kit	300 tests	IVD	cGMP	**6603152**



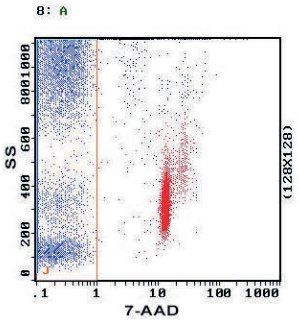
Whole Blood on venous blood. Acquisition with a Navios cytometer using CXP acquisition software and Kaluza analysis software.

NOTES

Description	Utility
7-AAD Viability Dye	Ready-to-use reagent allowing discrimination of viable from non-viable 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.
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.
ViaKrome Fixable Viability Dyes	Fixable dyes for discriminating viable from non-viable cells, not susceptible to hydrolysis like all other fixable viability dyes
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

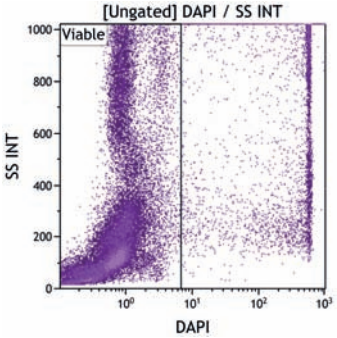
7-AAD Viability Dye is a ready-to-use reagent allowing discrimination of viable from non-viable cells using flow cytometry. It is composed of 7-Amino-Actinomycin D (7-AAD) which intercalates between cytosine and guanine bases of the DNA. The maximum absorption of the 7-AAD / DNA complex is situated in 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	**A07704**
	RUO	**IM3422**
	RUO	**B88526**

DAPI

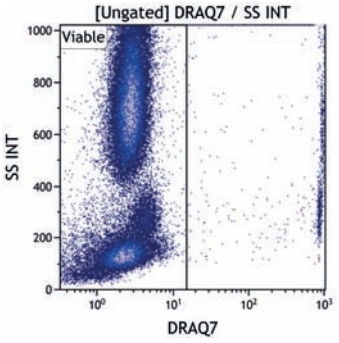
4',6-diamidino-2-phenylindole (DAPI) is a blue fluorescent nucleic acid stain that binds to double stranded DNA and appears to associate with AT clusters in the minor groove of the DNA molecule. DAPI undergoes approximately 20-fold enhancement of fluorescence when associated with DNA, having an excitation 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**

DRAQ7 dye

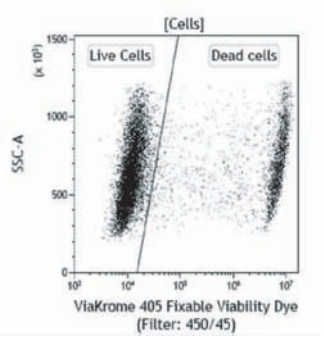
DRAQ7 is a novel far-red emitting viability dye (e.g. 725nm/20nm bandpass) that can be used as a membrane impermeant fluorescent dye for the rapid and convenient staining of the dsDNA/nuclei of cells, tissues and organisms including dead, permeabilized or fixed mammalian cells with minimal RNA-associated 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**

ViaKrome 405 Fixable Viability Dye

The ViaKrome 405 Fixable Viability Dye is a thiol reactive fluorescent dye that covalently binds free thiol present on cellular proteins at a neutral pH. Live cells, impermeable to the ViaKrome 405 Fixable Viability Dye, will be weakly stained by the covalent binding of proteins express on the cell surface while cells whose membranes have lost structural integrity, will be strongly stained by the covalent binding of intracellular and membrane expressed proteins. The reactive groups are stable in aqueous solutions, thus the ViaKrome 405 Fixable Viability Dye does not require DMSO for reconstitution.



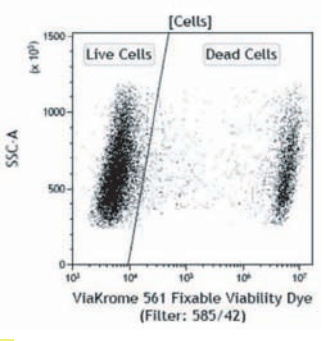
Excitation	MaxEmission Max	Suggested Bandpass
402 nm	425 nm	450/45

	Size	*Presentation*
Compatible Violet laser (405 nm)	200 tests	Liquid
	Status	*Part #*
	RUO	**C36614**

NEW

ViaKrome 561 Fixable Viability Dye

The ViaKrome 561 Fixable Viability Dye is a thiol reactive fluorescent dye that covalently binds free thiol present on cellular proteins at a neutral pH. Live cells, impermeable to the ViaKrome 561 Fixable Viability Dye, will be weakly stained by the covalent binding of proteins express on the cell surface while cells whose membranes have lost structural integrity, will be strongly stained by the covalent binding of intracellular and membrane expressed proteins. The reactive groups are stable in aqueous solutions, thus the ViaKrome 561 Fixable Viability Dye does not require DMSO for reconstitution.



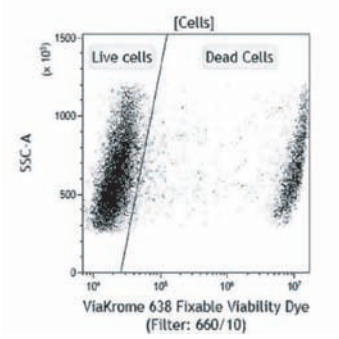
Excitation	MaxEmission Max	Suggested Bandpass
555 nm	565 nm	585/42

	Size	*Presentation*
Compatible Yellow Green (561 nm)/Blue (488 nm) lasers	200 tests	Liquid
	Status	*Part #*
	RUO	**C36620**

NEW

ViaKrome 638 Fixable Viability Dye

The ViaKrome 638 Fixable Viability Dye is a thiol reactive fluorescent dye that covalently binds free thiol present on cellular proteins at a neutral pH. Live cells, impermeable to the ViaKrome 638 Fixable Viability Dye, will be weakly stained by the covalent binding of proteins express on the cell surface while cells whose membranes have lost structural integrity, will be strongly stained by the covalent binding of intracellular and membrane expressed proteins. The reactive groups are stable in aqueous solutions, thus the ViaKrome 638 Fixable Viability Dye does not require DMSO for reconstitution.



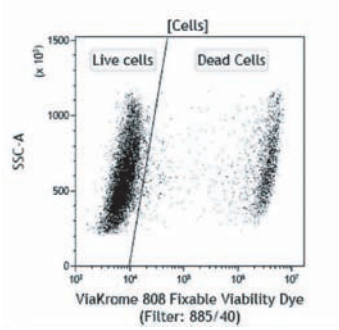
Excitation	MaxEmission Max	Suggested Bandpass
638 nm	655 nm	660/10

	Size	*Presentation*
Compatible Red laser (638 nm)	200 tests	Liquid
	Status	*Part #*
	RUO	**C36624**

NEW

ViaKrome 808 Fixable Viability Dye

The ViaKrome 808 Fixable Viability Dye is a thiol reactive fluorescent dye that covalently binds free thiol present on cellular proteins at a neutral pH. Live cells, impermeable to the ViaKrome 808 Fixable Viability Dye, will be weakly stained by the covalent binding of proteins express on the cell surface while cells whose membranes have lost structural integrity, will be strongly stained by the covalent binding of intracellular and membrane expressed proteins. The reactive groups are stable in aqueous solutions, thus the ViaKrome 808 Fixable Viability Dye does not require DMSO for reconstitution.



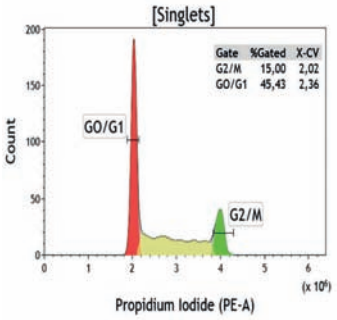
Excitation	MaxEmission Max	Suggested Bandpass
854 nm	878 nm	885/40

	Size	*Presentation*
Compatible InfraRed laser (808 nm)	200 tests	Liquid
	Status	*Part #*
	RUO	**C36628**

NEW

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 GO, 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**

Ancillary Reagents

Activation Solution

Ca2+ Activation solution

EDTA (ethylene-diamine-tetraacetic acid) is a broadly used Ca2+-depleting anti-coagulant for whole blood samples that interferes with functional assays assessing/characterizing Ca2+-dependent cellular functions. Treatment of EDTA-anti-coagulated blood with the Ca2+ Activation Solution can enable certain Ca2+ dependent functional studies. The feasibility of the assay with the Ca2+ Activation solution should be evaluated for each experimental set-up.

Size	*Format*	*Status*	*Part #*
100 tests	Liquid	RUO	**C23407**

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	**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	**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/IVD	**8448222**
1 L	Liquid	CE/IVD	**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	**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	**B23538**

Ancillary Reagents

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	**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**

DxFLEX Sheath Fluid

Size	*Format*	*Status*	*Part #*
10 L	Liquid	IVD	**B73613**

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.

Size	*Format*	*Status*	*Part #*
4 x 1.8 L	Liquid	IVD	**8547008**
1 x 10 L	Liquid	IVD	**8546859**

PuraFlow Sheath Fluid

Size	*Format*	*Status*	*Part #*
20 L	Liquid, 1X	RUO	**A70188**
4 x 6 L	Liquid, 8X	RUO	**CY30230**

Startup Reagents

CytoFLEX Startup Reagents

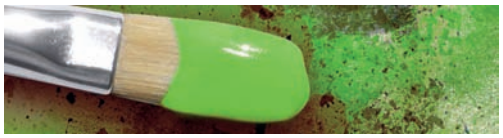
Daily QC Beads, Sheath, Flow Clean, Contrad.

Size	*Format*	*Status*	*Part #*
1 pack	Tubes	nMD	**B55031**
1 pack	Plates	nMD	**C14907**

CytoFLEX Startup Reagents - Infrared

Daily QC Beads, IR QC beads, Sheath, Flow Clean, Contrad.

Size	*Format*	*Status*	*Part #*
1 pack	Tubes	nMD	**C14908**
1 pack	Plates	nMD	**C14909**



INSTRUMENTATION

Integrated Solution

Automation

Automate sample handling to enhance reproducibility and productivity

Particle Counting & Characterization

Improve product quality, stability and performance

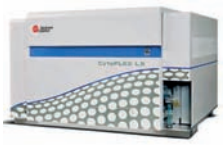
Centrifugation

Basis for all lab sample separation and preparation

Genomics

Simplify and Automate genetic analysis

Flow Cytometry



Increase throughput of single-cell analysis

Beckman Coulter Life Sciences can transform Biomek liquid handlers into complete workflow solutions that optimize the efficiency, consistency, and reliability of your lab operations. We understand that each lab is unique. Whether you desire to use existing equipment or require new instruments, we will work with you to analyze your application process and design a system that addresses your laboratory's needs, challenges and goals.

Our Integrated Solutions team, with extensive, multidisciplinary training and experience in mechanical, electrical and systems engineering, software development, and project management, has successfully integrated more than 300 third-party devices from over 60 manufacturers to meet our customers' diverse automation needs.

Flow Cytometry Automation

High-throughput flow cytometry has become an integral part of drug discovery efforts with applications in phenotypic screening, ligand binding assays, monoclonal antibody screening and biomarker discovery. The integration of the multi-parametric CytoFLEX flow cytometer increases sample throughput allowing faster processing of high complexity assays.
We now have two solutions with which to pair your CytoFLEX, depending on your throughput needs.
- The integration of the multi-parametric CytoFLEX flow cytometer to the Automation Assistant increases sample throughput allowing faster processing of high complexity assays.
- The integration of the multi-parametric CytoFLEX flow cytometer to a Biomek i5 or i7 workstation becomes a fully integrated hands-free cytometry workflow which incorporates all processing steps including sample preparation through data analysis. This workflow is further simplified by using the LUCID dry reagent plate format for antibody cocktails and data analysis using the Cytobank cloud computing software platform.

Automation of ELISA with Biomek Workstations

The flexibility and versatility of the Biomek i-Series platform allows the selected workstation of your choice to carry out all of the ELISA tasks, increasing the walk-away time and improving efficiency. The workstation reduces human error with precise dispensing and consistent treatment of each well/plate resulting in increased reproducibility. Our workstations offer high throughput capability supporting a variety of plates and tubes and come in several configurations which can be compatible with a HEPA-filtered enclosure.

AUTOMATION WORKSTATION

Biomek 4000 Laboratory Automation Workstation

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 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.

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.

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

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

AUTOMATION WORKSTATION

Biomek i-Series Automated Workstation

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:
Single Multichannel head (96/384) or Span-8 pipetting with gripper

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:
Multiple single- & dual-arm configurations with Multichannel heads (96/384) and/or Span-8 pipetting

Workstation		*Status*	*Part #*
Biomek i5 Base Unit		nMD	Please call
Biomek i7 Base Unit		nMD	Please call
Pipetting Heads		*Status*	*Part #*
MC-96			
Pipetting head, 300 µL	1 µL - 300 µL	nMD	**B87590**
Pipetting head, 1200 µL	5 µL - 1,200 µL	nMD	**B87589**
MC-384			
Pipetting head, 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 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

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	**378600**
Accessories	*Status*	*Part #*
PrepPlus 2 Accessory Kit	nMD	**6915549**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

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	**6605429**
Accessories		*Status*	*Part #*
Syringe Pump	Upgrade kit for Low Angle Light Scatter (LALS)	RUO	**6915116**
Reagent System		*Status*	*Part #*
IMMUNOPREP Reagent System		IVD	**7546999**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

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: ≤5%
- Relative standard deviation on subsets: ≤5%
- Medium Deviation between two instruments: ≤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	CE/IVD	**C05890**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

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

- 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)

Models	*Status*	*Part #*
Avanti J-15		
100-120/200-230 V, 50/60 Hz	IVD	**C01994**
100-120/200-230 V, 50/60 Hz	nMD	**C01995**
Avanti J-15R		
120 V, 60 Hz	IVD	**B99517**
120 V, 60 Hz	nMD	**B99516**
200-230 V, 50 Hz	IVD	**B99515**
200-230 V, 50 Hz	nMD	**B99514**
208-230 V, 60 Hz	IVD	**C31547**
208-230 V, 60 Hz	nMD	**C31546**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

CENTRIFUGE

HIGH PERFORMANCE CENTRIFUGE

Avanti J-E High-Performance Centrifuge

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.

Models		*Status*	*Part #*
Avanti J-E			
208-240 V, 50/60 Hz		nMD	**369001**
230 V, 50 Hz		nMD	**369003**
200 V, 50/60 Hz		nMD	**369005**
200/208/240 V, 50/60 Hz	BioSafe	nMD	**969352**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

CENTRIFUGE

HIGH PERFORMANCE CENTRIFUGE

Avanti JXN-26 High-Performance Centrifuge

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 (applies only to opening the door, not closing) is enhanced by a large easy to read touch screen interface.

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.

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.
**BioCertifi ed 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.

Models	*Status*	*Part #*
Avanti JXN-26		
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 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

CENTRIFUGE

HIGH PERFORMANCE CENTRIFUGE

Avanti JXN-30 High-Performance Centrifuge

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

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 diplay 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 ω2t integrator for applications requiring precise reproducibility

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 (applies only to opening the door, not closing)
- 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.

Models	*Status*	*Part #*
Avanti JXN-30		
220V, 3 phases, 50 Hz, 12A	nMD	**B34192**
220V, 3 phases, 50 Hz, 12A	IVD	**B38620**
200/208/240V, 50/60 Hz, 24A	nMD	**B34193**
200/208/240V, 50/60 Hz, 24A	IVD	**B38621**
230V, 50 Hz, 24A	nMD	**B37913**
230V, 50 Hz, 24A	IVD	**B38624**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

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

Models		*Status*	*Part #*
Optima MAX-TL			
MAX-TL		nMD	**A95761**
MAX-TL Biosafe	Includes centrifuge and HEPA filter	nMD	**B11229**
Optima MAX-XP			
MAX-XP		nMD	**393315**
MAX-XP Biosafe	Includes centrifuge and HEPA filter	nMD	**A47882**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

CENTRIFUGE

ULTRACENTRIFUGE

Optima XPN Series Ultracentrifuges

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.

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.

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.

Models	*Status*	*Part #*
Optima XPN-80K		
XPN-80K	nMD	**A95765**
XPN-80K	IVD	**A99839**
Optima XPN-90K		
XPN-90K	nMD	**A94468**
XPN-90K	IVD	**A99842**
Optima XPN-100K		
XPN-100K	nMD	**A94469**
XPN-100K	IVD	**A99846**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

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 Yes	Size Range 2–70 µm	Sample Volume 0.5 mL	Analysis Time < 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 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

COUNTER

CELL VIABILITY ANALYZER

Vi-CELL BLU

The Vi-CELL BLU automates the widely accepted trypan blue dye exclusion method for cell viability that has historically been performed with a light microscope, pipette, and a hemacytometer. This makes it perfect for large-to small-scale cell viability/counting applications in many fields including biopharma and academia.

- Fully automated sample preparation
- Fast sample processing
- Small sample volume requirements
- Strong instrument-to-instrument comparability
- More sample capacity

This instrument revolutionizes the speed, reliability and objectivity of your results, and provides critical information conventional methods simply cannot offer.

- High speed camera enables the system to capture images as the sample flows continuously through the flowcell.
- Decreasing tubing length and inner diameter enables the system to utilize smaller sample volumes for analysis
- Optimizing the syringe pump speed accelerates mixing and washing time while minimizing the introduction of bubbles
- Advanced software algorithms:
  - Use of a Concentration slope for improved linearity and accuracy of concentration
  - Ability to reanalyze data for cell type optimization
  - Bubble detection to alert the operator of the presence of bubble(s) in an image.
  - Ability to detect and ignore dust on the flowcell

Design Inspired by the Vi-CELL XR

- Fully automated sample prep and cell counting
- 24 position carousel for on-the-fly sample loading
- 96-well plate compatible

- Reagent pack complete
- Built-in PC (Win 10 OS) with touchscreen monitor
- Facilitates 21 CFR Part 11 Compliance
- Facilitates your ability to be compliant with IQ/OQ

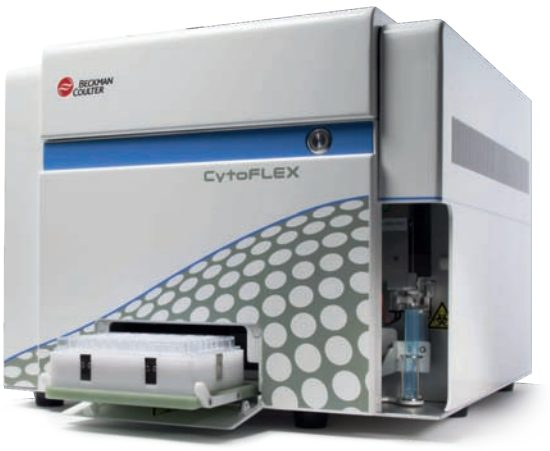
Models		*Status*	*Part #*
Vi-CELL BLU System	includes the instrument and start-up kit	RUO	**C19201**
Reagents		*Status*	*Part #*
Concentration control beads			
0.5M single-use concentration control	20 vials of 0.5 x 10^6 beads/mL	RUO	**C09147**
2.0M single-use concentration control	20 vials of 2 x 10^6 beads/mL	RUO	**C09148**
4.0M single-use concentration control	20 vials of 4 x 10^6 beads/mL	RUO	**C09149**
10.0M single-use concentration control	20 vials of 10 x 10^6 beads/mL	RUO	**C09150**
Start-up kit		RUO	**C23660**
Vi-CELL BLU Reagent Kit			
Single Reagent Kit	includes trypan blue, buffer, disinfectant and cleaning solutions	RUO	**C06019**
Quad pack reagent kit	x 4 kits	RUO	**C39291**
Viability control beads			
50% single-use viability control	20 vials of 50% viability beads	RUO	**C09145**
Accessories		*Status*	*Part #*
96-well Microplate	x 5 plates	RUO	**C24841**
96-well plate cover slip	x 10 cover slips	RUO	**C24842**
Sample vial	350 sample vials/bag	RUO	**C24843**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETER ANALYZER

CytoFLEX

CLASS I LASER



Optics

The CytoFLEX Platform is a revolutionary system presenting improved excitation and emission, reducing light loss and improving sensitivity. This compact system uses innovative technology borrowed from the telecommunications industry, resulting in performance comparable to instruments four times the size. 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. 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.

Laser Wavelength/Power

- Violet 405 nm/80 mW
- Blue 488 nm/50 mW
- Red 638 nm/50 mW

- Fluorescence and side scatter light delivered by fiber optics to Avalanche Photo Diode detector arrays. Proprietary design ensures high performance, high efficiency, low-noise signal detection. Emission profiles are collected using reflective optics and single transmission bandpass filters.
- Option to configure Avalanche Photo Diode detector array to collect side scatter signal from Violet (405 nm) laser. The configured channel (VSSC) can be used to better resolve nanoparticles.

Fluidics
- Ultra-low pressure peristaltic sheath and sample delivery system
- System Startup, Sample Mixing, Backflush, Prime, Shutdown, Deep Clean
- Fixed Flow Rates: 10, 30 and 60 µL/min; Custom Flow Rate Control mode from 10 to 240 µL/min in 1 µL increments.
- Gravimetric calibration for absolute counts within CytExpert Software.
- Standard 4 L tanks; Optional 10 L cubitainers

Electronics
- 30,000 events per second with all configured parameters
- Software capability to modify window extension parameter and to control abort rate during high event rate signal processing
- Fully digital system with 7-decade data display
- Pulse area, height for every channel, width for one selectable channel

Performance
- Blue (488 nm) Side Scatter Resolution: <300 nm; Violet (405 nm) Side Scatter Resolution (VSSC): 80 nm polystyrene particles
- Scatter performance is optimized for resolving human lymphocytes, monocytes, and granulocytes as well as nanoparticles.
- FITC: <30 molecules of equivalent soluble fluorochrome (MESF-FITC) from the 488 nm laser.
- PE: <10 molecules of equivalent soluble fluorochrome (MESF-PE) from the 488 nm laser.

CytExpert Software
- The CytExpert software is a full-feature software package that controls instrument operation, data collection and analysis.
- Automatic and manual full matrix compensation; Gain Independent Compensation
- Three different installation modes are available depending on the level of security required, including a mode for Electronic Records Management (21 CFR Part 11)
- An API (Application Programming Interface) is available

Workstation		*Status*	*Part #*
CytoFLEX Workstation	1 unit	RUO	Please call

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

Violet-Blue-Red (V-B-R) Series

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 V0-B5-R3 System	2 Laser (488 nm, 638 nm), 8 Colors	RUO	**B96622**
CytoFLEX V2-B4-R2 System	3 Laser (405 nm, 488 nm, 638 nm), 8 Colors	RUO	**C02945**
CytoFLEX V2-B2-R0 System	2 Laser (405 nm, 638 nm), 4 Colors	RUO	**B53017**
CytoFLEX V0-B2-R2 System	2 Laser (488 nm, 638 nm), 4 Colors	RUO	**B53016**
CytoFLEX V3-B3-R0 System	2 Laser (405 nm, 488 nm), 6 Colors	RUO	**B53012**
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 V2-B3-R2 System	3 Laser (405 nm, 488 nm, 638 nm), 7 Colors	RUO	**B53010**
CytoFLEX V0-B3-R3 System	2 Laser (488 nm, 638 nm), 6 Colors	RUO	**B53011**
CytoFLEX V2-B3-R3 System	3 Laser (405 nm, 488 nm, 638 nm), 8 Colors	RUO	**B53009**
CytoFLEX V3-B3-R3 System	3 Laser (405 nm, 488 nm, 638 nm), 9 Colors	RUO	**B53007**
CytoFLEX V5-B3-R3 System	3 Laser (405 nm, 488 nm, 638 nm), 11 Colors	RUO	**B53004**
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 V2-B4-R3 System	3 Laser (405 nm, 488 nm, 638 nm), 9 Colors	RUO	**B53008**
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 V5-B4-R3 System	3 Laser (405 nm, 488 nm, 638 nm), 12 Colors	RUO	**B53002**
CytoFLEX V0-B5-R0 System	1 Laser (488 nm), 5 Colors	RUO	**B53018**
CytoFLEX V5-B5-R0 System	2 Laser (405 nm, 488 nm), 10 Colors	RUO	**B53037**
CytoFLEX V2-B5-R3 System	3 Laser (405 nm, 488 nm, 638 nm), 10 Colors	RUO	**B53005**
CytoFLEX V4-B5-R3 System	3 Laser (405 nm, 488 nm, 638 nm), 12 Colors	RUO	**B53001**
CytoFLEX V5-B5-R3 System	3 Laser (405 nm, 488 nm, 638 nm), 13 Colors	RUO	**B53000**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETER ANALYZER

CytoFLEX LX

CLASS I LASER

Optics

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. As part of the CytoFLEX platform, these instruments offer high sensitivity, extensive set up bandpass filters, and the flexibility to upgrade by activating additional parameters.

Laser Wavelength/Power

- Violet 405 nm/80 mW
- Blue 488 nm/50 mW
- Red 638 nm/50 mW
- Near UV 375 nm/60 mW
- Yellow Green 561 nm/30 mW
- Infrared 808 nm/60 mW

- Fluorescence and side scatter light delivered by fiber optics to Avalanche Photo Diode detector arrays. Emission profiles are collected using reflective optics and single transmission bandpass filters.
- Option to configure Avalanche Photo Diode detector array to collect side scatter signal from Violet (405 nm) laser. The configured channel (VSSC) can be used to better resolve nanoparticles.

Fluidics

- Ultra-low pressure peristaltic sheath and sample delivery system
- System Startup, Sample Mixing, Backflush, Prime, Shutdown, Deep Clean
- Fixed Flow Rates: 10, 30 and 60 µL/min; Custom Flow Rate Control mode from 10 to 240 µL/min in 1 µL increments.
- Gravimetric calibration for absolute counts within CytExpert Software.
- 10 L cubitainers sheath fluid

Electronics

- 30,000 events per second with all configured parameters
- Software capability to modify window extension parameter and to control abort rate during high event rate signal processing
- Fully digital system with 7-decade data display
- Pulse area, height for every channel, width for one selectable channel

Performance

- Blue (488 nm) Side Scatter Resolution: <300 nm; Violet (405 nm) Side Scatter Resolution (VSSC): 80 nm polystyrene particles
- Scatter performance is optimized for resolving human lymphocytes, monocytes, and granulocytes as well as nanoparticles.
- FITC: <30 molecules of equivalent soluble fluorochrome (MESF-FITC) from the 488 nm laser.
- PE: <10 molecules of equivalent soluble fluorochrome (MESF-PE) from the 488 nm laser.

CytExpert Software

- The CytExpert software is a full-feature software package that controls instrument operation, data collection and analysis.
- Automatic and manual full matrix compensation; Gain Independent Compensation
- Three different installation modes are available depending on the level of security required, including a mode for Electronic Records Management (21 CFR Part 11)
- An API (Application Programming Interface) is available

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**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

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**

Accessories	*Status*	*Part #*
WDM Beam Splitter	RUO	**C36774**

The CytoFLEX LX WDM Beam Splitter expands the detection capacity of the UV/Near UV or Violet laser lines by borrowing the two detectors from the IR laser line when not in use. The median fluorescence intensity (MFI) of the unsplit signal can be achieved on the analogous split signal by adjusting the gain. To change between configurations, just reposition the fibers and select the appropriate detector configuration in CytExpert Software. Additionally, the VSSC capability to resolve 80 nm PS particles is retained when the WDM Beam Splitter is engaged in the configuration. Includes two additional bandpass filters, 712/25 and 740/35.

Compatible Configurations: CytoFLEX LX U3-V5-B3-Y5-R3-I2 and CytoFLEX LX N3-V5-B3-Y5-R3-I2

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETER

ANALYZER

CytoFLEX S

CLASS I LASER

Optics

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.

Laser Wavelength/Power

- Violet 405 nm/80 mW
- Blue 488 nm/50 mW
- Red 638 nm/50 mW
- Near UV 375 nm/60 mW
- Yellow Green 561 nm/30 mW
- Infrared 808 nm/60 mW

- Fluorescence and side scatter light delivered by fiber optics to Avalanche Photo Diode detector arrays. Proprietary design ensures high performance, high efficiency, low-noise signal detection. Emission profiles are collected using reflective optics and single transmission bandpass filters.
- Option to configure Avalanche Photo Diode detector array to collect side scatter signal from Violet (405 nm) laser. The configured channel (VSSC) can be used to better resolve nanoparticles.

Fluidics

- Ultra-low pressure peristaltic sheath and sample delivery system
- System Startup, Sample Mixing, Backflush, Prime, Shutdown, Deep Clean
- Fixed Flow Rates: 10, 30 and 60 µL/min; Custom Flow Rate Control mode from 10 to 240 µL/min in 1 µL increments.
- Gravimetric calibration for absolute counts within CytExpert Software.
- Standard 4 L tanks; Optional 10 L cubitainers

Electronics

- 30,000 events per second with all configured parameters
- Software capability to modify window extension parameter and to control abort rate during high event rate signal processing
- Fully digital system with 7-decade data display
- Pulse area, height for every channel, width for one selectable channel

Performance

- Blue (488 nm) Side Scatter Resolution: <300 nm; Violet (405 nm) Side Scatter Resolution (VSSC): 80 nm polystyrene particles
- Scatter performance is optimized for resolving human lymphocytes, monocytes, and granulocytes as well as nanoparticles.
- FITC: <30 molecules of equivalent soluble fluorochrome (MESF-FITC) from the 488 nm laser.
- PE: <10 molecules of equivalent soluble fluorochrome (MESF-PE) from the 488 nm laser.

CytExpert Software

- The CytExpert software is a full-feature software package that controls instrument operation, data collection and analysis.
- Automatic and manual full matrix compensation; Gain Independent Compensation
- Three different installation modes are available depending on the level of security required, including a mode for Electronic Records Management (21 CFR Part 11)
- An API (Application Programming Interface) is available

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**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

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 V4-B2-Y4-R0 System	3 Laser (405 nm, 488 nm, 561 nm), 10 Colors	RUO	**B96620**
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**
Violet-Blue-Red-Infrared (V-B-R-I) Series			
CytoFLEX S V0-B4-R0-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-R0-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**
Violet-Blue-Yellow Green-Red (V-B-Y-R) Series			
CytoFLEX S V0-B2-Y4-R3 System	3 Laser (405 nm, 488 nm, 561 nm), 6 Colors	RUO	**C02947**
CytoFLEX S V4-B2-Y0-R3 System	3 Laser (405 nm, 488 nm, 638 nm), 9 Colors	RUO	**C02948**
CytoFLEX S V2-B2-Y3-R2 System	4 Laser (405 nm, 488 nm, 561 nm, 638 nm), 9 Colors	RUO	**B96621**
CytoFLEX S V0-B2-Y4-R0 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 V4-B2-Y4-R3 System	4 Laser (405 nm, 488 nm, 561 nm, 638 nm), 13 Colors	RUO	**B75408**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETER

ANALYZER

DxFLEX

CLASS I LASER

The DxFLEX Flow Cytometer is designed for clinical applications. It offers performance, compact design, and streamlined installation and operation. System settings, data acquisition, and result exporting functions are integrated into the CytExpert for DxFLEX software workflow. Seven configurations are available with up to 3 lasers and 13 detectors, depending on geopraphy. Users can upgrade their configuration at a later date to activate additional channels including more lasers or optical filters.

An assembly of technologies are used to reduce light loss and therefore improve sensitivity.
A new approach to light management underpins every decision in the design. The result is an instrument with resolving power to separate dim and bright populations. The separation facilitates setting gates and calculating statistics.

The DxFLEX flow cytometer is flexible enough to accommodate a variety of assays. Instruments with as few as four and as many as 13 fluorescent detectors are available, with the ability to upgrade as the needs grow. Instrument performance provides the capabilities to resolve populations facilitating complex gating analyses.

The optional autoloader accepts a standard 32-tube carousel to decrease hands on time during acquisition, and can support sample loading from 96-well plates with an optional adapter

Models	*Status*	*Part #*
DxFLEX	-	Please call
Accessories	*Status*	*Part #*
Contrad 70 Cleaning Solution	nMD	**81911**
DxFLEX Daily QC Fluorospheres	IVD	**C39283**
DxFLEX Sheath Fluid	IVD	**B73613**
Flow-Clean Cleaning Agent	IVD	**A64669**
Plate adapter for Autoloader	-	Please call

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETER ANALYZER

Navios

CLASS I LASER

The Navios flow cytometer provides high sensitivity and resolution to run multi-color analyses on both clinical and clinical research samples. The Navios can be configured as either a two-laser system providing six- or eightcolor detection, or as a three-laser system offering up to 10-color analysis*.

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.

* 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 and ClearLLab 10C reagents.

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 µm spatially separated beam spots

Flow Cell

- 150 x 460 µm 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 #*
Violet-Blue-Red (V-B-R) Series			
Navios 6 colors, 2 lasers (5+1 configuration)	Navios B5-R1	IVD	**B47903**
Navios 8 colors, 2 lasers (5+3 configuration)	Navios B5-R3	IVD	**B47904**
Navios 10 colors, 3 lasers (5+3+2 configuration)		IVD	**B47905**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

Software	*Status*	*Part #*
Navios tetra Software	IVD	**775213**
Navios Win 7 Workstation and SW Upgrade	IVD	**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 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETER

ANALYZER

Navios EX

CLASS I LASER

The Navios EX flow cytometer is built on the 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 Navios EX has updated acquisition software and leverages the optical design from our CytoFLEX platform for enhanced 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. 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

Violet-Blue-Red (V-B-R) Series	*Status*	*Part #*
Navios EX		
6 colors, 2 lasers (5+1 configuration)	IVD	**B86735**
8 colors, 2 lasers (5+3 configuration)	IVD	**B86672**
10 colors, 3 lasers (5+3+2 configuration)	IVD	**B83535**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

Software	*Status*	*Part #*
Navios EX offline acquisition software		
Win 7 Workstation	nMD	**B80220**
1 User, Software v2.0,	IVD	**B91238**
5 User, Software v2.0	IVD	**B91239**
tetra Software	IVD	**B91240**
New User, Software Win 7	IVD	**B91237**
Optional Data Innovations products	*Status*	*Part #*
Data Innovations Additional Connection, Licence and Service	nMD	Please call
Data Innovations Instrument Manager Software, Licenses and Service	nMD	Please call

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETER

CELL SORTER

MoFlo Astrios EQ

CLASS I LASER

Simplify your most complex sorting tasks with Beckman Coulters' MoFlo Astrios sorter family, offering 7 spatially separated lasers and six-way jet-in-air sorting proficiency that delivers powerful capability while reducing complexity.

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 beadles 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 cleanabilty.
- CyClone plate arm with wiper that seals back of sort chamber.

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

Instruments and Software

Instrument	Status	Part #
MoFlo Astrios EQ	RUO	**B25982**
MoFlo Astrios EQs	RUO	**B52102**

Accessories	Status	Part #
Baker SterilGARD BSL2 Cabinet		
100V version	RUO	**B10300**
110-120V version	RUO	**B10302**
220-240V version	RUO	**B10301**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETER

CELL SORTER

MoFlo XDP

CLASS I LASER

MoFlo XDP combines reliability and stable 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. The light detection and filter designs
provide the sensitivity required of a sorter.
The electronics ensure you identify and accurately sort each cell of interest at higher sort speeds. Cell sorting research with the 32-bit-high resolution 5-decade multichannel digital system enables sorting of rare events and stem cells. 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 digital processing and fluidic
stability; the software and Touch Screen Control Panel reduce the set up time on a MoFlo XDP.

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		
110V	RUO	**ML23230**
220V	RUO	**ML23330**
Class II Biosafety Cabinet		
90V	RUO	**A70400**
110V	RUO	**ML23430**
220V	RUO	**ML23530**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETER

LOAD & GO SYSTEM

AQUIOS CL

CLASS I 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 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

Instruments and Software

Instrument		*Status*	*Part #*
Blue (B) Series			
AQUIOS CL (220-240v)		IVD	**B39102**
AQUIOS CL (100-120v)		IVD	**B39101**
Software		***Status***	***Part #***
AQUIOS Designer Software 2.0		CE/IVD	**B69476**

The AQUIOS Designer Software 2.0 (ADS 2.0) functions 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.

AQUIOS Designer Software 2.0		-	**C04893**
Reagents		***Status***	***Part #***
AQUIOS Cleaning Agent	500 mL	IVD	**B25698**

A cleaning agent for use on the AQUIOS flow cytometer components that come in contact with blood samples. This azide-free, formaldehyde-free, biodegradable cleaner contains a proteolytic enzyme that aids in the removal of protein buildup in the fluidics system and flow cell of a flow cytometer. The Cleaning Agent resides onboard the instrument and is used in automatic cleaning cycles.

AQUIOS Flow-Count Fluorospheres	100 tests	CE/IVD	**B43611**

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.

AQUIOS Flow-Count Fluorospheres	100 tests	RUO	**B96656**

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.

AQUIOS IMMUNO-TROL Cells	2 x 3 mL	IVD	**B23535**

AQUIOS IMMUNO-TROL Cells is an 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, the lysing of erythrocytes, and the analysis of samples by the AQUIOS CL Flow Cytometer. When using Tetra-1 Panel or Tetra-2+ Panel tests, there are 15 tests per tube. When using the Tetra Combo, there are 10 tests per tube.

AQUIOS IMMUNO-TROL Low Cells	2 x 3 mL	IVD	**B25700**

AQUIOS IMMUNO-TROL Low Cells is an 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, the lysing of erythrocytes, and the analysis of samples by the AQUIOS CL Flow Cytometer.When using Tetra-1 Panel or Tetra-2+ Panel tests, there are 15 tests per tube. When using the Tetra Combo, there are 10 tests per tube.

AQUIOS Lysing Reagent Kit	100 tests	IVD	**B23538**

AQUIOS Lysing Reagent Kit consists of two reagents (Reagent A and Reagent B) used by AQUIOS flow cytometers to prepare whole blood samples for analysis of white blood cells. Reagent A lyses red blood cells in whole blood samples sufficiently to perform monoclonal antibody panel analysis without interference from red blood cells. Reagent B slows the lysing reaction sufficiently to allow analysis without damage to white blood cells. The lysing reagents are placed onboard the system and are barcoded, which allows the system to detect their presence and position. High volume users can load multiple containers and the system will automatically move from one container to the next as needed.

AQUIOS Sheath Solution	10 L	IVD	**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. The AQUIOS Sheath Solution is manufactured for low particulate and fluorescence background to ensure superior signal to noise ratio measurements during the analysis process.

AQUIOS Sodium Hypochlorite Solution	4 x 50 mL	IVD	**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. Sodium Hypochlorite reacts with protein buildup in the instrument. It is used as a preventative measure for optimal system operation as well as for corrective measures.

AQUIOS Tetra-1 Panel	50 tests	IVD	**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

AQUIOS Tetra-2+ Panel	50 tests	IVD	**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.

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

AQUIOS VersaFix Lysing Reagent	50 tests	CE/IVD	**B43019**

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 the AQUIOS Designer Software.

AQUIOS VersaFix Lysing Reagent	50 tests	RUO	**C02059**

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 the AQUIOS Designer Software.

AQUIOS VersaFix Lysing Reagent	8 x 50 tests	CE/IVD	**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 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.

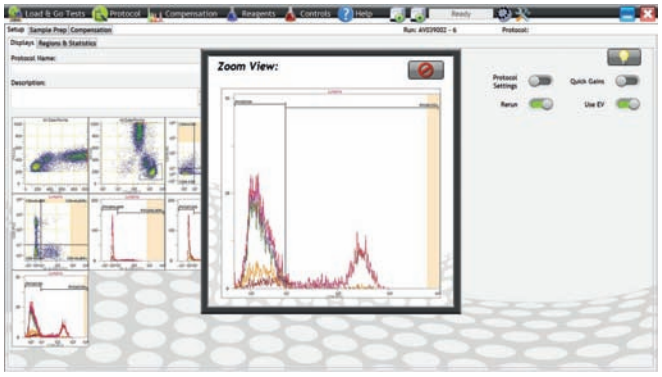
Option	*Status*	*Part #*
Color Laser Printer	nMD	**B31892**

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 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETRY 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 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.

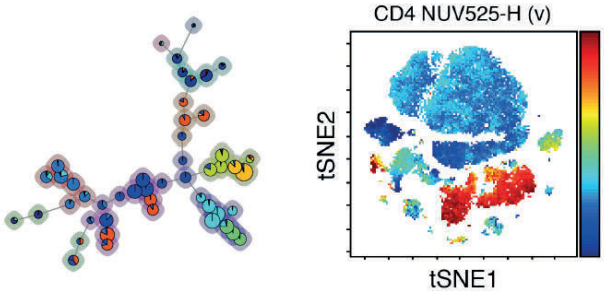
Software	*Status*	*Part #*
AQUIOS Designer Software 2.0	-	**C04893**

Software	*Status*	*Part #*
AQUIOS Designer Software 2.0	CE/IVD	**B69476**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETRY SOFTWARE

Cytobank



Cytobank provides an established cloud-based platform that accelerates research productivity by enabling you to analyze and visualize multiple complex single-cell data sets efficiently and effectively. The Cytobank platform provides tools for a complete workflow including data pre-processing steps such as data transformation and fluorescence compensation, classical population identification via biaxial gating and comprehensive population analysis with machine learning-based algorithms.

Cytobank's clustering, dimensionality reduction, and visualization tools leverage scalable cloud compute, doing large analyses quickly without taking over your computer. The software automatically and instantly saves all your work in the cloud so data aren't lost and you aren't interrupted. Native algorithm implementation and a fully supported restful API simplifies pipeline construction and integration into your informatics workflows.

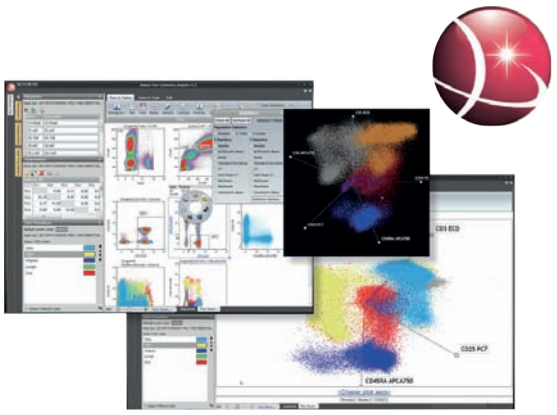
Uploading your data, whether for storage, analysis, or sharing, is a great way to create a reliable backup of your results. In addition to preserving your cytometry experiments, Cytobank's secure servers allow you to back up and associate related experimental data, including protocols, presentations and microscopy images and to collaborate with colleagues from around the globe.

Academic license	*Status*	*Part #*
Cytobank 1 year license		
Premium license	RUO	**C47384**
5 User Premium license	RUO	**C47385**
10 User Enterprise license	RUO	**C47388**
Additional User Enterprise license	RUO	**C47390**
Cytobank 2 year license		
Premium license	RUO	**C47391**
5 User Premium license	RUO	**C47392**
10 User Enterprise license	RUO	**C47395**
Additional User Enterprise license	RUO	**C47396**
Cytobank 3 year license		
Premium license	RUO	**C47398**
5 User Premium license	RUO	**C47399**
10 User Enterprise license	RUO	**C47402**
Additional User Enterprise license	RUO	**C47403**
Non-academic license	*Status*	*Part #*
Cytobank 1 year license		
5 User Premium license	RUO	**C47383**
10 User Enterprise license	RUO	**C47386**
Additional User Enterprise license	RUO	**C47387**
Cytobank 2 year license		
5 User Premium license	RUO	**C47389**
10 User Enterprise license	RUO	**C47393**
Additional User Enterprise license	RUO	**C47394**
Cytobank 3 year license		
5 User Premium license	RUO	**C47397**
10 User Enterprise license	RUO	**C47400**
Additional User Enterprise license	RUO	**C47401**

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETRY 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

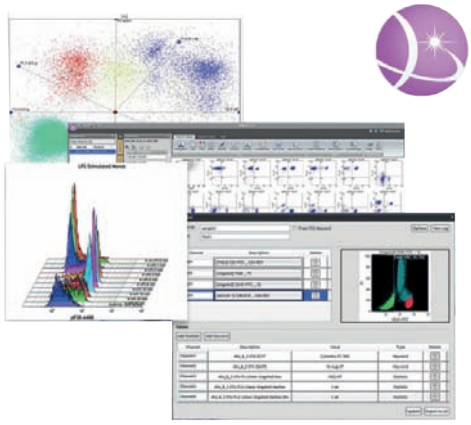
Kaluza is available in the format you and your laboratory need. Whether you are looking for an individual timed license or a large site license, we have the solution for you. And, with the Kaluza Network License Control Center managing a site license is easier than ever.

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 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

FLOW CYTOMETRY 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 processes 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)	IVD	**C10575**
Kaluza C Analysis Software Perpetual, 1-User (Single)	IVD	**C10574**
Kaluza C Analysis Software, 10-User (Network)	IVD	**C10576**
Kaluza C Analysis Software, 5-User (Network)	IVD	**C10577**
Academic license	*Status*	*Part #*
Kaluza C Analysis Software 1 Year, 1-User (Single)	IVD	**C10578**
Kaluza C Analysis Software Perpetual, 1-User (Single)	IVD	**C10579**
Kaluza C Analysis Software, 10-User (Network)	IVD	**C10580**
Kaluza C Analysis Software, 5-User (Network)	IVD	**C10581**

* In development, pending achievement of CE compliance; not yet available for in vitro diagnostic use

For Accessories see pages 269-271, for Support Reagents see pages 231 and for Services see pages 13-19

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
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 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
510/20 nm Bandpass Filter	BP 510/20 GFP	nMD	B76128
515/20 nm Bandpass Filter	BP 515/20 eGFP	nMD	B76124
595/20 nm Bandpass Filter	BP 595/20 DsRed	nMD	B76117
585/15 nm Bandpass Filter	BP 585/15 dTomato	nMD	B76121
550/30 nm Bandpass Filter	BP 550/30 YFP	nMD	B76139
740/35 nm Bandpass Filter	BP 740/35 BUV 737	nMD	B78217
819/44 nm Bandpass Filter	BP 819/44 BUV 805	nMD	B78220
405/10 nm Bandpass Filter	BP 405	nMD	A01-1-0048
450/45 nm Bandpass Filter	BP 450/45 Pacific Blue	nMD	A01-1-0049
488/8 nm Bandpass Filter	BP 488	nMD	A01-1-0050
525/40 nm Bandpass Filter	BP 525/40 Krome Orange	nMD	A01-1-0051

For other product accessories please visit www.beckmancoulter.com.

Instrument Accessories

585/42 nm Bandpass Filter	BP 585/42 PE	nMD	A01-1-0052
610/20 nm Bandpass Filter	BP 610/20 ECD/mCheery	nMD	A01-1-0053
638/6 nm Bandpass Filter	BP 638	nMD	A01-1-0054
660/10 nm Bandpass Filter	BP 660/20 Violet 660	nMD	A01-1-0055
690/50 nm Bandpass Filter	BP 690/50 PV5.5	nMD	A01-1-0056
712/25 nm Bandpass Filter	BP 712/25 APC-A700	nMD	A01-1-0057
780/60 nm Bandpass Filter	BP 780/60 APC-A750	nMD	A01-1-0058
405/30 nm Bandpass Filter		nMD	B99146
450/45 nm Bandpass Filter with Signal Attenuation (OD1)		nMD	B90300
510/20 nm Bandpass Filter with Signal Attenuation (OD1)		nMD	B90294
525/40 nm Bandpass Filter with Signal Attenuation (OD1)		nMD	B90303
561/6 nm Bandpass Filter		nMD	B72627
585/30 nm Bandpass Filter		nMD	B71089
610/20 nm Bandpass Filter with Signal Attenuation (OD1)		nMD	B90297
675/30 nm Bandpass Filter		nMD	B78244
710/50 nm Bandpass Filter		nMD	B71092
763/43 nm Bandpass Filter		nMD	B99143
840/20 nm Bandpass Filter		nMD	B99144
885/40 nm Bandpass Filter		nMD	B99145
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 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 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

For other product accessories please visit www.beckmancoulter.com.

Instrument Accessories

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

	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
Sample Tubes	250 tubes, 12mm x 75mm	nMD	2523749

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	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.

NOTES

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A21689	CD2 (Human); Clone: 39C1.5; PC7; CE/IVD; 100 tests	31

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A21690	CD5 (Human); Clone: BL1a; PC7; CE/IVD; 100 tests	34
A21691	CD34 (Human); Clone: 581; PC7; CE/IVD; 100 tests	55
A21692	CD56 (Human); Clone: N901; PC7; CE/IVD; 100 tests	67
A21693	CD20 (Human); Clone: B9E9; APC; CE/IVD; 100 tests	47
A22327	Cyclin A2 (Human); Clone: 11B2G3; FITC; ASR; 2 mL	111
A22328	CD300a (Human); Clone: E59.126; PE; ASR; 1 mL	106
A22329	CD314 (Human); Clone: ON72; APC; ASR; 0.5 mL	107
A22330	CD328 (Human); Clone: Z176; PE; RUO; 50 tests	108
A22331	CD14 (Human); Clone: RMO52; PC7; ASR; 1 mL	42
A22332	CD158a,h (Human); Clone: EB6B; APC; ASR; 0.5 mL	92
A22333	CD158b1/b2,j (Human); Clone: GL183; APC; ASR; 0.5 mL	93
A22334	CD85d (Human); Clone: 42D1; PE; RUO; 100 tests	77
A22361	CD166 (Human); Clone: 3A6; PE; ASR; 2 mL	96
A22364	CD146 (Human); Clone: TEA 1/34; PC5; ASR; 1 mL	90
A23413	CD(14+16)-FITC/CD85k-PE/CD33-PC5; CE/IVD; 50 tests	157
A23416	CD(14+16)-FITC/CD85k-PE/CD123-PC5; CE/IVD; 50 tests	157
A24987	OSCAR (Human); Clone: 11.1CN5; PE; RUO; 100 tests	124
A32535	CD123 (Human); Clone: SSDCLY107D2; PE; ASR; 2 mL	85
A32536	CD21 (Human); Clone: BL13; PE; ASR; 2 mL	48
A32537	CD44 (Human); Clone: J.173; PE; ASR; 2 mL	61
A32560	CD43 (Human); Clone: DFT1; PE; ASR; 2 mL	61
A33096	CD5 (Human); Clone: BL1a; ECD; ASR; 1 mL	34
A33097	CD13 (Human); Clone: Immu103.44; ECD; ASR; 1 mL	41
A33098	CD16 (Human); Clone: 3G8; ECD; ASR; 1 mL	44
A33099	CD23 (Human); Clone: 9P25; PE; ASR; 2 mL	49
A39499	TCR PAN α/β (Human); Clone: IP26A; PE; ASR; 1 mL	125
A39500	TCR PAN α/β (Human); Clone: IP26A; PC5; ASR; 0.5 mL	125
A40174	IgE (Dε2) (Human); Clone: E124.2.8; UNLB; ASR; 0.2 mg	118
A40316	CD138 (Human); Clone: B-A38; PE; ASR; 2 mL	89
A40317	CD138 (Human); Clone: B-A38; PC5; ASR; 1 mL	89
A40579	HLA-DR (Human); Clone: Immu-357; PC7; ASR; 0.5 mL	116
A40926	CD352 (Human); Clone: MA127; PE; RUO; 50 tests	110
A46526	CD7 (Human); Clone: 8H8.1; PC7; ASR; 1 mL	35
A46527	CD10 (Human); Clone: ALB1; PC7; ASR; 1 mL	38
A46528	CD13 (Human); Clone: Immu103.44; PC7; ASR; 1 mL	41
A46529	CD85k (Human); Clone: ZM3.8; PC7; ASR; 1 mL	78
A47882	MAX-XP Biosafe	244
A49080	CD278 (Human); Clone: ISA-3; PE; RUO; 100 tests	104
A51074	CD2 (Human); Clone: 39C1.5; PC7; ASR; 1 mL	31
A51075	CD5 (Human); Clone: BL1a; PC7; ASR; 1 mL	34
A51076	CD20 (Human); Clone: B9E9; APC; ASR; 1 mL	47

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Part #	Description	Page
C01161	CytoFLEX S V4-B4-R3-I2 System; RUO	253
C01994	100-120/200-230 V, 50/60 Hz; IVD	240
C01995	100-120/200-230 V, 50/60 Hz	240
C02059	AQUIOS VersaFix Lysing Reagent; RUO; 50 tests	199, 220, 264
C02396	CytoFLEX Plate Loader with Mode Control Upgrade Kit	269
C02943	Preventive Maintenance Kit	270
C02944	CytoFLEX V2-B2-R2 System; RUO	249
C02945	CytoFLEX V2-B4-R2 System; RUO	249
C02946	CytoFLEX V2-B2-R2 System; RUO	249
C02947	CytoFLEX S V0-B2-Y4-R3 System; RUO	253
C02948	CytoFLEX S V4-B2-Y0-R3 System; RUO	253
C02949	CytoFLEX S N0-V0-B2-Y2 System; RUO	253
C03551	Cell Cycle kit; RUO; 200 tests	230
C04666	DURAClone IF T Helper Cell; RUO; 25 tests	174
C04893	AQUIOS Designer Software 2.0; -; 1 unit	199, 263, 265
C05890	nizonPlus Cell washer; CE/IVD	239
C06019	Single Reagent Kit; RUO	247
C06147	CytoFLEX Daily IR QC Fluorospheres; RUO; 2 x 10 mL	212
C09145	50% single-use viability control; RUO	247
C09147	0.5M single-use concentration control; RUO	247
C09148	2.0M single-use concentration control; RUO	247
C09149	4.0M single-use concentration control; RUO	247
C09150	10.0M single-use concentration control; RUO	247
C10574	Kaluza C Analysis Software Perpetual, 1-User (Single); IVD	268
C10575	Kaluza C Analysis Software 1 Year, 1-User (Single); IVD	268
C10576	Kaluza C Analysis Software, 10-User (Network); IVD	268
C10577	Kaluza C Analysis Software, 5-User (Network); IVD	268
C10578	Kaluza C Analysis Software 1 Year, 1-User (Single); IVD	268
C10579	Kaluza C Analysis Software Perpetual, 1-User (Single); IVD	268
C10580	Kaluza C Analysis Software, 10-User (Network); IVD	268
C10581	Kaluza C Analysis Software, 5-User (Network); IVD	268
C11101	Phorbol-Myristate-acetate (PMA) / Ionomycin / Brefeldin A; RUO; 25 tests	183
C11102	Phorbol-Myristate-acetate (PMA) / Ionomycin; RUO; 25 tests	184
C11183	CytoFLEX LX U3-V5-B3-Y0-R3-I0 System; RUO	251
C11184	CytoFLEX LX U3-V5-B3-Y0-R3-I0 System; RUO	251
C11185	CytoFLEX LX U3-V5-B3-Y5-R3-I0 System; RUO	251
C11186	CytoFLEX LX U3-V5-B3-Y5-R3-I2 System; RUO	251
C14907	CytoFLEX Startup Reagents; 1 pack	232
C14908	CytoFLEX Startup Reagents - Infrared Systems; 1 pack	232
C14909	CytoFLEX Startup Reagents - Infrared Systems; 1 pack	232

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C15189	λ Chain; PE; ASR; 2 mL	121
C15190	CD133; Clone: W6B3C1; APC; ASR; 0.5 mL	87
C15623	κ Chain; FITC; ASR; 2 mL	120
C19201	Vi-CELL BLU System; RUO	247
C21857	Lipopolysaccharide (LPS) and Brefeldin A; RUO; 25 tests	184
C21858	DURAClone IF Monocyte Activation Tube; RUO; 25 tests	176
C23009	CytoFLEX LX N0-V5-B3-Y5-R3-I0 System; RUO	250
C23406	DURAClone IF Basophil Activation Tube; RUO; 25 tests	175
C23407	Ca2+ Activation solution; RUO; 100 tests	177, 231
C23660	Start-up kit; RUO	247
C24841	96-well Microplate; RUO	247
C24842	96-well plate cover slip; RUO	247
C24843	Sample vial; RUO	247
C31546	208-230 V, 60 Hz	240
C31547	208-230 V, 60 Hz; IVD	240
C34369	DURAClone SC Mesenchymal; RUO; 25 tests	181
C36614	405 Fixable Viability Dye; RUO	228
C36620	561 Fixable Viability Dye; RUO; 200 tests	228
C36624	638 Fixable Viability Dye; RUO; 200 tests	229
C36628	808 Fixable Viability Dye; RUO; 200 tests	229
C36774	WDM Beam Splitter; RUO; 1 unit	251
C39283	DxFLEX Daily QC Fluorospheres; IVD	254
C39291	Quad pack reagent kit; RUO	247
C47383	5 User Premium license; RUO	266
C47384	Premium license; RUO	266
C47385	5 User Premium license; RUO	266
C47386	10 User Enterprise license; RUO	266
C47387	Additional User Enterprise license; RUO	266
C47388	10 User Enterprise license; RUO	266
C47389	5 User Premium license; RUO	266
C47390	Additional User Enterprise license; RUO	266
C47391	Premium license; RUO	266
C47392	5 User Premium license; RUO	266
C47393	10 User Enterprise license; RUO	266
C47394	Additional User Enterprise license; RUO	266
C47395	10 User Enterprise license; RUO	266
C47396	Additional User Enterprise license; RUO	266
C47397	5 User Premium license; RUO	266
C47398	Premium license; RUO	266
C47399	5 User Premium license; RUO	266
C47400	10 User Enterprise license; RUO	266

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IM1760	CD11c (Human); Clone: BU15; PE; CE/IVD; 100 tests	40
IM1760U	CD11c (Human); Clone: BU15; PE; ASR; 2 mL	40
IM1761	TCR Vδ1 (Human); Clone: R9.12; UNLB; RUO; 0.1 mg	139
IM1832U	CD38 (Human); Clone: T16; PE; ASR; 2 mL	57
IM1833	CD45 (Human); Clone: Immu19.2; PE; RUO; 100 tests	62
IM1834U	CD45RA (Human); Clone: ALB11; PE; ASR; 2 mL	63
IM1835	CD22 (Human); Clone: SJ10.1H11; PE; CE/IVD; 100 tests	48
IM1835U	CD22 (Human); Clone: SJ10.1H11; PE; ASR; 2 mL	48
IM1836	CD35 (Human); Clone: J3D3; FITC; RUO; 100 tests	56
IM1837U	CD48 (Human); Clone: J4.57; FITC; ASR; 2 mL	64
IM1838U	HLA-ABC (Human); Clone: B9.12.1; FITC; ASR; 2 mL	115
IM1839U	CD90 (Human); Clone: F15-42-1-5; FITC; ASR; 2 mL	79
IM1840U	CD90 (Human); Clone: F15-42-1-5; PE; ASR; 2 mL	79
IM1844	CD56 (Human); Clone: C218; UNLB; RUO; 0.2 mg	67
IM1846	CD158b1/b2,j (Human); Clone: GL183; UNLB; RUO; 0.2 mg	93
IM1853U	CD80 (Human); Clone: MAB104; FITC; ASR; 2 mL	76
IM1854U	CD49e (Human); Clone: SAM1; FITC; ASR; 2 mL	66
IM1856U	CD103 (Human); Clone: 2G5; FITC; ASR; 2 mL	81
IM1870	CD34 (Human); Clone: 581; FITC; CE/IVD; 100 tests	55
IM1870U	CD34 (Human); Clone: 581; FITC; ASR; 2 mL	55
IM1871U	CD34 (Human); Clone: 581; PE; ASR; 2 mL	55
IM1874	Myeloperoxidase (Human); Clone: CLB-MPO-1; FITC; CE/IVD; 100 tests	122
IM1874U	Myeloperoxidase (Human); Clone: CLB-MPO-1; FITC; ASR; 2 mL	122
IM1914U	CD63 (Human); Clone: CLB-Gran/12; PE; ASR; 2 mL	71
IM1915U	CD10 (Human); Clone: ALB1; PE; ASR; 2 mL	38
IM1935	CD32 (Human); Clone: 2E1; PE; ASR; 2 mL	53
IM1936U	CD40 (Human); Clone: MAB89; PE; ASR; 2 mL	58
IM1942U	CD1a (Human); Clone: BL6; PE; ASR; 2 mL	30
IM1943U	CD69 (Human); Clone: TP1.55.3; PE; ASR; 2 mL	73
IM1954U	CD15 (Human); Clone: 80H5; PE; ASR; 2 mL	43
IM1976U	CD80 (Human); Clone: MAB104; PE; ASR; 2 mL	76
IM1977	CD116 (Human); Clone: SCO6; PE; RUO; 100 tests	84
IM1979	CD126 (Human); Clone: M91; PE; ASR; 2 mL	86
IM1980U	CD127 (Human); Clone: R34.34; PE; ASR; 2 mL	86
IM2001U	CD71 (Human); Clone: YDJ1.2.2; PE; ASR; 2 mL	74
IM2002	TCR Vβ5.3 (Human); Clone: 3D11; PE; ASR; 1 mL	130
IM2003	TCR Vβ9 (Human); Clone: FIN9; PE; ASR; 1 mL	132
IM2004	TCR Vβ23 (Human); Clone: AF23; PE; ASR; 1 mL	139
IM2014	CD8β (Human); Clone: 2ST8.5H7; UNLB; RUO; 0.2 mg	37
IM2033U	CD30 (Human); Clone: HRS4; PE; ASR; 2 mL	52

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IM2039U	CD66c (Human); Clone: KOR-SA3544; FITC; ASR; 1 mL	73
IM2047	TCR Vβ14 (Human); Clone: CAS1.1.3; PE; ASR; 1 mL	135
IM2048	TCR Vβ17 (Human); Clone: E17.5F3.15.13; PE; ASR; 1 mL	136
IM2049	TCR Vβ18 (Human); Clone: BA62.6; PE; ASR; 1 mL	137
IM2051	TCR Vβ22 (Human); Clone: IMMU 546; PE; ASR; 1 mL	138
IM2070	CD152 (Human); Clone: BNI3; UNLB; RUO; 0.2 mg	91
IM2071U	CD28 (Human); Clone: CD28.2; PE; ASR; 2 mL	51
IM2073U	CD56 (Human); Clone: N901; PE; ASR; 2 mL	67
IM2076	CD3-FITC/CD(16+56)-PE; RUO; 50 tests	158
IM2078U	CD45 (Human); Clone: J33; PE; ASR; 2 mL	62
IM2088U	APO2.7 (Human); Clone: 2.7A6A3; PE; ASR; 2 mL	29
IM2211U	CD235a (Human); Clone: 11E4B-7-6; PE; ASR; 2 mL	102
IM2212U	CD235a (Human); Clone: 11E4B-7-6; FITC; ASR; 2 mL	102
IM2213	TCR Vβ2 (Human); Clone: MPB2D5; PE; ASR; 1 mL	128
IM2214U	CD62L (Human); Clone: DREG56; PE; ASR; 2 mL	70
IM2216U	CD154 (Human); Clone: TRAP-1; PE; ASR; 2 mL	91
IM2217U	CD8β (Human); Clone: 2ST8.5H7; PE; ASR; 2 mL	37
IM2218U	CD83 (Human); Clone: HB15a; PE; ASR; 2 mL	77
IM2221	CD79a (Human); Clone: HM47; PE; CE/IVD; 100 tests	75
IM2221U	CD79a (Human); Clone: HM47; PE; ASR; 2 mL	75
IM2234U	CD135 (Human); Clone: SF1.340; PE; ASR; 2 mL	88
IM2276	CD94 (Human); Clone: HP-3B1; PE; RUO; 100 tests	80
IM2278U	CD158b1/b2,j (Human); Clone: GL183; PE; ASR; 1 mL	93
IM2279U	CD36-FITC/CD235a-PE; RUO; 50 tests	159
IM2280U	CD45-FITC/CD235a-PE; RUO; 50 tests	159
IM2282	CD152 (Human); Clone: BNI3; PE; RUO; 100 tests	91
IM2283	TCR Vα24 (Human); Clone: C15; PE; ASR; 1 mL	127
IM2285	TCR Vβ5.1 (Human); Clone: IMMU 157; PE; ASR; 1 mL	129
IM2286	TCR Vβ5.2 (Human); Clone: 36213; PE; ASR; 1 mL	130
IM2287	TCR Vβ7.1 (Human); Clone: ZOE; PE; ASR; 1 mL	131
IM2289	TCR Vβ8 (Human); Clone: 56C5.2; PE; ASR; 1 mL	132
IM2290	TCR Vβ11 (Human); Clone: C21; PE; ASR; 1 mL	133
IM2291	TCR Vβ12 (Human); Clone: VER2.32.1; PE; ASR; 1 mL	133
IM2292	TCR Vβ13.1 (Human); Clone: IMMU 222; PE; ASR; 1 mL	134
IM2295	TCR Vβ20 (Human); Clone: ELL1.4; PE; ASR; 1 mL	137
IM2353U	CD16b (Human); Clone: 1D3; FITC; ASR; 2 mL	45
IM2355	TCR Vβ1 (Human); Clone: BL37.2; PE; ASR; 1 mL	127
IM2356U	Cytokeratin (Human); Clone: J1B3; FITC; ASR; 2 mL	112
IM2357U	CD66c (Human); Clone: KOR-SA3544; PE; ASR; 1 mL	73
IM2370U	CD243 (Human); Clone: UIC2; PE; ASR; 2 mL	103
IM2371U	CD38 (Human); Clone: LS198-4-3; PE; ASR; 2 mL	57

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IM2725	CD55 (Human); Clone: JS11KSC2.3; FITC; ASR; 2 mL	67
IM2726	CD55 (Human); Clone: JS11KSC2.3; PE; ASR; 2 mL	67
IM2729U	CD86 (Human); Clone: HA5.2B7; PE; ASR; 2 mL	79
IM2732	CD117 (Human); Clone: 104D2D1; PE; CE/IVD; 100 tests	84
IM2732U	CD117 (Human); Clone: 104D2D1; PE; ASR; 2 mL	84
IM2733	CD117 (Human); Clone: 104D2D1; PC5; CE/IVD; 100 tests	84
IM2733U	CD117 (Human); Clone: 104D2D1; PC5; ASR; 1 mL	84
IM2741	CD206 (Human); Clone: 3.29B1.10; PE; ASR; 2 mL	100
IM2742	Lactoferrin (Human); Clone: CLB13.17; PE; ASR; 2 mL	122
IM2743	MPO-FITC/Lactoferrin-PE; RUO; 50 tests	160
IM2750	CD159a (Human); Clone: Z199; UNLB; ASR; 0.2 mg	95
IM2762	CD45RA-FITC/CD4-PE; RUO; 50 tests	159
IM3169	TCR ζ (Human); Clone: 2H2D9; PE; ASR; 2 mL	141
IM3240U	CD83 (Human); Clone: HB15a; PC5; ASR; 1 mL	77
IM3264U	CD43 (Human); Clone: DFT1; FITC; ASR; 2 mL	61
IM3279U	TNFα (Human); Clone: IPM2; PE; ASR; 2 mL	143
IM3291U	CD159a (Human); Clone: Z199; PE; ASR; 1 mL	95
IM3292	CD158e1/e2 (Human); Clone: Z27.3.7; PE; ASR; 1 mL	93
IM3293	TIA-1 (Human); Clone: 2G9A10F5; PE; ASR; 2 mL	142
IM3337	CD158i (Human); Clone: FES172; PE; ASR; 1 mL	94
IM3422	7-AAD Viability Dye; RUO; 150 tests	227
IM3448	CD208 (Human); Clone: 104.G4; UNLB; RUO; 0.2 mg	101
IM3450	CD161 (Human); Clone: 191B8; PE; ASR; 1 mL	96
IM3454U	NG2 (Human); Clone: 7.1; PE; ASR; 2 mL	123
IM3455U	Myeloperoxidase (Human); Clone: CLB-MPO-1; PE; ASR; 2 mL	122
IM3456U	CD79a (Human); Clone: HM47; PC5; ASR; 1 mL	75
IM3457U	CD59 (Human); Clone: P282E; FITC; ASR; 2 mL	69
IM3497	β Mark TCR Vβ Repertoire Kit; RUO; 25 tests	203
IM3514	IOTest 3 Lysing Solution; RUO; 100 tests	221
IM3515	IOTest 3 Fixative Solution; RUO; 100 - 200 tests	222
IM3524	TdT (Human); Clone: HT1 + HT4 + HT8 + HT9; FITC; CE/IVD; 50 tests	141
IM3524U	TdT (Human); Clone: HT1 + HT4 + HT8 + HT9; FITC; ASR; 1 mL	141
IM3546	Annexin A5-FITC Kit (200 tests); FITC; RUO; 200 tests	202
IM3548	CD45 (Human); Clone: J33; PC7; CE/IVD; 100 tests	62
IM3548U	CD45 (Human); Clone: J33; PC7; ASR; 1 mL	62
IM3575	CD203c (Human); Clone: 97A6; PE; ASR; 2 mL	100
IM3577	CD207 (Human); Clone: DCGM4; PE; ASR; 2 mL	101
IM3601U	CD64 (Human); Clone: 22; PE; ASR; 2 mL	71
IM3602	TCR Vβ4 (Human); Clone: WJF24; PE; ASR; 1 mL	129
IM3603	TCR Vβ13.2 (Human); Clone: H132; PE; ASR; 1 mL	134
IM3604	TCR Vβ7.2 (Human); Clone: ZIZOU4; PE; ASR; 1 mL	131
IM3605	CD61 (Human); Clone: SZ21; PE; ASR; 2 mL	69
IM3606U	CD64 (Human); Clone: 22; PC5; ASR; 1 mL	71
IM3607U	CD20 (Human); Clone: B9E9; ECD; ASR; 1 mL	47
IM3608U	CD10 (Human); Clone: ALB1; ECD; ASR; 1 mL	38
IM3609U	CD23 (Human); Clone: 9P25; ECD; ASR; 1 mL	49
IM3610	CD1a (Human); Clone: BL6; PC5; ASR; 1 mL	30
IM3611	CD11b (Human); Clone: Bear1; PC5; ASR; 1 mL	39
IM3613	CD7 (Human); Clone: 8H8.1; PC5; CE/IVD; 100 tests	35
IM3613U	CD7 (Human); Clone: 8H8.1; PC5; ASR; 1 mL	35
IM3614	Annexin A5-FITC/7-AAD kit; FITC; RUO; 150 tests	202
IM3628	CD19 (Human); Clone: J3-119; PC7; CE/IVD; 100 tests	46
IM3628U	CD19 (Human); Clone: J3-119; PC7; ASR; 1 mL	46
IM3629	CD20 (Human); Clone: B9E9; PC7; CE/IVD; 100 tests	47
IM3629U	CD20 (Human); Clone: B9E9; PC7; ASR; 1 mL	47
IM3630	Stem-Kit Reagents; IVD; 50 tests	206, 207
IM3632	Stem-Trol Control Cells; IVD; 10 tests	207, 217
IM3633	CD10 (Human); Clone: ALB1; APC; ASR; 1 mL	38
IM3635	HLA-DR (Human); Clone: Immu-357; APC; ASR; 1 mL	116
IM3636	HLA-DR (Human); Clone: Immu-357; ECD; ASR; 1 mL	116
IM3638	CD117 (Human); Clone: 104D2D1; APC; ASR; 1 mL	84
IM3645	CD1a (Human); Clone: BL6; APC; ASR; 1 mL	30
IM3648	VersaLyse Lysing Solution; RUO; 100 tests	225
IM3657	CD160 (Human); Clone: BY55; PE; ASR; 2 mL	95
IM3698	CD117 (Human); Clone: 104D2D1; PC7; ASR; 1 mL	84
IM3701	CD58 (Human); Clone: AICD58; APC; ASR; 1 mL	68
IM3702	CD58 (Human); Clone: AICD58; PC5; ASR; 1 mL	68
IM3703	CD90 (Human); Clone: Thy1/310; PC5; ASR; 1 mL	79
IM3704	CD22 (Human); Clone: SJ10.1H11; PC5; ASR; 1 mL	48
IM3707	CD11c (Human); Clone: BU15; PC5; ASR; 1 mL	40
IM3709	CD337 (Human); Clone: Z25; PE; ASR; 1 mL	110
IM3710	CD336 (Human); Clone: Z231; PE; ASR; 1 mL	109
IM3711	CD335 (Human); Clone: BAB281; PE; ASR; 1 mL	109
IM3716	CD61 (Human); Clone: SZ21; PC7; ASR; 1 mL	69

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ML23230	110V; RUO	261, 270
ML23330	220V; RUO	261, 270
ML23430	110V; RUO	261, 271
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ML99030	MoFlo XDP; RUO	261

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NOTES

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		APPROPRIATE USES		INAPPROPRIATE USES	
A	Activating	F	Frozen Tissue Sections	~~A~~	Non-activating
B	Blocking	I	Immunoprecipitation	~~B~~	Non-blocking
C	Flow Cytometry	P	Paraffin-embedded Tissue Sections	~~I~~	Inappropriate for Immunoprecipitation
Ci	Intracytoplasmic Staining	Ph	Heat Treated Paraffin-embedded Tissue	~~P~~	Inappropriate for Paraffin-embedded Tissue Sections
E	Elisa	W	Western Blot	~~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.

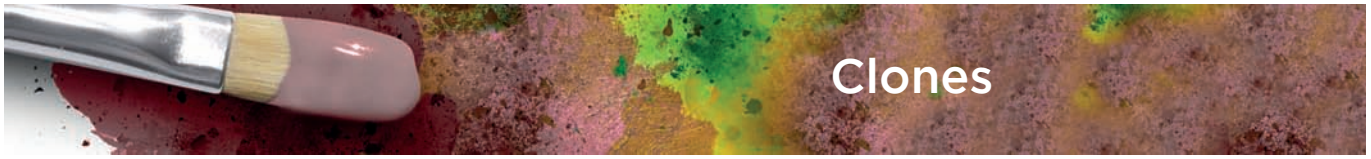
1 **HLDA 1: Leucocyte Typing - Bernard, A., et al. Eds., Springer-Verlag (1984)**
2 **HLDA 2 : Leucocyte Typing II - Reinherz, E.L., et al. Eds., Springer-Verlag (1986)**
3 **HLDA 3: Leucocyte Typing III - McMichael, A.J., et al. Eds., Oxford University Press (1987)**
4 **HLDA 4: Leucocyte Typing IV - KnappW., et al. Eds., Oxford University Press (1989)**
5 **HLDA 5 Leucocyte Typing V - Schlossman, S.F., et al. Eds., Oxford University Press (1995)**
6 **HLDA 6 Leucocyte Typing VI - Kishimoto, T., et al. Eds., Garland Publishing, Inc. (1997)**
7 **HLDA 7 Leucocyte Typing VII - Mason, D., et al. Eds., Oxford University Press (2002)**
8 **HLDA 8 www.hlda8.org**
9 **HLDA 9 www.hcdm.org**
10 **HLDA 10 www.hcdm.org**

Leukocyte and Stromal Cell Molecules, The CD Markers, 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	Specificity		Technical Data	Page
1-2				
1A4CD27	CD27	5	C F I B	51
1A4CD27 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon.				
1D3	CD16b	5	C I F	45
1F11	CD31	5	C I	53
1G11	CD106	5	C I B F	82
1HT44H3	CD25	2	I C	50
1HT44H3 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon.				
2.7A6A3	APO2.7		C W E Ci	29
2A2	ROR1		C	125
2E1	CD32	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	CD103	5	C I	81
2G5 cross reacts with: Indian Rhesus, Sooty Mangabey.				
2G9A10F5	TIA-1	5	C	142
2H2D9	TCR ζ		C W I F	141
2H46D3B	CD6	2	C	35
2H4LDH11LDB9	CD45RA	3	C F I B	63
2ST8.5H7	CD8β	5	C I	37

Clone Name	Specificity		Technical Data	Page
3-4				
3.29B1.10	CD206		B C F	100
3A1E-12H7	CD7	1	C F I	35
3A6	CD166	6	C	96
3C10	TCR Vα7.2		C	126
3D11	TCR Vβ5.3		C	130
3G8	CD16	4	C F B I A E	44
3G8 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Common Marmoset, Squirrel Monkey. 3G8 cross reacts with: Equine, Canine				
4B4-1	CD137	6	C	88
4B4LDC9LDH8	CD29	3	C A B I F ~~P~~	52
4B4LDC9LDH8 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Squirrel Monkey.				
4D9	IL-4		C Ci	119
4EL-1C7	CD26	2	C I ~~B~~	50
5-6				
5.6E	CD31	4	C W I F	53
7-8-9				
7.1	7.1 (NG2 antigen)		I C F W	123



Clones

Clone Name	Specificity		Technical Data	Page
7E4	CD18	6	B I C	45
7E4 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon. 7E4 cross reacts with: Bovine, Ovine, Porcine, Equine, Canine, Feline, Mink, Llama				
8A3	CD109		C	83
8F9	Clec9A		C	111
8H8.1	CD7	2	C F I	35
8H8.1 cross reacts with: Equine				
9-49	HLA-DR, DP, DQ		C	116
9-49 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Squirrel Monkey.				
9F5	CD123	6	C	85
9P25	CD23	6	C B I	49
9P25 cross reacts with: Bovine, Ovine, Equine				

10-50

11.1CN5	OSCAR		C	124
11B2G3	Cyclin A2		C	111
11E4B-7-6	CD235a	7	C F	102
12G5	CD184	7	C B	98
12G5 cross reacts with: Cynomolgus Monkey, Olive Baboon. 12G5 cross reacts with: Bovine, Ovine, Canine				
13B8.2	CD4	3	W E C B	33
13B8.2 cross reacts with: Hamadyras Baboon, Olive Baboon.				
22	CD64	4	C I F	71
22 cross reacts with: Indian Rhesus.				
22F6	Helios		C	114
25.3	CD11a	4	I C B	39
25.3 cross reacts with: Equine, Feline, Mink				
39C1.5	CD2	2	A B C	31
39C1.5 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Common Marmoset, Squirrel Monkey. 39C1.5 cross reacts with: Equine				
42D1	CD85d		C	77
45.15	IFN-γ		C Ci	117
45.15 cross reacts with: Indian Rhesus.				

51-99

56C5.2	TCR Vβ8		C F	132
80H3	CD66b	5	C I W F E	72
80H5	CD15	5	C E A Ph F	43
84H10	CD54	3	I C F B E Ci	66
84H10 cross reacts with: Canine				
88H7	CD65	6	C W F	72
89B	CD19	2	C I F	46
94	CD11b	1	C W I B F	39
94 cross reacts with: Indian Rhesus.				
95C3	CD117	5	C I F	84
97A6	CD203c	7	I C	100

100 & +

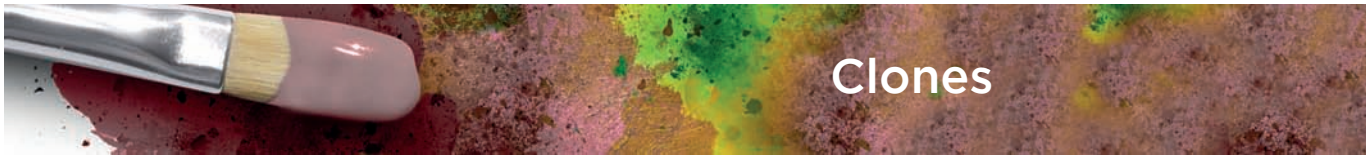
104.G4	CD208	7	F I Ci	101
104D2D1	CD117	6	C	84
104D2D1 cross reacts with: Bovine				
116	CD14	1	C I F	42
191B8	CD161	6	C B	96
259D	FoxP3		C	113
322A-1	CD14	1	C F W I E B	42
322A-1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Capuchin Monkey, Squirrel Monkey.				
36213	TCR Vβ5.2		C	130
366	CD13	1	C I F	41
581	CD34	5	A C W F Ꝑ	55
581 cross reacts with: Ovine				
906	CD33	2	C F I	54

A

AD-2	CD73	4	C	74
AF23	TCR Vβ23		C	139
AICD58	CD58	5	C I F Ƀ	68
ALB1	CD10		F C	38
ALB1 cross reacts with: Bovine, Equine				
ALB11	CD45RA	5	C P	63
ALB11 cross reacts with: Ovine, Equine				
ALB12	CD45		C	62
ALB2	CD10	3	C F	38
ALB6	CD9	3	C I W A F	37
ALB9	CD24	6	E C F	49
AZND1	CD209	7	C F	102

B

B-A38	CD138		C	89
B-R35	CD196	8	C	98
B1.49.9	CD25	2	I C A Ƀ	50
B1.49.9 cross reacts with: Squirrel Monkey. B1.49.9 cross reacts with: Ovine, Mink				



Clones

Clone Name	Specificity		Technical Data	Page
B1G6	β2-microglobulin		C	29
B8.12.2	HLA-DR		C	116
B8.12.2 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon, Common Marmoset, Cotton-topped Tamarin, Squirrel Monkey.				
B9.11	CD8	1	C B I	36
B9.12.1	HLA-ABC		C	115
B9.12.1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon.				
B9E9	CD20	5	C	47
B9E9 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Pigtailed Macaque, Hamadyras Baboon, Olive Baboon, Sooty Mangabey.				
BA54	CD39	5	C	58
BA62.6	TCR Vβ18		C F	137
BAB281	CD335		C	109
BAB281 cross reacts with: Cynomolgus Monkey, African Green, Chimpanzee, Olive Baboon, Common Marmoset.				
Bear1	CD11b	6	C I B F	39
Bear1 cross reacts with: Ovine, Equine, Canine				
Ber-ACT35	CD134		C	87
Ber-ACT35 cross reacts with: Feline				
BL13	CD21	3	C F I E	48
BL13 cross reacts with: Bovine, Ovine, Equine, Canine, Rabbit				
BL14	CD37	3	C I F	57
BL168	IL-17A		C	120
BL1a	CD5	3	C I W B	34
BL1a cross reacts with: Bovine, Equine				
BL37.2	TCR Vβ1		C	127
BL37.2 cross reacts with: Indian Rhesus.				
BL6	CD1a	3	C F I	30
BL6 cross reacts with: Ovine, Equine				
BM16	CD294		C	105
BNI3	CD152	6	E F I C Ci	91
BNI3 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Chimpanzee, Olive Baboon. BNI3 cross reacts with: Ovine, Porcine				
BU15	CD11c	3	F C I	40
BU15 cross reacts with: Canine				
BY55	CD160	7	C I B	95
BY55 cross reacts with: Sooty Mangabey.				

C

C1.7	CD244	5	A C W	103
C15	TCR Vα24		C F	127
C21	TCR Vβ11		C	133
C218	CD56	6	B C	67
CAS1.1.3	TCR Vβ14		C	135
CB3-1	CD79b	6	A C I W	75
CB3-1 cross reacts with: Mink				
CD28.2	CD28	5	A C B	51
CF1	CD122	5	C E B F	85
CF1 cross reacts with: Cynomolgus Monkey, Indian Rhesus.				
CH11	CD95	5	A C F P E	80
CH92	TCR Vβ3		C	128
CLB-Gran/12	CD63	4	C W Ci	71
CLB-MPO-1	Myeloperoxidase		C	122
CLB-T1/1	CD5	3	C	34
CLB-Thromb/6	CD62P	4	W I B C F Ci	70
CLB13.17	Lactoferrin		C	122

D

D3HL60.251	CD33	4	C I	54
DCGM4	CD207	7	F C I Ci	101
DFT1	CD43	5	C P W A I F	61
DFT1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon. DFT1 cross reacts with: Ovine				
dG9	Perforin		C	124
DREG56	CD62L	5	C W I B E F	70
DREG56 cross reacts with: Chimpanzee. DREG56 cross reacts with: Bovine				

E

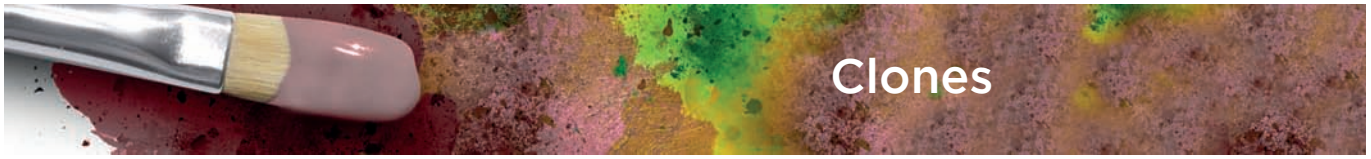
E124.2.8	IgE (Dε2)		C	118
E17.5F3.15.13	TCR Vβ17		C F	136
E59.126	CD300a		C W	106
EB6B	CD158a,h	6	C I W B	92
ELL1.4	TCR Vβ20		C	137

F

F15-42-1-5	CD90	6	C W	79
F15-42-1-5 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon.				
FA6.152	CD36	5	C F E W B t	56
FES172	CD158i		I C	94
FIN9	TCR Vβ9		C	132
FMC7			W C	47, 113

G

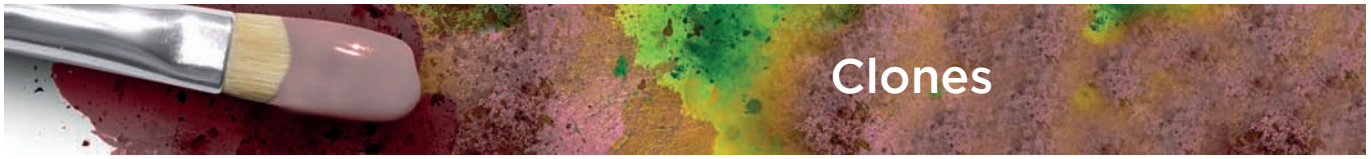
G025H7	CD183		C	97



Clones

Clone Name	Specificity		Technical Data	Page
G043H7	CD197	8	C	99
GB11	Granzyme B		C	114
GB11 cross reacts with: Mouse, Rat				
Gi9	CD49b	5	B F C I W	65
GL183	CD158b1/b2,j	6	C I W B	93
H				
H10E12F4	DAP12		C	112
H132	TCR Vβ13.2		C	134
H299	CD20	1	C F I B E	47
H299 cross reacts with: African Green, Chimpanzee, Common Marmoset, Cotton-topped Tamarin, Squirrel Monkey.				
H4A3	CD107a	5	C Ci	83
HA5.2B7	CD86		C F	79
HA5.2B7 cross reacts with: Ovine, Caprine, Porcine, Mink				
HB15a	CD83	5	C I ~~A~~	77
HB15a cross reacts with: Indian Rhesus, Common Marmoset, Squirrel Monkey.				
HCD99	CD99	6	C	81
HD237	CD19	3	C B	46
HD239	CD22	4	I F C	48
HD50	CD23	3	C B I	49
HI186	CD52	6	C	66
HM47	CD79a	5	I Ci F Ph C	75
HM47 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Chimpanzee, Olive Baboon.				
HP-3B1	CD94	5	B I A C F	80
HP-F1	CD85j		C	78
HP2/1	CD49d	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	CD30	3	C W P I E F	52
HRS4 cross reacts with: Cynomolgus Monkey, Indian Rhesus.				
HT1 + HT4 + HT8 + TdT HT9			C	141
I				
IA6-2	IgD		C	117
IG125	TCR Vβ21.3		C	138
IL2.39.1	IL-2			119
IMMU 157	TCR Vβ5.1		C F	129
IMMU 222	TCR Vβ13.1		C F	134

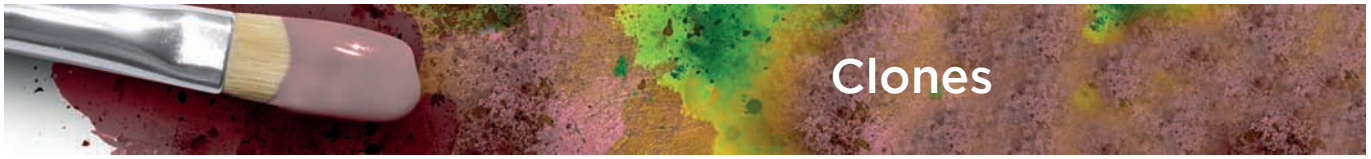
Clone Name	Specificity		Technical Data	Page
IMMU 360	TCR Vγ9		C	140
IMMU 360 cross reacts with: Squirrel Monkey.				
IMMU 389	TCR Vδ2		C	140
IMMU 546	TCR Vβ22		C F	138
Immu-357	HLA-DR		C	116
Immu-357 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Cotton-topped Tamarin.				
Immu103.44	CD13	5	C	41
Immu103.44 cross reacts with: Olive Baboon.				
Immu133	CD34	5	C W P F A I	55
Immu19.2	CD45	6	C	62
IMMU510	TCR PAN γ/δ		C I E F	126
IP26A	TCR PAN α/β		C	125
IPM2	TNFα		C	143
ISA-3	CD278		C	104
J				
J.173	CD44	3	C A I	61
J.173 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon.				
J1B3	Cytokeratin		C	112
J3-119	CD19	4	B ~~t~~ C	46
J33	CD45	3	C	62
J3D3	CD35	3	I C E B F P	56
J4.57	CD48	4	C I P	64
J5	CD10	1	F C I ~~P~~ B	38
J5 cross reacts with: Bovine, Ovine, Equine, Mink, Guinea Pig				
JS11KSC2.3	CD55	6	I F C	67
JS64	CD81	5	C I W	76
JS64 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Olive Baboon.				
JU74.3	TCR Vβ13.6		C	135
K				
K20	CD29	3	I F C ~~B~~	52
K20 cross reacts with: Bovine, Caprine, Porcine, Equine, Canine, Mink				
KC56	CD45	5	C	62
KC57	HIV-1 core antigen		C	114
KDR-1	CD309	8	C	107
Ki-67			F W C Ci ~~Ph~~	121
KOR-SA3544			C W Ph	73



Clones

Clone Name	Specificity	Technical Data	Page
L			
L161	CD1c	3 C I F	30
L161 cross reacts with: Ovine			
LS198-4-3	CD38	5 C	57
M			
M80	CD141	C	89
M91	CD126	6 F I B W C E	86
MA127	NTB-A	C	110
MA152	NKp80	C	123
MAB104	CD80	6 C I F	76
MAB89	CD40	4 C P A F W E	58
MEM-43	CD59	4 C	69
MHR73-11	CD180	7 C	97
MP4-25D2	IL-4	C E W	119
MP4-25D2 cross reacts with: Porcine, Equine			
MPB2D5	TCR Vβ2	C	128
N			
N901	CD56	4 P I F B A C	67
N901 cross reacts with: Hamadyras Baboon.			
NC1	CD57	5 C W P	68
NKTA255	CD305	8	106
O			
ON72	CD314	C	107
ON72 cross reacts with: African Green, Chimpanzee, Common Marmoset.			
OX-104	CD200	7 C	99
P			
P2	CD41	5 C B E I W	59
P282E	CD59	5 C	69
PD-L1	CD274	8 C	104
PD1.3	CD279	8 C	105
Q			
QBEnd10	CD34	4 C W P F I A	55
QBEnd10 cross reacts with: Hamadyras Baboon.			
QBEnd10 + Immu133 + Immu409	CD34	C	55

Clone Name	Specificity	Technical Data	Page
R			
R34.34	CD127	6 B C I	86
R34.34 cross reacts with: Indian Rhesus, Pigtailed Macaque.			
R9.12	TCR Vδ1	C	139
RF3	CD157	6 C I E	92
RM052	CD14	6 C	42
S			
SA-DA4	IgM	C	118
SAM1	CD49e	5 C F I B	66
SBZAP	ZAP-70	C	143
SC06	CD116	6 C I W	84
SF1.340	CD135	6 I C B	88
SFCI12T4D11	CD4	1 F C B	33
SFCI12T4D11 cross reacts with: Hamadyras Baboon, Olive Baboon.			
SFCI19Thy1A8	CD1a	1 C I F	30
SFCI21Thy2D3	CD8	1 C F B I	36
SFCI21Thy2D3 cross reacts with: Common Marmoset.			
SFCI3Pt2H9	CD2	1 C B F	31
SFCI3PT2H9 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon, Capuchin Monkey, Common Marmoset, Squirrel Monkey.			
SJ10.1H11	CD22	3 C A I	48
SJ1D1	CD13	3 C I F	41
SPAN 12	Thrombin receptor	C	142
SPVL3	HLA-DQ	I B F C	115
SSDCLY107D2	CD123	C	85
SSDCLY107D2 cross reacts with: Cynomolgus Monkey.			
SY/11B5	CD157	C	92
SZ1	CD42a	5 C I W	60
SZ2	CD42b	5 C B I W P	60
SZ21	CD61	5 C I W E P F	69
SZ22	CD41	5 C W E I	59
T			
T16	CD38	3 F I C	57
TAMAYA1.2	TCR Vβ16	C F	136
TEA 1/31	CD144	6 F I C	90
TEA 1/34	CD146	6 C F	90



Clones

Clone Name	Specificity		Technical Data	Page
TEA3/17.1.1	CD105	6	C	82
Thy1/310	CD90		C	79
TP1.55.3	CD69		C A I F	73
TRAP-1	CD154	6	B C I W F	91
TRAP-1 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Hamadyras Baboon, Olive Baboon.				

U

UB2	CD95		F C P	80
UB2 cross reacts with: Carp				
UCHL1	CD45RO	3	C P F I B	64
UCHL1 cross reacts with: Mink, Trout, Carp				
UCHT1	CD3	1	I C A F E	32
UIC2	CD243		B C F P	103
UP-R1	CD158f		C	94

V

VER2.32.1	TCR Vβ12		C	133
VU1D9	CD326		C	108

W

W6B3C1	CD133	7	C	87
WEDE15	Thrombin receptor		C E	142
WJF24	TCR Vβ4		C	129

Y

YDJ1.2.2	CD71	5	C F	74
YDJ1.2.2 cross reacts with: Cynomolgus Monkey.				

Z

Z176	p75 AIRM1		C W	108
Z199	CD159a		I C B	95
Z199 cross reacts with: Cynomolgus Monkey, Indian Rhesus, Pigtailed Macaque, African Green, Chimpanzee, Olive Baboon, Common Marmoset.				
Z231	CD336		C	109
Z25	CD337		C	110
Z25 cross reacts with: Cynomolgus Monkey, Indian Rhesus, African Green, Chimpanzee, Olive Baboon, Common Marmoset.				
Z27.3.7	CD158e1/e2		I C B	93
ZIZOU4	TCR Vβ7.2		C	131
ZM3.8	CD85k	7	I C	78
ZOE	TCR Vβ7.1		C	131

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