



iQue® 5

Truly Fast.  
Simply Effortless.

High-Throughput Screening  
(HTS) by Cytometry

Simplifying Progress

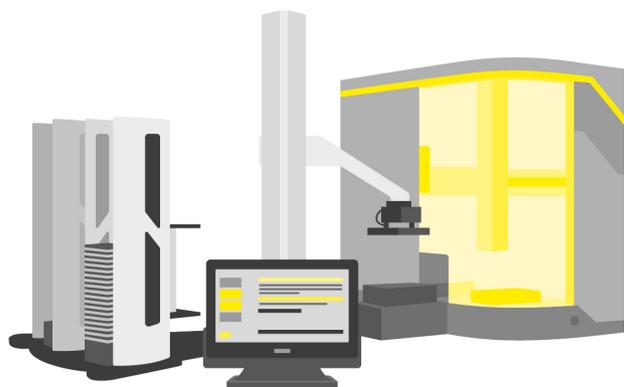
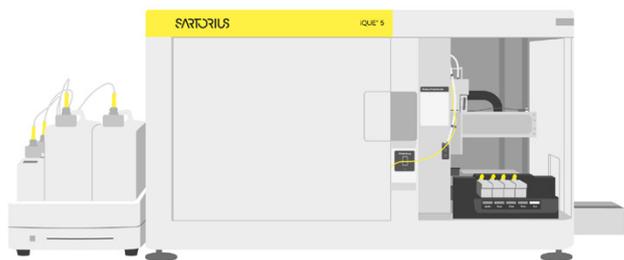
**SARTORIUS**

# Expand Your Research Potential

## iQue® 5 HTS Cytometry Platform

The iQue® 5 High-Throughput Screening (HTS) Cytometer eliminates complexity at every step to amplify your data generation capability. Building on core iQue® strengths as the fastest solution for HTS applications, the iQue® 5 expands assay range with up to 27 channels, individual gain settings, and flexible workflows in 96- and 384-well formats.

Re-designed systems for clog and fluidics management, reduce downtime, and support up to 24-hours of continuous run-time. The QMax Workstation enables further extensions of run-times. A more powerful version of iQue Forecyt® software simplifies the entire process, with pre-defined templates and enhanced analytics tools, designed for complex datasets.



### Get the Data You Need Faster

- Market-leading speed completes processes 96-well plates in as few as 5 minutes or 384-well plates in 20 minutes
- Validated consumables and buffers ensure consistent performance
- Plug and play kits speed up assay design and validation
- Patented sampling with replaceable probe / tubing reduces downtime from clogs

### Design Your Assay Your Way

- Broad detection range covers cells, beads, yeast and more (down to 0.2  $\mu\text{m}$ )
- Up to 27 channel capacity supports wide range of applications
- Flexible throughput by compatibility with 96- and 384-well plates
- Integration with robotics systems allows extended operation

### Enjoy True User-Friendly Experience

- Intuitive iQue Forecyt® Software simplifies operation for users of all levels
- Multi-user environment features walkaway automation, comprehensive analysis, and advanced visualization tools
- New Clog Detection monitors the system so you don't have to babysit, alerts inform of potential issues and give the choice of a response
- iQue® Qmax trolley provides convenient sheath and waste fluid management during long runtimes



### Speed

Relieve capacity bottlenecks throughout your entire workflow with faster plate sampling, integrated analysis, and novel data streamlining tools.



### Simplicity

Enjoy an easy to use, multi-user environment with walkaway automation, including automated QC bead vortexing on-board and 48-hour continuous run times.



### Scalability

Take advantage of the open platform design for integration with leading robotic systems for automatic plate handling and operation.



### Expert Help

Rely on our experts to overcome hardware, software, or technical challenges and get your experiments back on track as fast as possible.

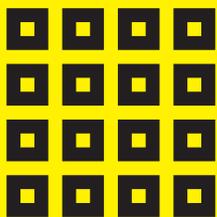
# Recognized for Effortless Operation

## To Empower Every User

The iQue® HTS Platform has been the leading screening by cytometry solution for pharmaceutical, biotechnology, and academic laboratories for over 20 years. What makes the platform unique is not only its unrivaled speed, but also the ease and flexibility of running assays from start to finish. The iQue® 5 HTS Cytometer provides our most powerful screening capabilities for modern applications, complete with enhanced software features and simplified extended operation for maximum data generation.

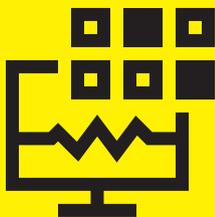
## Imagine a New, Simpler Workflow

### Sample Prep



- Seed cells in a 96 or 384 well plate
- Label samples per instructions within chosen kit(s)
- Incubate and wash plate

### Set-up



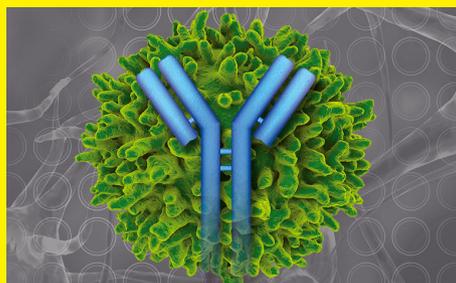
- Set-up template in iQue Forecyt® Software
- Place in plate holder

### Analyze



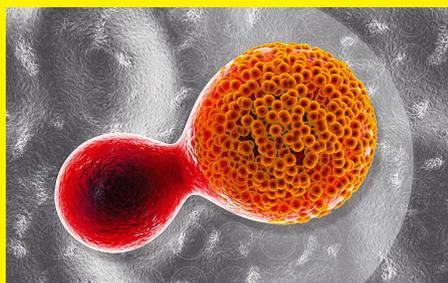
- Analyze in iQue® with Forecyt® Software

## Explore the Wide Range of Supported Applications



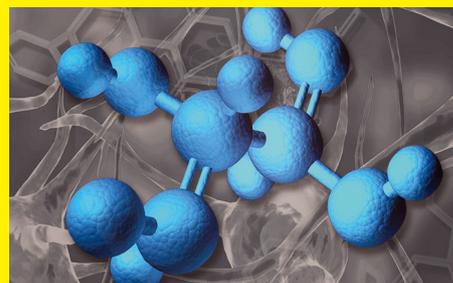
### Antibody Discovery and Development

- Increase data throughput and quality by multiplexing antibody binding, functions, 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

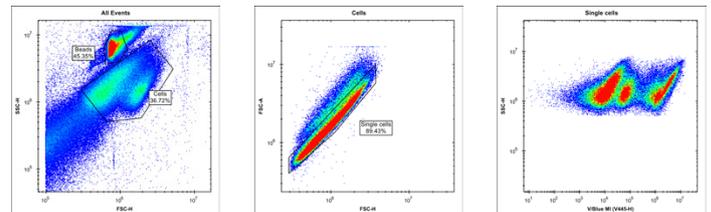
# Up to 25-Color-Channel Multiplexing Capability

For Extra Freedom in Assay Design

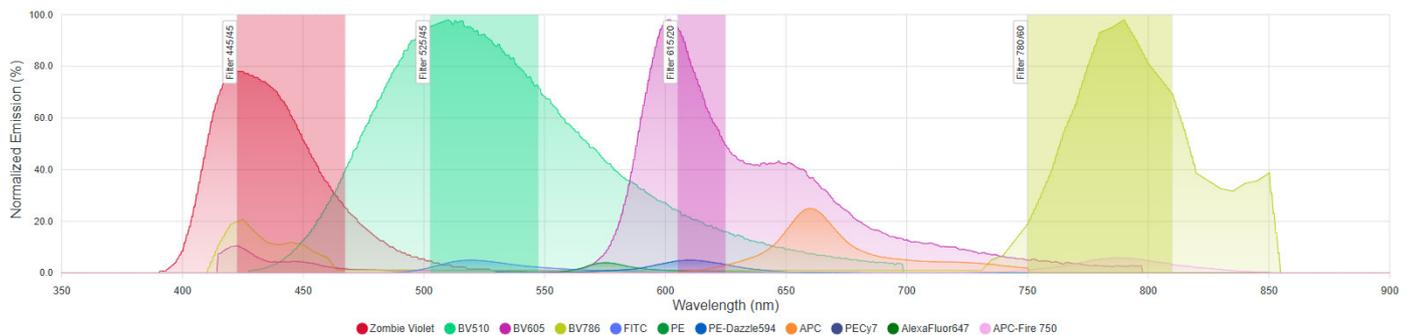
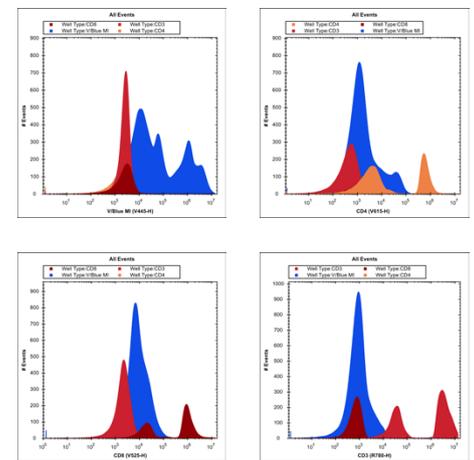
Laser	405 nm	488 nm	561 nm	637 nm
445/45 nm	● Pacific Blue BV421			
525/45 nm	● BV510	● FITC		
586/20 nm	● BV605	● EYFP	● PE	
615/20 nm	● Qdot 605	● PI	● PE-Dazzle594	
667/30 nm	● BV650	● PerCP	● PE-Cy5	● APC, AF647
659/40 nm	● BV711	● PerCP-Cy5.5	● PE-Cy5.5	● AF680
725/40 nm	● BV750	● PerCP-eFlour7	● PE-AF700	● AF700
780 / 60 nm	● BV786	● PE-Cy7	● PE-Cy7	● APC-Cy7

## Precise Analysis of Whole Lysed Blood Populations for Phenotypic Markers

Example: PBMCs were stained for CD3, CD4, and CD8, along with a live/dead dye, using the Sartorius Panel Designer to automatically select the appropriate antibodies and channels for the experiment.



LASER	FILTER	TARGET	FLUOROCHROME	PRODUCTS
Violet405	445/45	Viability (Live/Dead, Live-Dead, L/D, Live Dead)		* Zombie Violet
Violet405	525/45	CD8		* BV510 (Brilliant Violet 510)
Violet405	615/20	CD4		* BV605 (Brilliant Violet 605)
Violet405	780/60	CD69		* BV786 (Brilliant Violet 786)
Blue488	525/45	CD62L (L-selectin, LECAM-1, Ly-22)		* FITC
Yellow561	586/20	CD25 (IL-2 Receptor alpha, IL-2 Receptor $\alpha$ , IL2R $\alpha$ , IL-2 Receptor $\alpha$ , IL-2R $\alpha$ )		* PE
Yellow561	615/20	CCR7 (CD197, CCR-7)		* PE-Dazzle594 (PE-DZL594)
Yellow561	667/30	TIM-3 (TIM 3, CD366, HAVCR2, TIM3, T-cell immunoglobulin domain and mucin domain-3)		* APC
Yellow561	780/60	PD-1 (CD279, PD1)		* PECy7
Red637	667/30	LAG-3 (CD223, LAG3)		* AlexaFluor647 (AF647)
Red637	780/60	CD3 (CD3e, CD3 epsilon, CD3epsilon, CD3e)		* APC-Fire 750 (APC-F750)

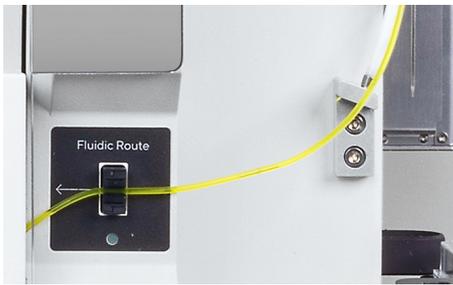


# Next-Level Performance

So You Can Leave the Lab on Time

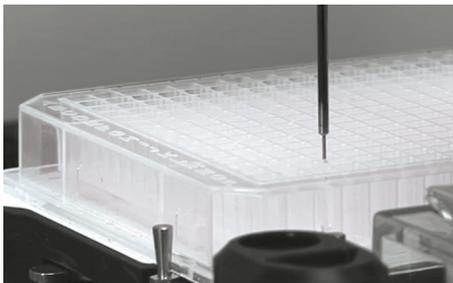
Gain the insights you need from only a few microliters of sample and make every research decision faster and with more confidence.

The iQue® 5 HTS Cytometer equips your lab with our most advanced capabilities in hardware and software so you can push beyond limits and accelerate your research.



## Peace of Mind

Indicator lights and fluidic sensors provide visual confirmation that instrument is running smoothly.



## Sample Conservation

Minimal volume sampling requirements, as low as 1  $\mu$ L, conserve samples and reduce reagent costs.



## Clogs

New clog detection features alert users of potential clogs. Resolve clogs in less than 5 minutes (instead of hours) with our patented fluidics system, featuring a replaceable probe and tubing piece.



## Automation

Robotic integration capabilities enable automated plate handling in high throughput applications.

iQUE® 5



### Automated Resuspension

Onboard vortexing before sampling ensures proper resuspension, enhancing QC results and consistency.



### Extended Runs

Cartridges enable consistent, reproducible, and unattended processing of multiple plates. Liquid level detection and user-definable low-level warnings ensure sufficient reagents for completing planned runs.



### Sample Acquisition

Samples are delivered to detectors in an air-gap delimited stream through a patented rapid microvolume sampling process, with new automated features managing fluidics and tube clamping.

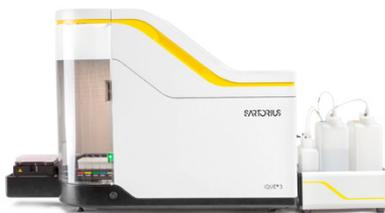
# Choose the Right iQue® HTS Cytometer for Your Needs

## iQue® 3 BR 2-Laser | 6 Color Channels



"A cost-effective workhorse in antibody screening"

## iQue® 3 VBR and VYB 3-Laser | 13 Color Channels



"A sweet spot in functional profiling from antibodies to CAR-T"

## iQue® 5 VYBR 4-Laser | 25 Color Channels



"A no compromise upgrade with technology and usability advances for the future of HTS using flow"

	iQue® 3	iQue® 5
Lasers   Configuration	3 (Violet   Blue   Red)	4 (Violet   Yellow   Blue   Red)
Color Channels	13*	25
SSC   FSC	Yes	Yes
Photodetector	Fixed PMT	SiPM
Particle Size Detection	> 0.5 µm	> 0.2 µm
Size   Dimensions (H x W x D)	66 x 130 x 63 cm	46 x 130 x 63 cm
Sensitivity	7 Decades	7.2 Decades
Engine   Software	-	More Powerful Engine   Software
Clogging Detection	-	Bubble sensor to visually ID Clogs
Plates	96-, 384- well	96-, 384- well
Extend Run-Time time w   Add-on	QMax Refill Module	QMax Workstation
Catalog Numbers	91377	BA-97135

\* Other iQue® 3 Cytometer 2-laser and 3-laser configurations in the market

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 Find out more: [sartorius.com/i-que-products](http://sartorius.com/i-que-products)

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