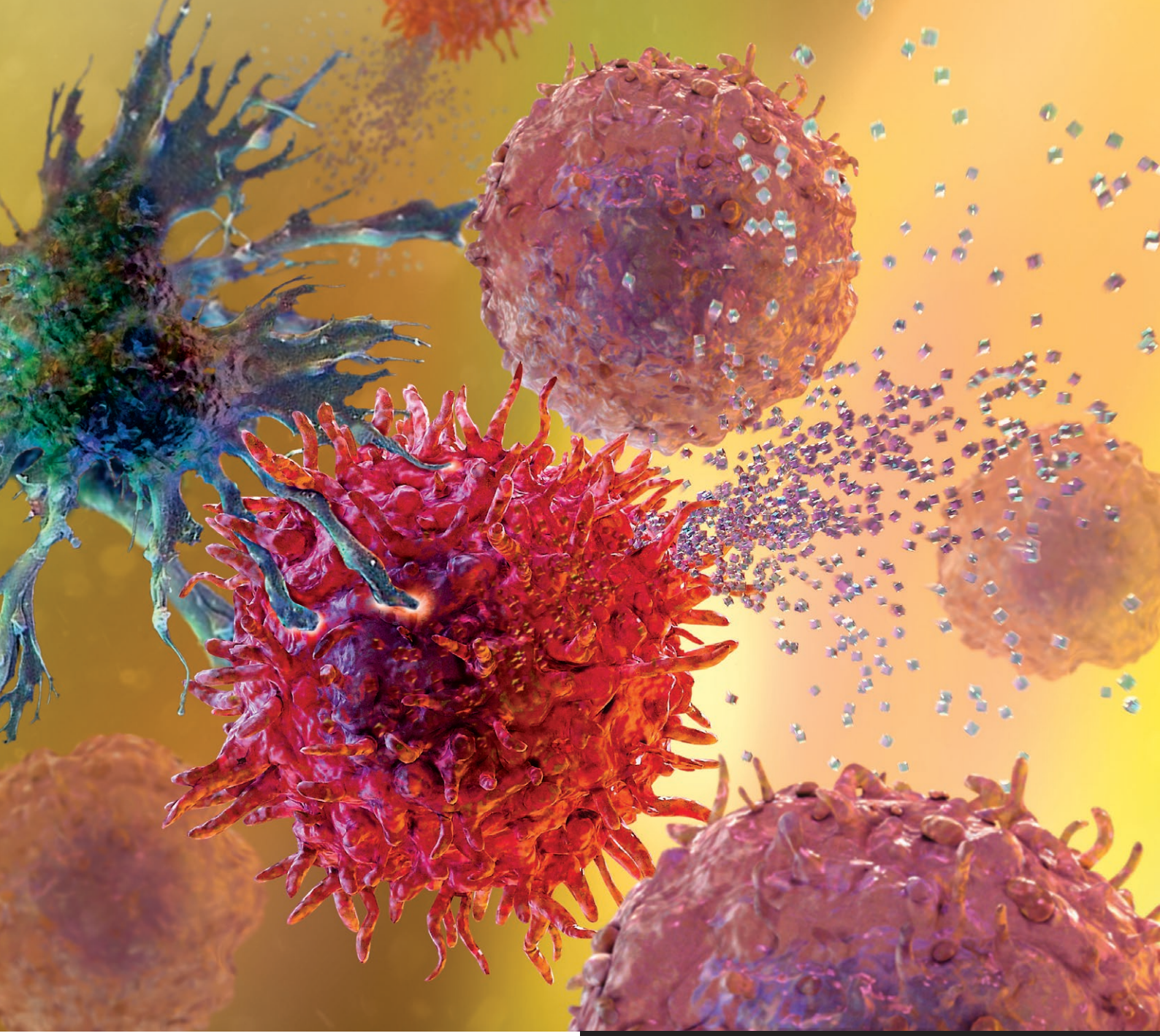


iQue® Reagent Kits

High-Throughput, Multiplexed Solutions for Faster Time to Actionable Answers

Simplifying Progress

SARTORIUS

iQue® Reagent Kits

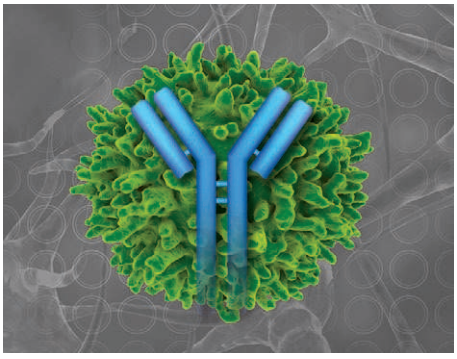
iQue® Reagent Kits provide an integrated solution to enable high content, high throughput, flow cytometry based analysis for insight into complex biology. iQue® Reagent Kits have been developed to be run on the iQue® advanced flow cytometry platforms and analyzed with iQue® Forecyt® software.

- Biologically relevant results: Multiparametric data gives a fuller understanding of each cell population and more informed actionable results.
- Speed: Analyze a 96-well plate in as few as 5 minutes or a 384-well plate in as few as 20 minutes for a faster time to result.
- Ease of use: A streamlined workflow ensures that more scientists and lab members, from novice to expert, can perform assays and maximize the value of the iQue® advanced flow cytometry platform in your lab.
- Miniaturize assay volumes: Use as little as 1 µL, conserving precious samples and reagents for additional analysis.

iQue® Qbeads® and iQue® Qpanels Kits allow you to capture and analyze specific proteins on distinct bead types for multiplexed quantitation of secreted cytokines, adhesion molecules, enzymes, growth factor receptors, and more.

iQue® Reagent Kits enable the measurement of multiple functional readouts, including cell cycle, apoptosis, membrane integrity, proliferation, and antibody characterization, as well as a variety of immune cell functions on beads, cells, or both, allowing you to simultaneously assess both phenotype and function.

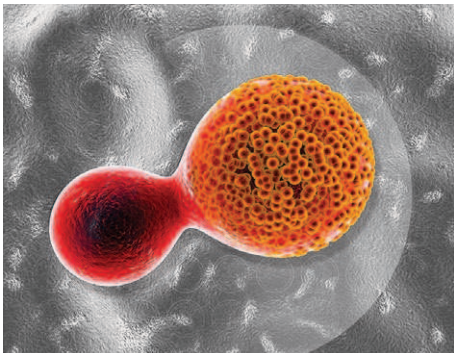
iQue® Reagent Kits



Antibody Discovery and Development

Increase data throughput and quality by multiplexing antibody binding, function, and titer across the process.

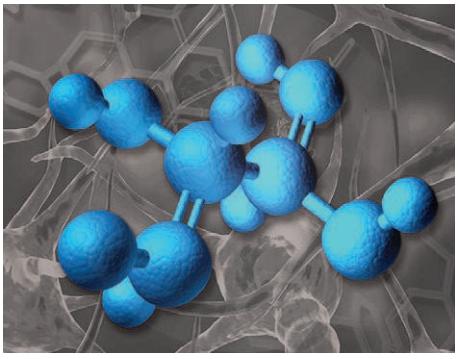
- Antibody screening
- Functional profiling
- Cell line development



Adoptive Cell Therapy

Assess multiple cell parameters faster, with fewer cells and less reagents.

- Immune cell killing
- Immune cell assessment
- Cytokine profiling



Small Molecule Screening

Perform high-content phenotypic screening of immune biology across the drug discovery process.

- Primary immune cell screening
- Yeast and bacterial assays
- Target identification with siRNA and CRISPR

Kits at a Glance

Kit Type	Key Advantages	Suitable Applications
iQue® Plexscreen Kits[2,3] Capture human, mouse, or rat secreted proteins	Configurable to meet your needs—plex up to 30 analytes from our menu and use pre-configured analysis templates	Cytokine profiling, drug screening, and biomarker discovery
iQue® Devscreen Kits[3] Attach your own target proteins or capture antibodies for greatest flexibility	Plex up to 30 of your own analytes with Qbeads® Devscreen SH, or 5 analytes with Qbeads® Devscreen SAv	Cytokine profiling, phenotypic screening, and antibody screening
iQue® Qpanels T Helper Kits[1] Quantify up to 9 analytes in a single sample	Easy to use, with pre-configured, pre-mixed reagents	Cytokine profiling, and analysis of T helper cell secreted cytokines
iQue® Immune Cell and Bead-Based Kits[1] Assess immune phenotype and function in a single assay	T Cell Characterization and Immune Cell Killing Kits measure immunophenotyping markers, cell health, cell function, and cytokine profiling markers in a single well Highly reproducible, streamlined workflow with minimal hands-on time	Cytokine profiling, T cell biology, immunophenotyping, immune cell killing, and characterization
iQue® Cell and Bead-Based Kits for Antibody Characterization[1,2] Screen clones and speed up antibody discovery efforts High throughput evaluation of antibody internalization	Analyze both cells and secreted proteins simultaneously in a single assay Generate data for informed decisions from less sample, faster than conventional assays	Clone selection, IgG titer, isotyping, cell health, and antibody internalization
iQue® Cell-Based Kits[1,2,3] Understand cell cycle, cell health, apoptosis, membrane integrity, and proliferation Encode multiple cell lines for multiplexed analysis in a single well	Measure multiple endpoints of cell health and cell function across a breadth of biological processes like cell activation, differentiation, communication, and death	Cell cycle, apoptosis, cell membrane activity, membrane target antibody screening and proliferation status

1. Available in both 96-well and 384-well formats
2. No-wash protocol for improved reproducibility and reduced assay time
3. Flexibility to multiplex with other kits

Visit shop.intellicyt.com to find and order:

- Reagents and kits based on searches by application, instrument, species reactivity and research areas
- Detailed information on all of our reagents and kits

Cytokine Profiling and Bead-Based Screening

iQue® Qbeads® and iQue® Qpanels Kits

iQue® Qbeads® are a family of reagents that enable the capture of specific proteins on distinct bead types, enabling the multiplexed quantitation of biological parameters such as secreted cytokines, adhesion molecules, enzymes and growth factor receptors using minimal sample volume and a simple, fast workflow. iQue® Qbeads® come in two variations: iQue® Qbeads® Plexscreen Reagents and iQue® Qbeads® Devscreen Kits.

iQue® Qbeads® Plexscreen Kits

- Choose from over 50 analytes to quantify human, mouse or rat secreted proteins.
- Configure your own panel for analysis of up to 30 secreted proteins in a single well using our online assay-builder tool.

Please visit **www.intellicyt.com/qbeads-assay-builder** to build a panel and request a quotation.

- Combine with other iQue® kits, with no reduction in analysis speed.
- Simplified no-wash and one-wash protocols.
- Kits include detection reagents, standard protein, buffers and pre-defined analysis templates (Figure 1), providing the fastest sample to decision workflow.
- Quantitative readouts measured as fluorescence intensity, or interpolated to a concentration (pg/mL) in solution via the use of a standard curve (Figure 2).

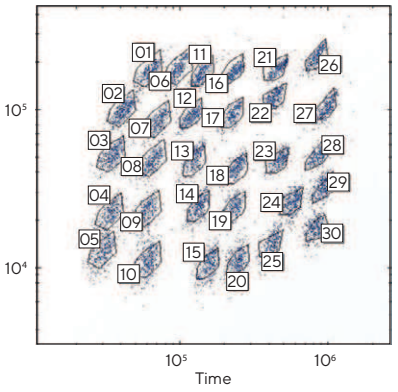
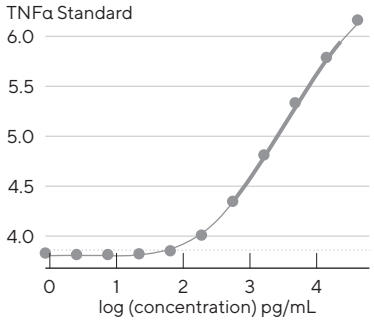


Figure 1: Pre-defined analysis templates are provided with each kit for the included analytes. Bead population gates are empty before acquisition, and are populated with the appropriate beads during sample acquisition.



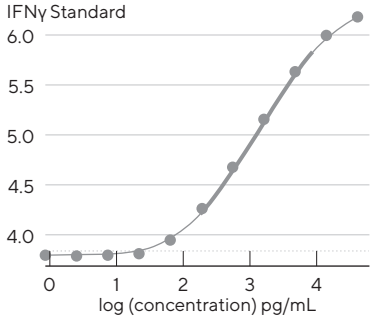


Figure 2: Sample standard curves generated for different cytokines.

iQue® Qbeads® Devscreen Kits

iQue® Qbeads® Devscreen kits allow users the flexibility to attach their own capture antibodies or target proteins onto iQue® Qbeads®. Devscreen beads come coated with either Streptavidin or Sulfhydryl functional groups.

iQue® Qbeads® Devscreen Streptavidin Coated Reagents

- Streptavidin coated kits used to screen biotinylated targets (Figure 3).
- Available in 5 different bead populations.
- Multiplex (by bead size) with analytes from the Plexscreen or Devscreen Sulfhydryl (SH) panels.

Find out more
www.intellicyt.com/qbeads-kits/

iQue® Qbeads® Devscreen Sulfhydryl Derivatized Reagents

- Sulfhydryl coated beads covalently bind any molecule with a free amine functional group in a simple two-step process.
- Available in up to 30 different bead populations.
- Multiplex with iQue® Qbeads® Plexscreen and Devscreen SAv reagents kits (multiplexing with iQue® Qbeads® Plexscreen is subject to bead compatibility).

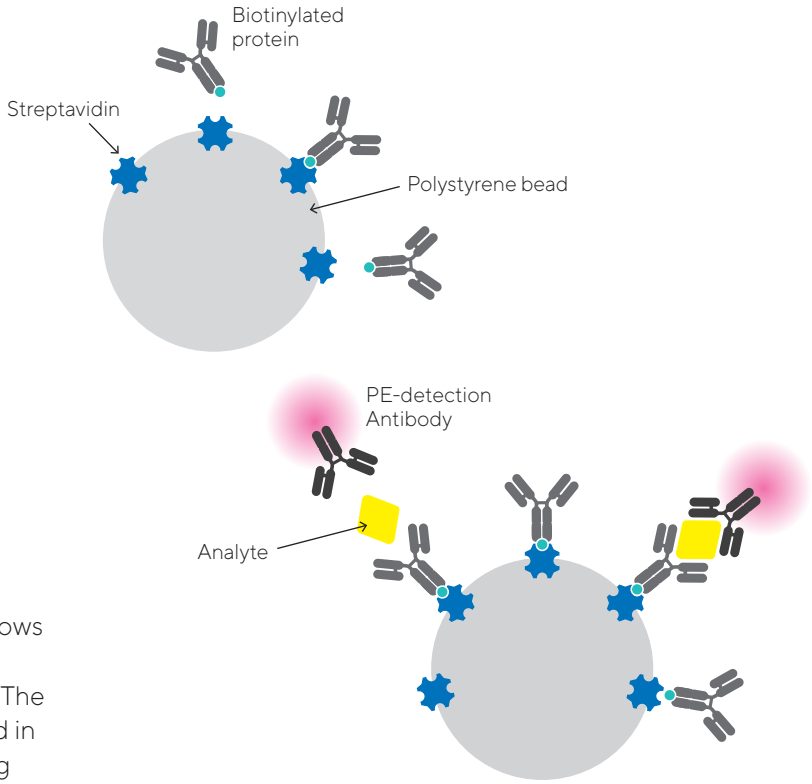


Figure 3: Principle of iQue® Qbeads® Devscreen Streptavidin Coated Reagents

iQue® Qbeads® Human Inflammation Panel Kit

iQue® Qbeads® Human Inflammation Panel Kit allows the measurement of seven human cytokines and chemokines from either serum or *in vitro* samples. The cytokines and chemokines included are implicated in inflammatory responses to disease states including autoimmune diseases, chronic inflammation, and infections. Analytes offered in the iQue® Qbeads® Human Inflammation Panel Kit include: Human Interferon gamma (IFNγ), Interleukin-2 (IL-2), Interleukin-6 (IL-6), CCL2 (MCP-1), CCL3 (MIP-1α), CXCL9 (MIG), and CXCL10 (IP-10).

Please visit **www.intellicyt.com/inflammation-panel-kit/**

iQue® Qpanels Human T Helper Kits

With pre-configured beads for the qualitative and quantitative analysis of up to 9 analytes in a single sample of plasma, serum, or cell culture supernatant, iQue® Qpanels Human T helper kits are designed for multiplexed detection of cytokines secreted by human T helper cells. Each kit has been optimized for different analyte combinations, specifically designed for ease-of-use with pre-mixed beads and standards, and requires only 10 µL of sample.

iQue® Qpanels Human T Helper Kits	Analytes
Th1|2 | 4-plex	IL-4, IL-6, IFNγ, TNFα
Th1|2 | 6-plex	IL-2, IL-4, IL-6, IL-10, IFNγ, TNFα
Th1|2 | 9-plex	IL-2, IL-4, IL-6, IL-10, IL-12 (p70), IL-13, IFNγ, TNFα, GM-CSF
Th1|2|17 | 7-plex	IL-2, IL-4, IL-6, IL-10, IL-17A, IFNγ, TNFα

Find out more
www.intellicyt.com/qpanels-kits/

Visit shop.intellicyt.com to find and order:

- Reagents and kits based on searches by application, instrument, species reactivity and research areas
- Detailed information on all of our reagents and kits

Immune Cell Function and Characterization

iQue® Immune Cell and Bead-Based Kits

iQue® Human T Cell Activation Kit

The iQue® Human T Cell Activation Kit streamlines the traditional workflow by measuring immune cell phenotypes, T cell activation markers, cell proliferation, cell viability and secreted cytokine concentrations (IFNγ and TNFα) using only 5 µL–10 µL of samples. (Figure 4).

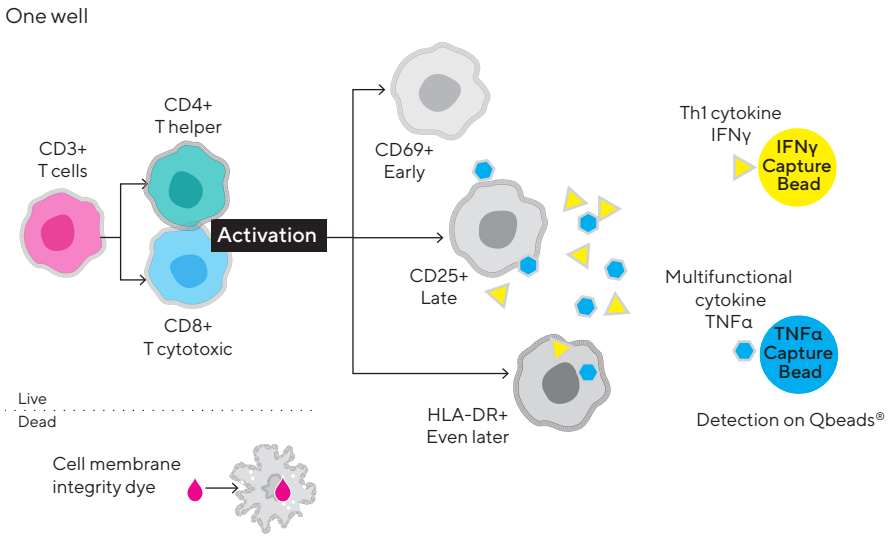


Figure 4: Assay principle of the iQue® Human T Cell Activation Kit. Simultaneous measurement of activation markers, cell proliferation, cell viability, and cytokines in a single well.

iQue® Human T Cell Companion Kits

iQue® Human T Cell Companion Kits are used in combination with the iQue® Human T Cell Activation Kit and iQue® Human T Cell Memory Kit to allow the measurement of up to six more human cytokines in addition to those already included in the iQue® Human T Cell Activation Kit and iQue® Human T Cell Memory Kit. The iQue® Human T Cell Companion Kits are supplied with their own pre-formatted analysis template (Figure 5).

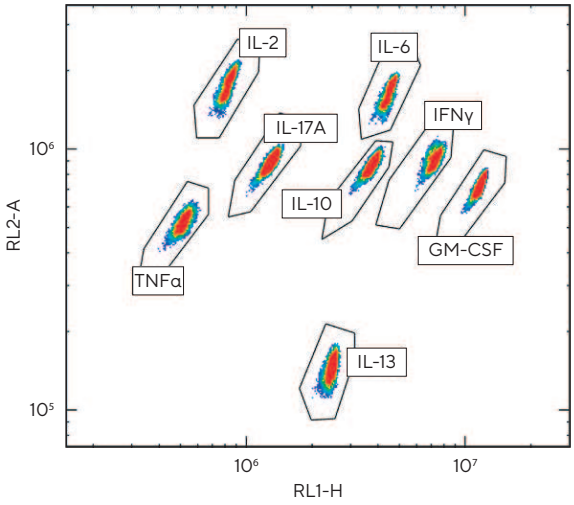


Figure 5: iQue® Human T Cell Companion Kit cytokines template.

Find out more
www.intellicyt.com/tca

iQue® Human T Cell Memory Kit

The iQue® Human T Cell Memory Kit measures T cell memory phenotype and function at different stages while providing information about their health and their role in cytokine secretion. This one-wash assay requires minimal hands-on time and measures both cells and beads together in a single well (Figure 6).

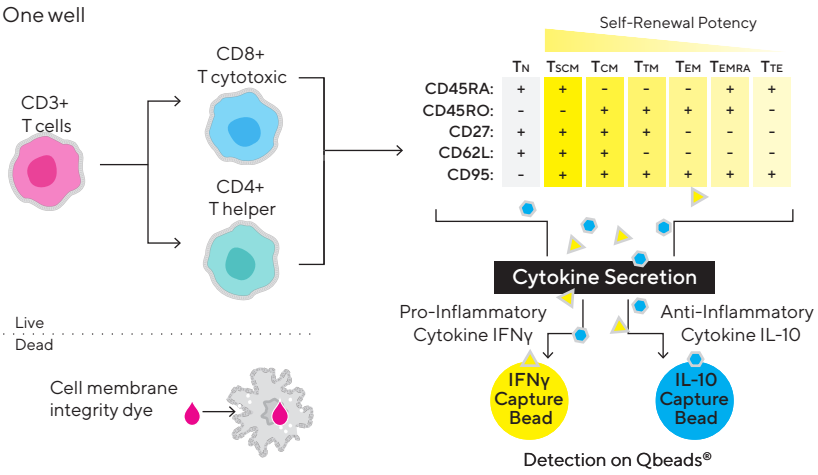


Figure 6: Illustration of the iQue® Human T Cell Memory Kit assay principles.

Find out more
www.intellicyt.com/tcm

iQue® Human T Cell Exhaustion Kit

The iQue® Human T Cell Exhaustion Kit is designed for ease of use in multi-plexing markers of T cell exhaustion, phenotyping T helper and T cytotoxic cells, assessing cell health, and bead-based measurement of secreted cytokines, all in the same assay (Figure 7).

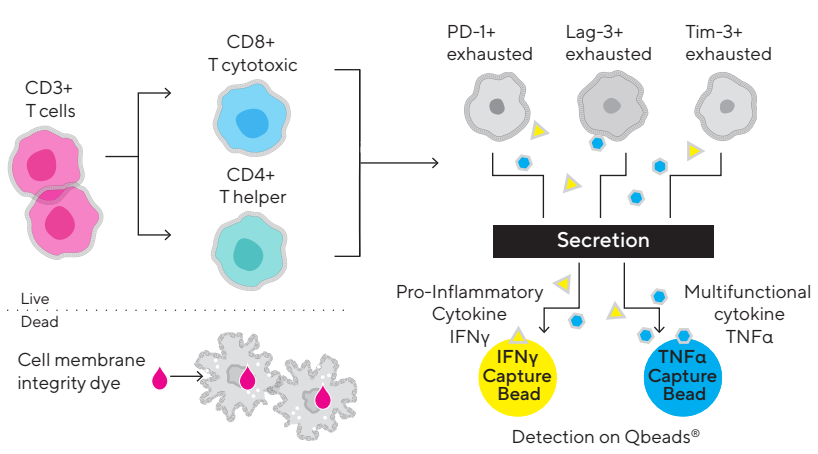


Figure 7: Simultaneous endpoint measurement in a single well.

Find out more
www.intellicyt.com/tce

iQue® Mouse T Cell Kit

The iQue® Mouse T Cell Kit measures T cell activation, memory, and exhaustion while providing information about their health and their role in cytokine secretion (Figure 8).

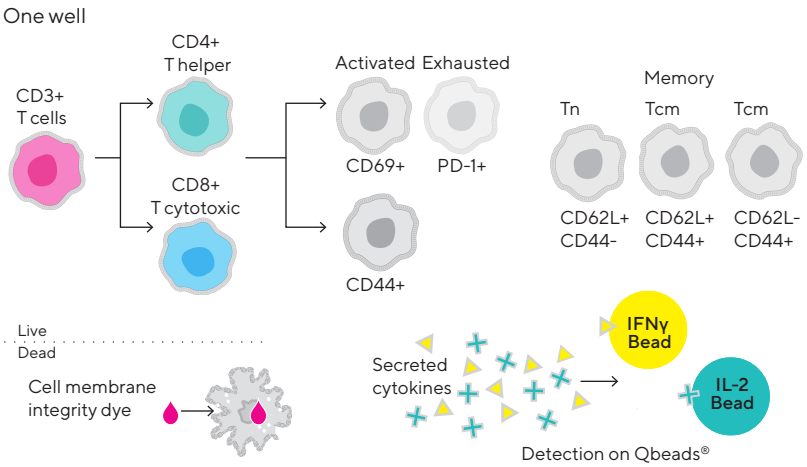


Figure 8: The iQue® Mouse T Cell Kit enables simultaneous measurement of cell count and viability, T cell phenotypes markers of activation and exhaustion, secreted cytokines, cell encoding and proliferation (optional) in a single well.

Find out more
www.intellicyt.com/mouse-t-cell-kit

iQue® Human T Cell Phenotyping Kit (CD3, CD4 and CD8)

The iQue® Human T Cell Phenotyping Kit (CD3, CD4 and CD8) is designed for reliable identification of human T cell subsets (Figure 9). This assay is optimized to run on the iQue® 3 VBR and VYB configurations, which combine high throughput sampling, flow cytometry detection and multiplexing capabilities. The kit is formulated to minimize non-specific background staining. The optimized workflow also provides the flexibility by enabling additional cytokines to be added for further characterization of subpopulations.

Find out more
www.intellicyt.com/t-cell-phenotyping

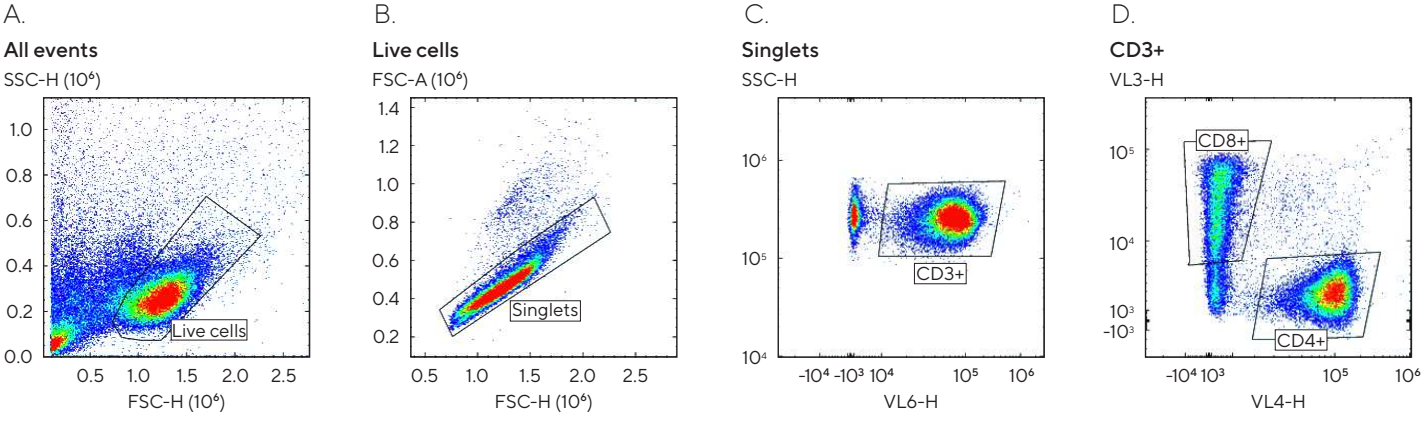


Figure 9: Phenotyping analysis of human PBMCs cultured for one day. (A) Set gate for live cells in all events to exclude debris | dead cells. (B) Remove doublets from live cells to obtain single cells. (C) $CD3^+$ cells of Singlets. (D) $CD4^+$ and $CD8^+$ subsets of $CD3^+$ cells.

Immune Cell Killing Kit

iQue® Human General Immune Cell Killing Kit

The iQue® Human General Immune Cell Killing Kit is a cell and bead mixture assay that simultaneously measures target cell distinction from effector cells, effector cell secreted pro-apoptotic serine protease Granzyme B, mitochondrial membrane depolarization, cell membrane integrity, cell count, and cell health of effectors and targets.

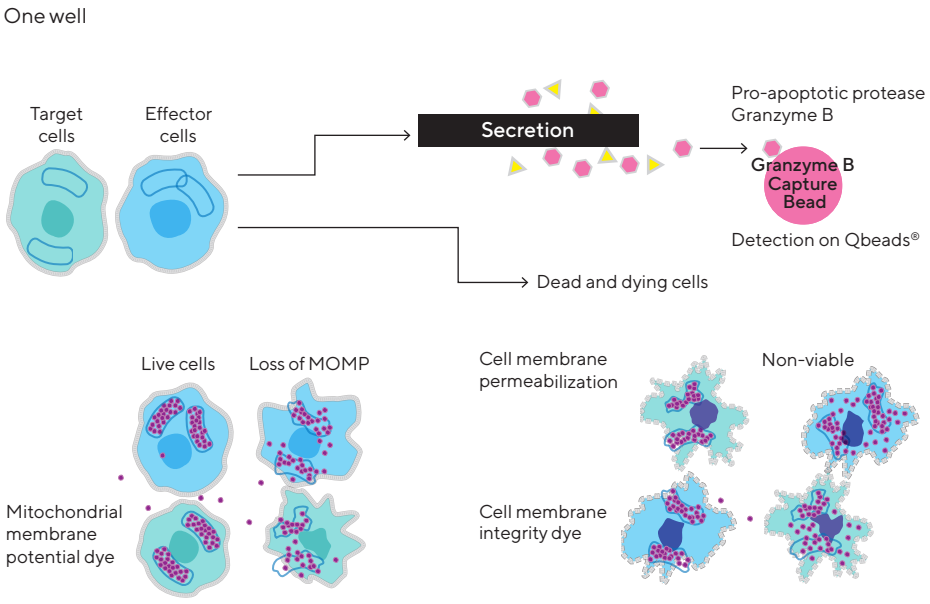


Figure 10: Simultaneous endpoint measurement in a single well. Mitochondrial outer membrane potential is also known as MOMP.

Find out more
www.intellicyt.com/ick

iQue® Human T Cell Killing Kit

The iQue® Human T Cell Killing Kit was designed for ease of use in multiplexing cell health, cell phenotype and function markers along with bead-based, secreted protein profile measurements in the same assay (Figure 11).

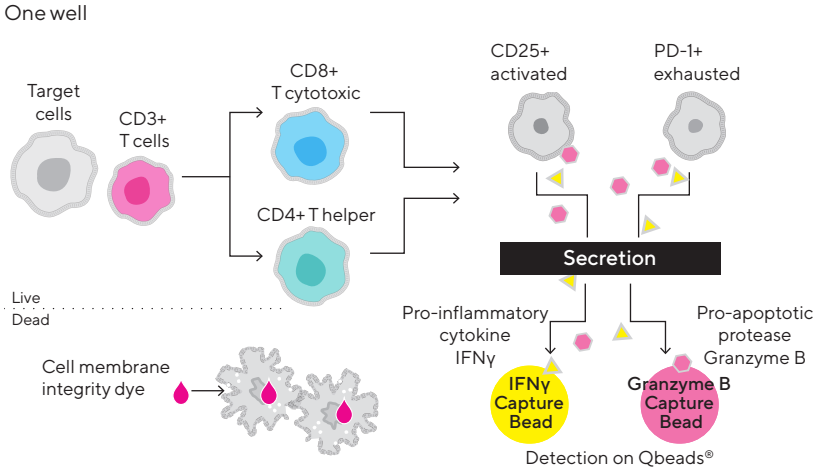


Figure 11: Simultaneous measurement of target cell identification, cell health, cell function, immunophenotyping, and cytokine profiling all in one well.

Find out more
www.intellicyt.com/t-cell-killing

iQue® Human NK Cell Killing Kit

The iQue® Human NK Cell Killing Kit is a cell and bead mixture assay that simultaneously measures cell phenotype markers, NK cell functional markers, target cell identification, effector secreted pro-inflammatory cytokine and pro-apoptotic protease, and lastly cell count and cell membrane integrity (Figure 12).

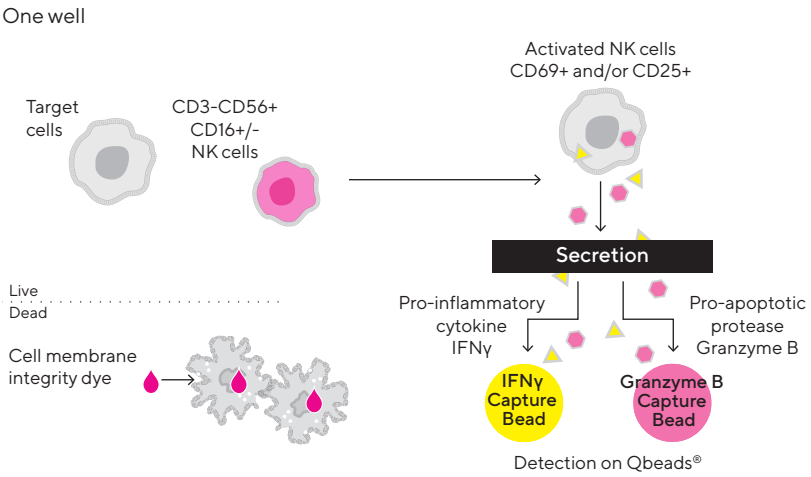


Figure 12: Simultaneous endpoint measurement in a single well.

iQue® Human NK Cell Companion Kits

The iQue® Human NK Cell Companion Kits may be used in combination with the iQue® Human NK Cell Killing Kit to allow measurement of up to 6 additional human cytokines | effector proteins along with IFNγ and Granzyme B which are already included in the iQue® Human NK Cell Killing Kit (Figure 13).

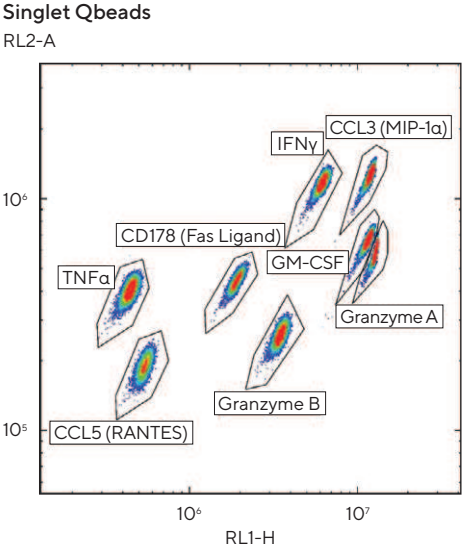
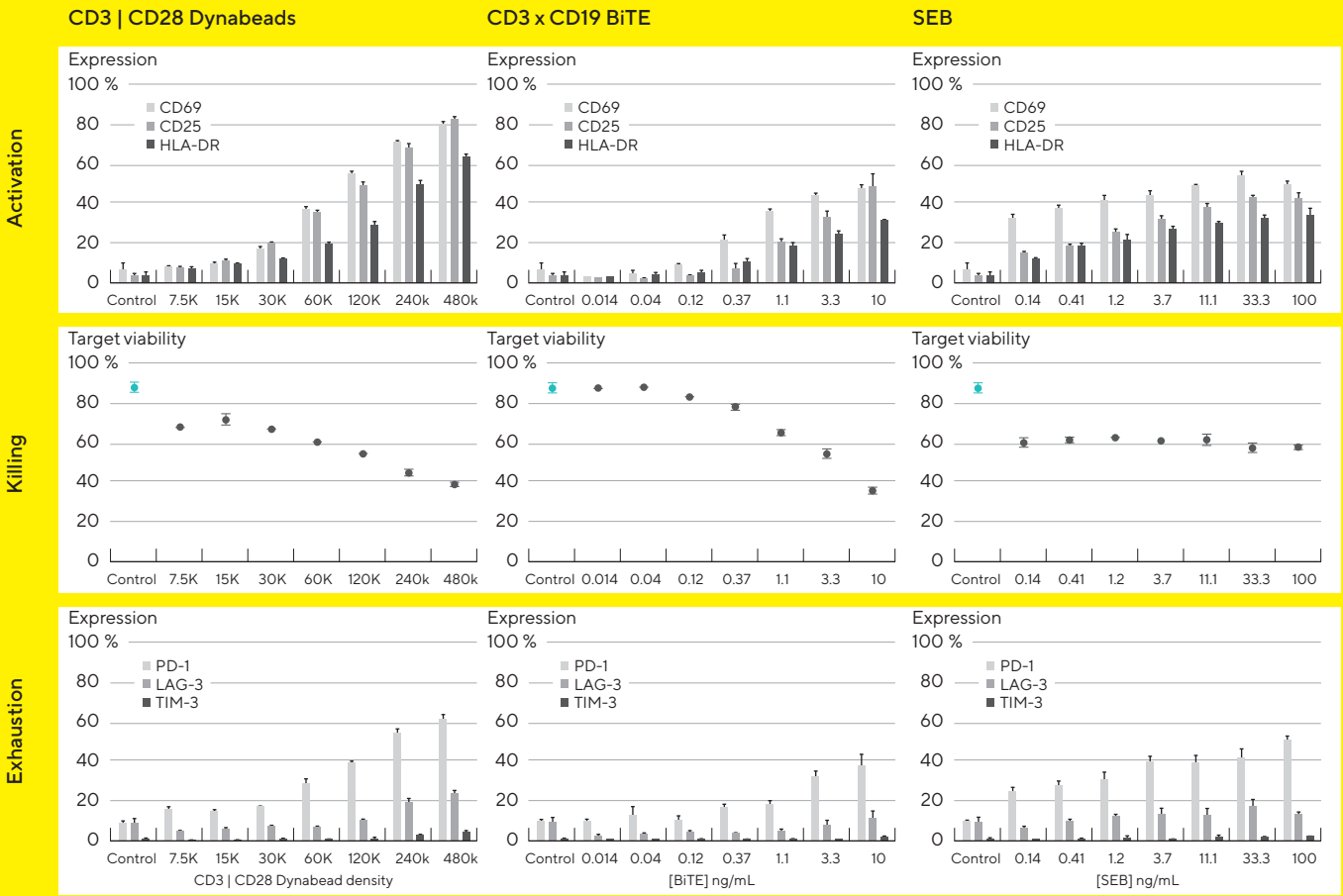


Figure 13: iQue® Human NK Cell Companion Kit cytokine template

Find out more
www.intellicyt.com/nk-killing

Application Spotlight: T Cell Characterization

Thorough evaluation of T cell phenotype and function is critical to understanding T cell biology and building better therapeutics. A growing number of immunotherapies, for example bispecific antibodies, checkpoint inhibitors and CAR-T cells, are being developed to target various stages in T cell activation and differentiation pathways. Detailed characterization during the course of T cell development has the potential to offer greater insights leading to improved therapeutics.



Memory

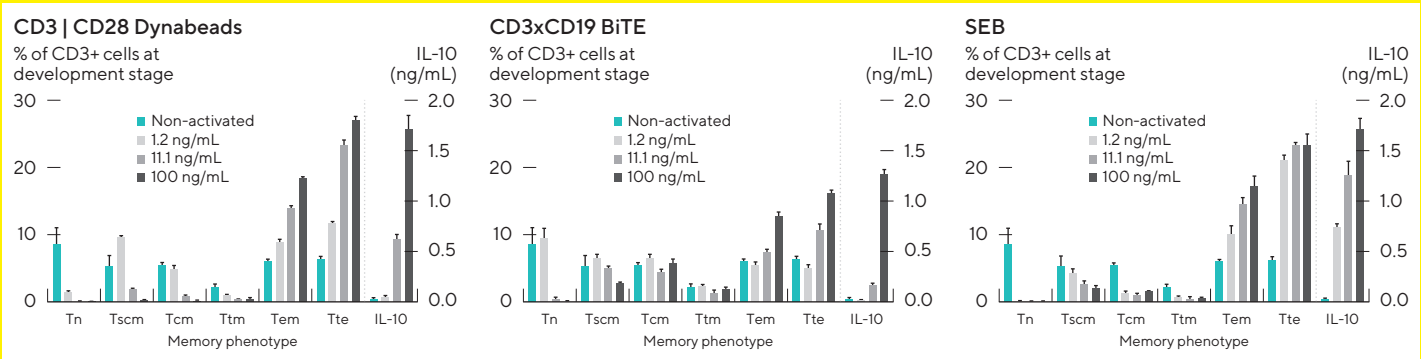


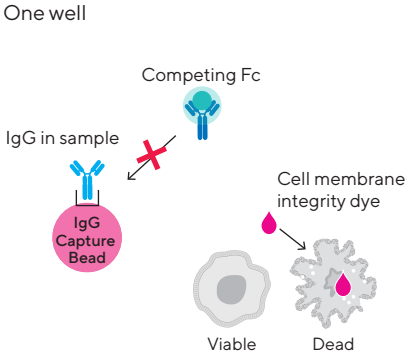
Figure 14: Advanced flow cytometry with the iQue® 3 platform provides a robust, high throughput solution for multiplexed studies of T cells. Combined with four of our T cell characterization kits (iQue® Human T Cell Activation Kit, iQue® Human T Cell Killing Kit, iQue® Human T Cell Exhaustion Kit, and iQue® Human T Cell Memory Kit), they collapse the traditional workflow by providing a convenient approach for evaluating cell phenotypes, T cell markers, cell proliferation, cell viability and secreted cytokines, to be measured in a single sample.

Antibody Characterization
iQue® Cell and Bead-Based Kits

iQue® Human Cy-Clone™ Plus

The iQue® Human Cy-Clone™ Plus enables the rapid analysis of thousands of clones in a simple no-wash, mix and read assay. It is the only solution to correlate IgG quantitation, cell viability and cell count in a single well in order to make more informed decisions on cell productivity.

A.



B. Human IgG standard curve

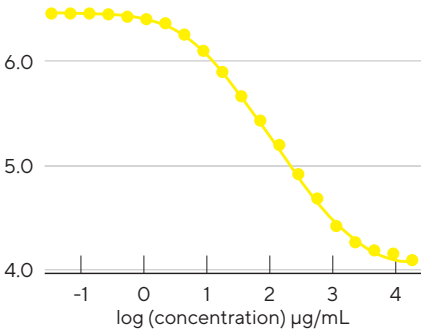


Figure 15: (A) Principle of the iQue® Human Cy-Clone™ Plus. Fluorescently labeled IgG (FITC-IgG) is added to samples containing secreted IgG and CHO production cells. The FITC-IgG and non-labeled sample IgG compete for binding to IgG capture beads. Cell viability is simultaneously measured in each well using a membrane impermeable integrity dye. (B) IgG concentration is inversely proportional to intensity of fluorescence signal.

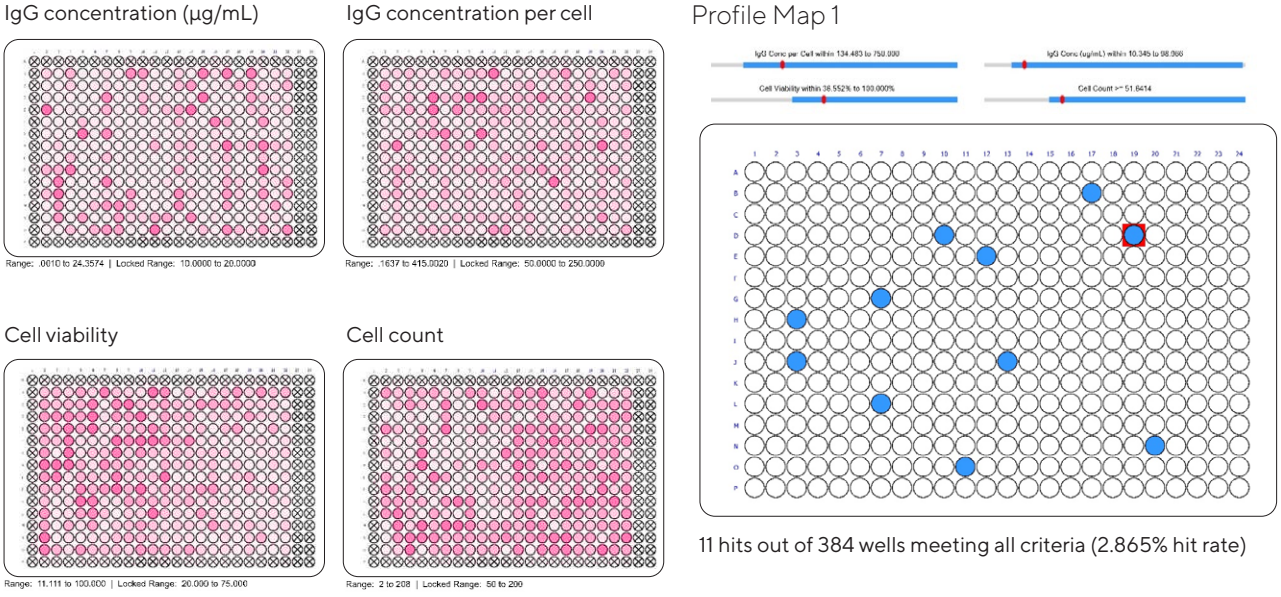


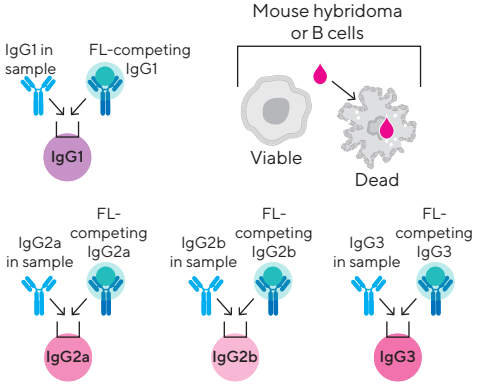
Figure 16: Correlate IgG concentration, cell number, and cell viability in a single well. The customizable profile map feature in iQue® Forecyt® allows the user to easily identify hits that meet all the desired selection criteria.

Find out more
www.intellicyt.com/cy-clone-plus

iQue® Mouse IgG Type and Titer Assay

Expedite your antibody discovery with this simple, no-wash assay that enables the simultaneous quantitative measurement of each mouse IgG isotype, cell number, and viability from each well of the screening plate in under 2 hours.

A.



B. Representative Standard Curves (Mouse IgG1, 2a, 2b, and 3)

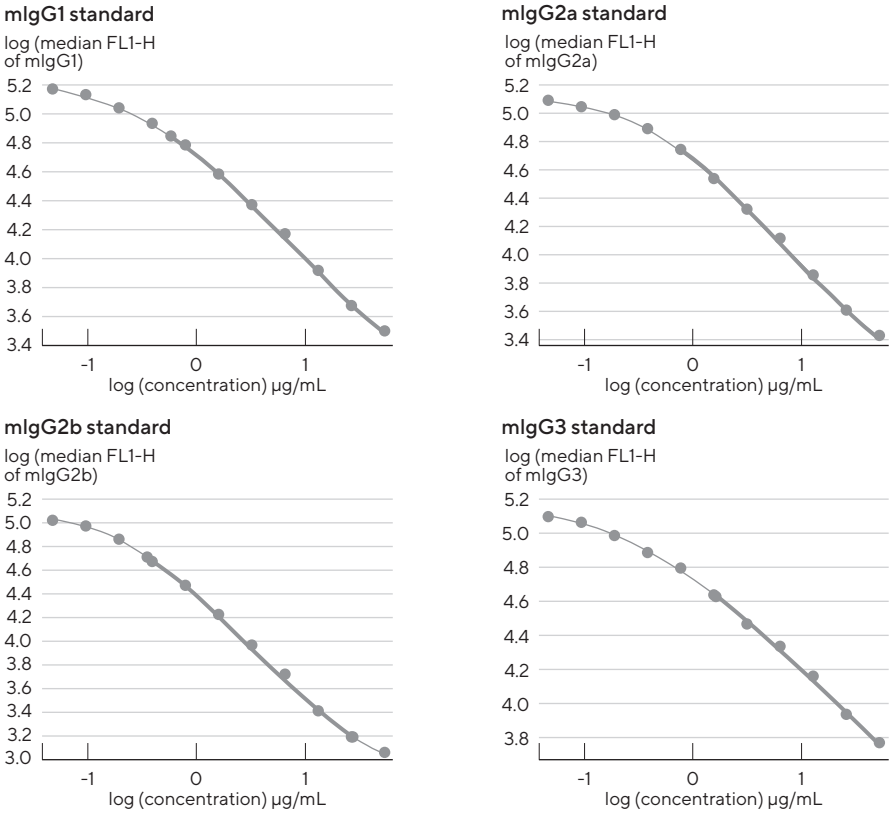
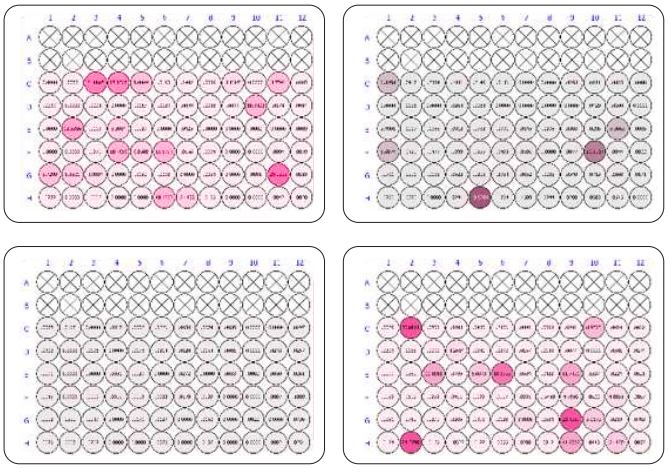


Figure 17: (A) iQue® Mouse IgG Type and Titer Kit assay principle. The no-wash competition assay functions on the differential binding of cell-secreted IgG vs. mouse FITC-IgG to four isotype specific IgG Capture Beads. IgG concentration is inversely proportional to intensity of fluorescence signal. Cell viability is measured simultaneously in each well using a cell membrane impermeable integrity dye. (B) IgG concentration across four isotype-specific beads, in each well are automatically calculated from standard curves for each isotype using iQue® Forecyt®.

IgG quantity



Profile Map — Mouse IgG1

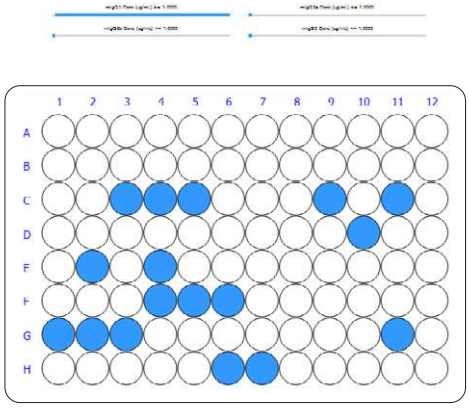


Figure 18: iQue® Forecyt® allows simple creation of heat maps to visualize individual isotype secretion trends or customizable profile maps to easily identify wells with desired secretion profiles.

Find out more
www.intellicyt.com/mouse-igg-kit

iQue® Human and Mouse Antibody Internalization Reagents and Kits

The iQue® Human and Mouse Antibody Internalization Reagents are novel, no-wash pH sensitive dyes that identify antibody internalization from 20 µL of sample in a simple plate-based format. The iQue® Human and Mouse Antibody Internalization Kits are high throughput, multiplexed, no-wash assays that measure antibody internalization, cell specificity, and cell health using 10 µL sample of cells and 10 µL of antibody. The ability to quickly profile and compare large sets of antibodies and characterize their key attributes, such as antibody internalization, can vastly reduce the time required for candidate generation and expedite the development of potential therapeutic treatments.

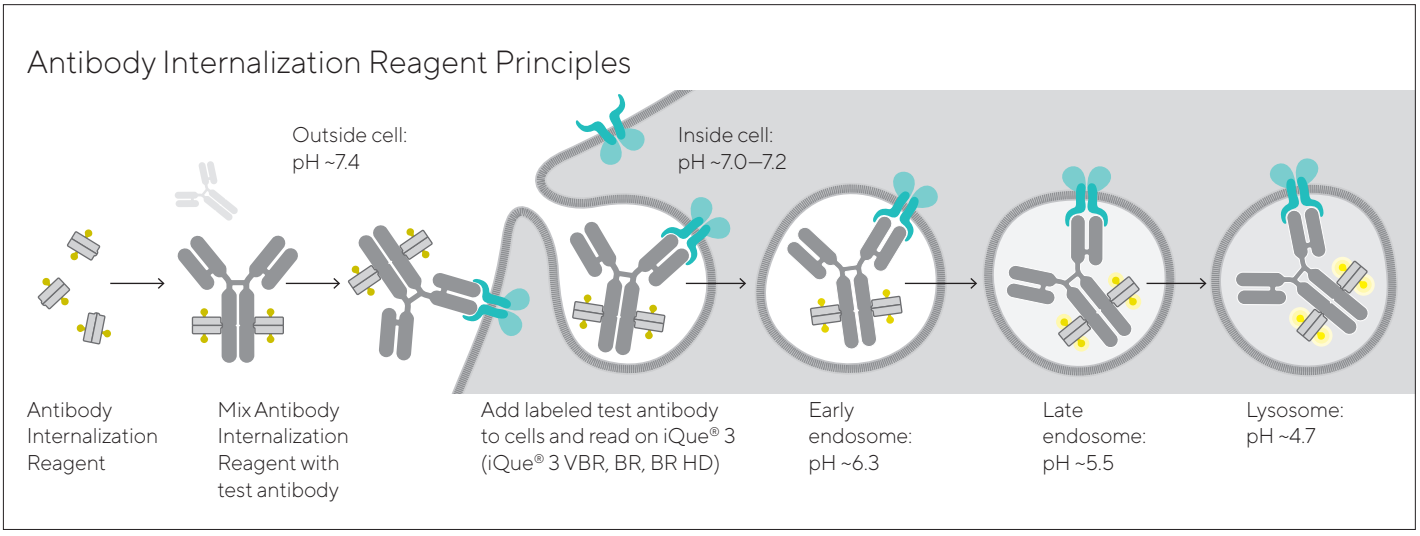


Figure 19: Assay principle of the iQue® Human and Mouse Antibody Internalization Reagents and Kits. Antibodies labeled with the Antibody Internalization Reagent have little fluorescence at neutral pH but become highly fluorescent at a lower pH when they are internalized and processed through the acidic lysosome | endosome pathway.

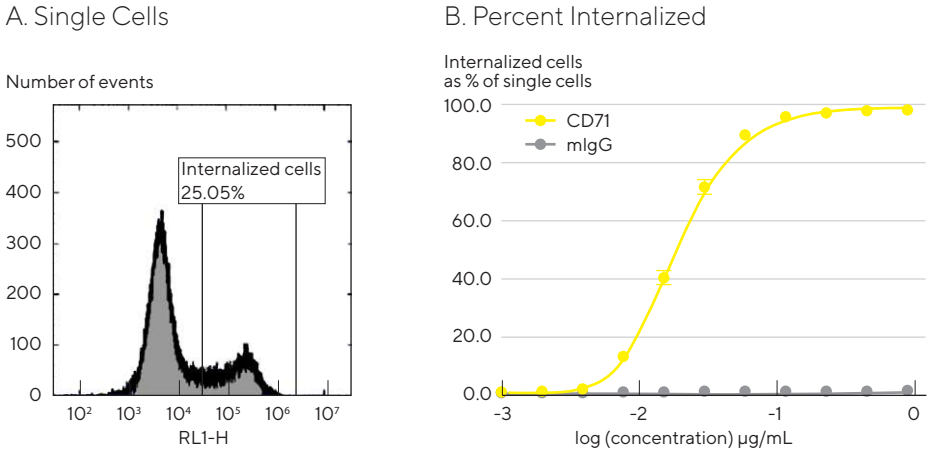


Figure 20: (A) Pre-set template gates are provided for different populations (cells, single cells, and internalized cells). The template also provides a dose response curve plotted for MFI and percent internalized for a control sample. Additional curves for further samples can be generated, including (B), the number of internalized cells as a percentage of single cells.

Find out more
www.intellicyt.com/multicyt-kits

General Cell Health and Analysis

iQue® Cell-Based Kits

iQue® Cell-Based Kits enable the analysis of multiple cell health and cell function endpoints, such as viability, proliferation, apoptosis, and more. Most of these kits are optimized with no-wash, mix, and read protocols, and can be multiplexed with other iQue® cell or bead-based kits.

Apoptosis

iQue® Human 4-Plex Apoptosis Kit

The no-wash iQue® Human 4-Plex Apoptosis Kit allows the simultaneous detection of Caspase 3/7 activation, Annexin V binding, cell viability, and mitochondrial depolarization from a single sample (Figure 21), in addition to total cell count to identify overly toxic treatments. All four reagents can be run simultaneously (Figures 22 (A) and 22 (B)),or individual reagents are available separately to "mixed and matched" according to experimental objectives.

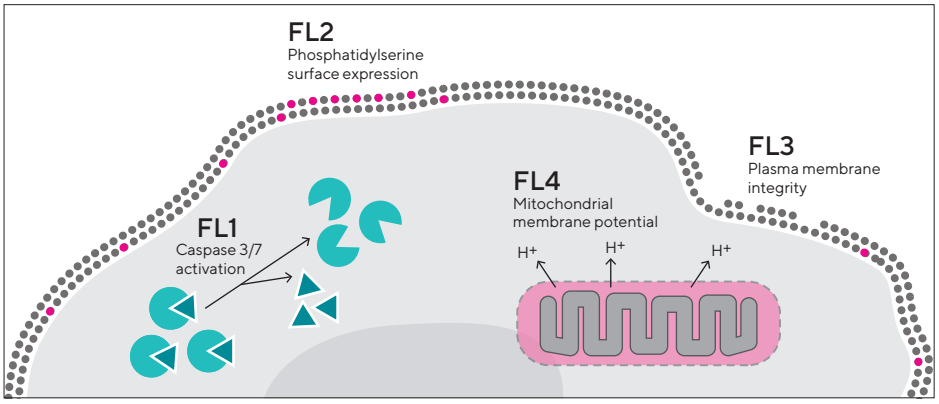


Figure 21: Principle of the iQue® Human 4-Plex Apoptosis Kit. (FL1): Activation of Caspase 3/7 is detected following cleavage by an activated enzyme. (FL2): Surface expression of phosphatidylserine is detected by the binding of Annexin V. (FL3): Cell viability is determined by the uptake of membrane impermeable dye through compromised (porous) membranes. (FL4): Mitochondrial membrane potential is determined by a dye that localizes in the mitochondrial lumen when mitochondria are healthy and able to maintain a membrane potential. Upon mitochondrial depolarization, the dye leaks into the cytoplasm and loses its ability to fluoresce.

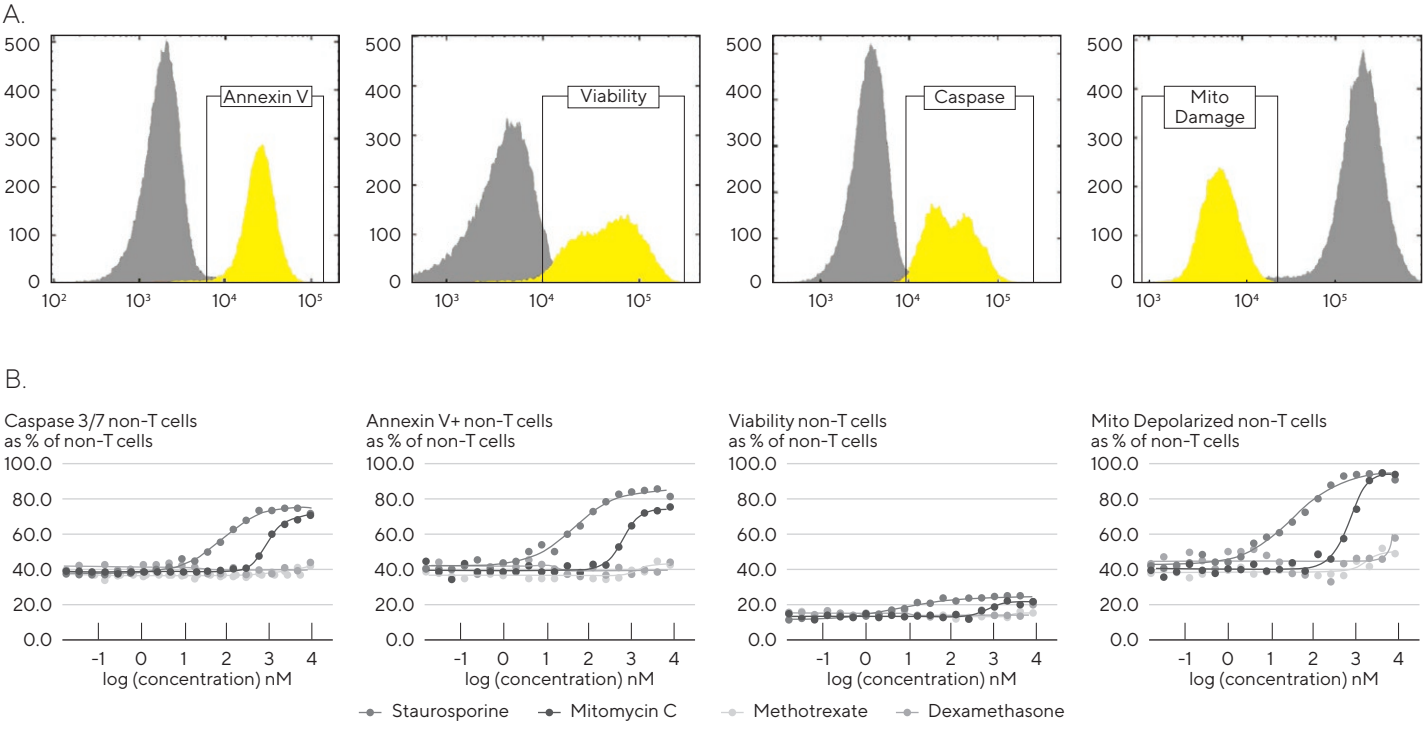


Figure 22: (A) Four distinct hallmarks of cell death enable identification of apoptosis pathways. (B) Compound dose response curves to the addition of Stauropsprorine, Mitomycin C, Methotrexate and Dexamethasone. Histograms and dose response curves generated in iQue® Forecyt®.

iQue® Cell Cycle Kit

The iQue® Cell Cycle Kit uses a fluorescent dye that intercalates into DNA, reporting content with enough sensitivity to distinguish between the G0 | G1, G2 | M and S phases (Figure 23).

Unlike traditional methods, the kit requires no wash steps, and the live cell stain can be added without the need to permeabilize, fix or perform an RNase treatment, requiring only a single, 1 hour incubation.

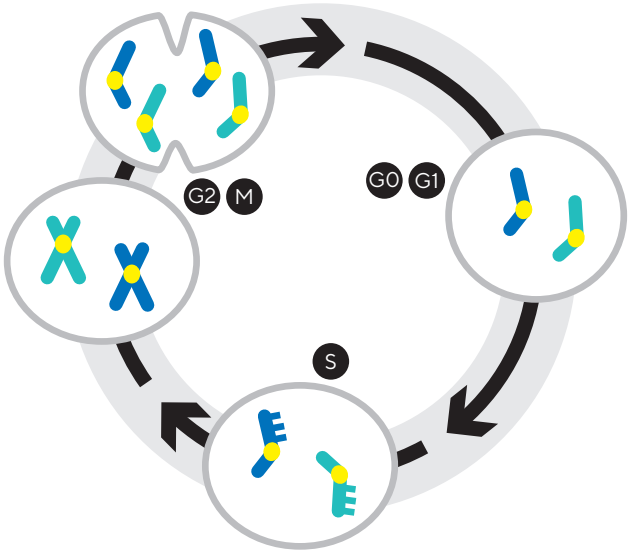


Figure 23: Determining cell cycle stage by DNA content

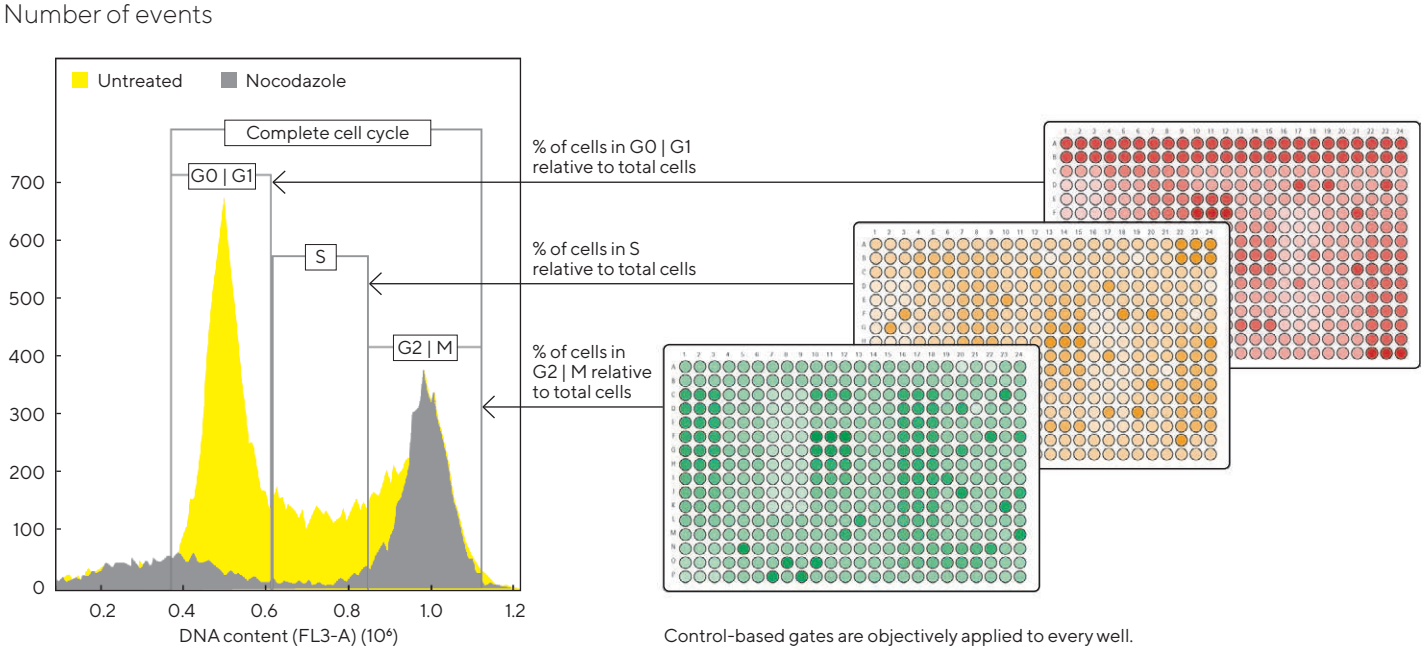


Figure 24: The effects of the cell cycle inhibitor, Nocodazole (gray histogram), can be compared to untreated cells (yellow histogram) using the iQue® Cell Cycle Kit. The percentage of cells in each cycle (G0 | G1, G2 | M, and S) can be quickly compared across multiple plates using heat maps feature in the iQue® Forecyt® software.

iQue® Cell Membrane Integrity Dyes

iQue® Cell Membrane Integrity Dyes are comprised of membrane-impermeable, proprietary reagents able to determine cell viability using reagent exclusion and cell membrane integrity as a measurement of cell health (Figure 25). Available in four distinct excitation and emission ranges that enable flexible multiplexing with additional iQue® reagents, the iQue® Cell Membrane Integrity Dyes also offer users a no-wash assay workflow, minimal cytotoxicity up to 48 hours after reagent addition, and robust signal stability with optimized titrations. The B | Red reagent dye will also remain fluorescent for up to 18 hours after fixation in 4% paraformaldehyde (PFA) and is compatible with adherent cells, such as HeLa and A459.

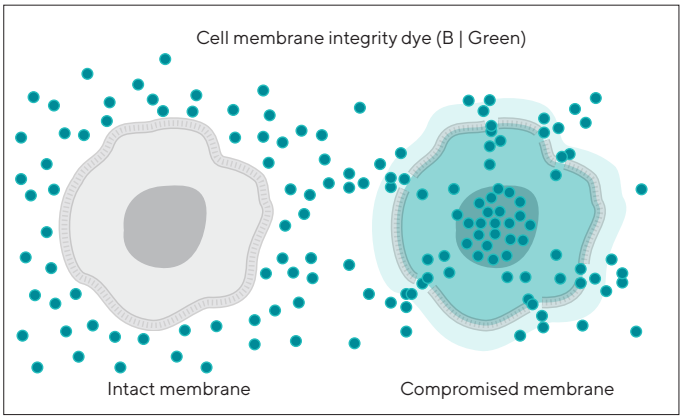


Figure 25: iQue® Cell Membrane Integrity Dye Assay Principles: Cells with intact membranes are able to exclude the cell impermeable reagents and remain non-fluorescent. Once the membranes become compromised, the reagent enters the cell and binds to DNA by intercalation, creating a detectable fluorescent signal.

Representative data for B | Green cell membrane integrity reagent

Representative data for B | Red cell membrane integrity reagent

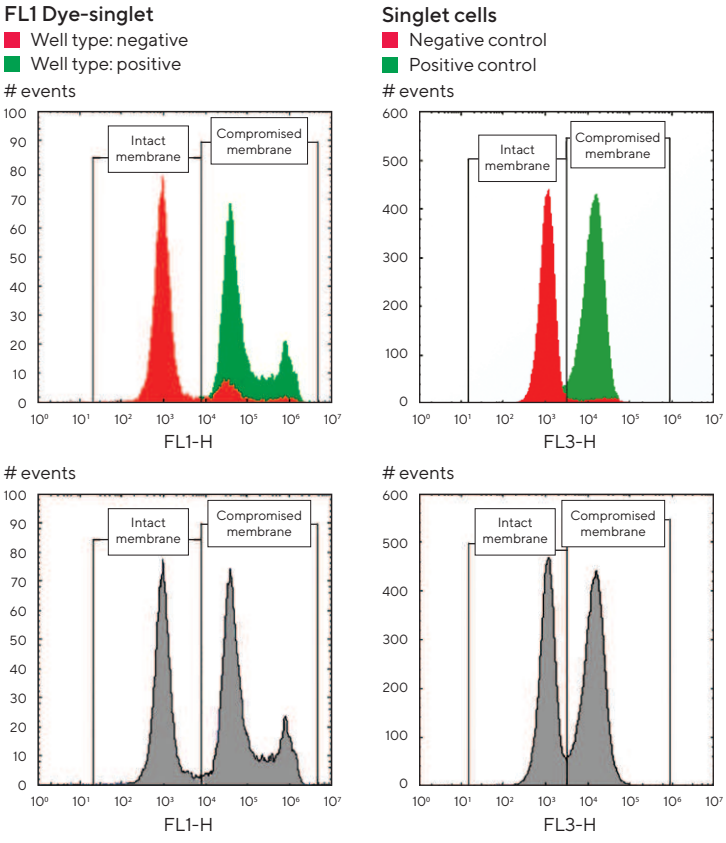


Figure 26: Example readouts to identify cell populations with intact membranes and compromised membranes

Find out more
www.intellicyt.com/multicyt-kits

iQue® Cell Proliferation and Encoding Dyes

The iQue® Cell Proliferation and Encoding Dyes are comprised of proprietary, spectrally distinct, cell permeable dyes that fluoresce after binding to either primary amine groups or glutathione, respectively. With minimal cytotoxicity and increased stability for long term studies up to six generations of proliferated cells can be observed, with no fluorescence intensity gaps between the first and second generation of cells. Alternatively, when used for encoding applications, the iQue® Cell Proliferation and Encoding Dyes offer a robust and flexible solution for the labeling (encoding) of 2 to 4 different cell populations at different intensities in a single fluorescent channel. Each dye is sold individually in several standard sizes and has both wash | no-wash and with | without standard protocols. Available in three distinct excitation | emission ranges, both dyes can be used for either cell proliferation or cell encoding, and can be multiplexed with other iQue® reagents.

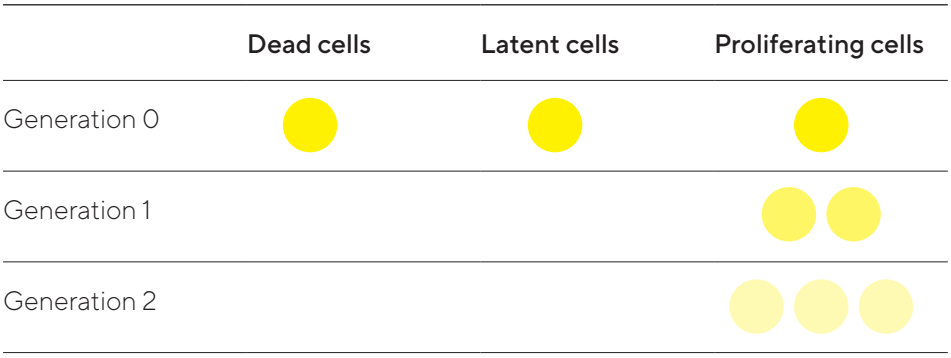
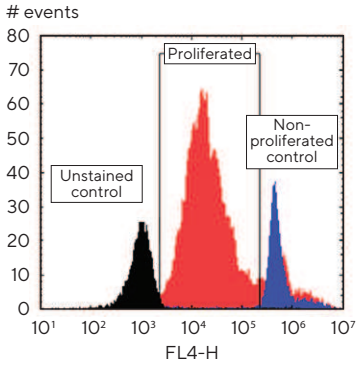
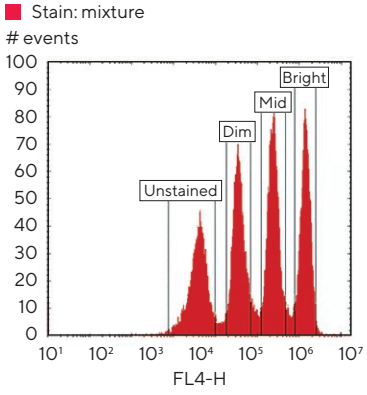


Figure 27: Assay Principles for the iQue® Cell Proliferation Dye. Proliferating cells will have decreasing amounts of dye, corresponding to lower fluorescence intensities. Dead or latent cells will maintain the initial dye intensity, which enables easy discrimination between proliferated and non-proliferated cells.

A. FL4 Histogram Singlet Cells



B. FL4-H 1D Histogram Singlet Cell Encoder



C. FL4-H vs. FSC-H 2D Plot

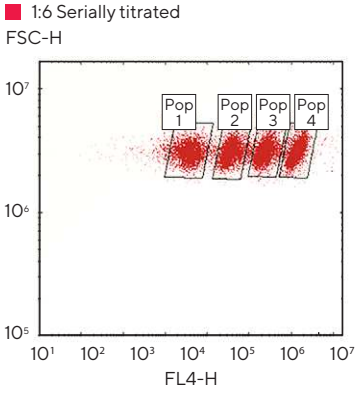


Figure 28: (A) Identification of the proliferated cell population. (B) and (C) identify the various encoded cell populations. The iQue® Cell Proliferation and Encoding Dye has been extensively tested for screening applications using both suspension (PBMC as shown above, Jurkat, Ramos and U937) and adherent (HeLa, A549 and H4) cell lines.

Application Spotlight: Immune Cell Killing

Immune cell recognition and killing of unwanted target cells, such as emergent tumor cells, is a critical component of the human host defense mechanism. iQue® kits include optimized reagents that are validated on the iQue® platforms for immune cell killing application areas:

- Adoptive T Cell Therapy
- Chimeric Antigen Receptors
- Tumor Infiltrating Lymphocytes
- NK Cells
- Soluble T Cell Engager

The flexibility of multiplexing with other iQue® kits for further analysis and richer content offers the potential to gain additional insights into the mechanisms of immune cell killing. Monitor viability in both target and effector cells using iQue® Cell Membrane Integrity Dyes, differentiate cells using the iQue® Encoding Dyes, and detect apoptosis in response to immune cell killing (Figures 29 and 30).

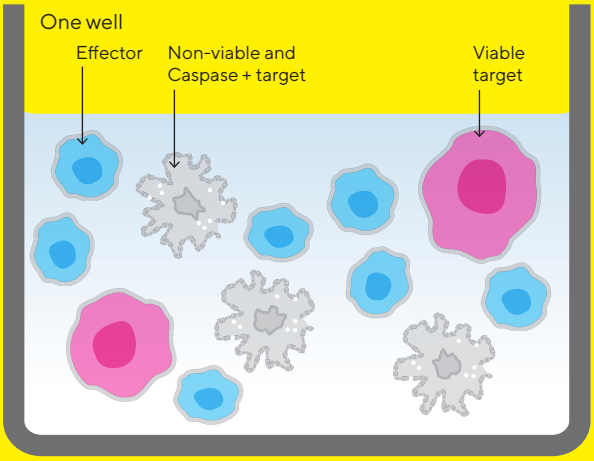


Figure 29: Distinguish target cells from effector cells using the iQue® Encoding Dye. Label dead cells with the iQue® Cell Membrane Integrity Dye. Add additional reagents to assess apoptosis and proliferation, perform cytokine profiling, and phenotyping.

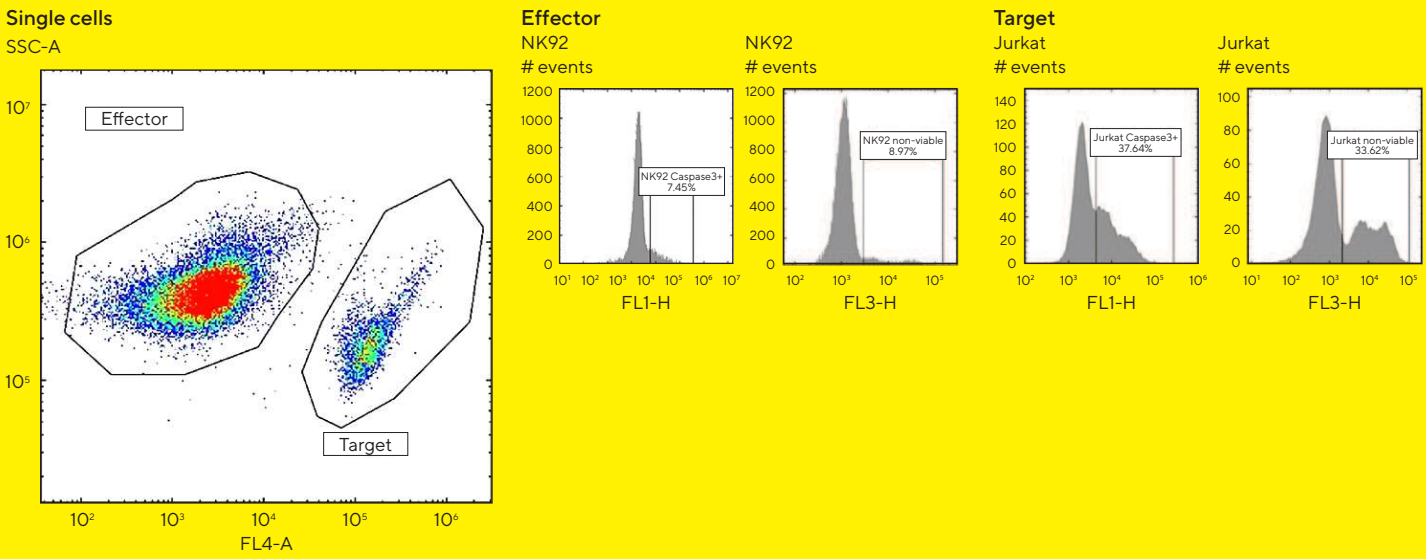


Figure 30: Monitor target cell apoptosis and viability in response to immune cell killing. Independently monitor death in target cells and effector cells using iQue® Encoding Dye, iQue® Caspase 3/7 Kit and iQue® Cell Membrane Integrity Dye, all in a single assay.

Sales and Service Contacts

For further contacts, visit www.sartorius.com

Essen Bioscience, A Sartorius Company
www.sartorius.com/intellicyt
E-Mail: info.intellicyt@sartorius.com

North America
Essen BioScience Inc.
300 West Morgan Road
Ann Arbor, Michigan, 48108
USA
Telephone +1 734 769 1600

Europe
Essen BioScience Ltd.
Units 2 & 3 The Quadrant
Newark Close
Royston Hertfordshire
SG8 5HL
United Kingdom
Telephone +44 (0) 1763 227400

APAC
Essen BioScience K.K.
4th Floor Daiwa Shinagawa
North Bldg.
1-8-11 Kita-Shinagawa
Shinagawa-ku, Tokyo
140-0001
Japan
Telephone +81 3 6478 5202

Version 2020 | 08 Publication Number: 12860

To Place an Order or Request Additional Information:

E-Mail: **info.intellicyt@sartorius.com**