

invitrogen



Attune Flow Cytometers

Transformative. Efficient. Flexible.

ThermoFisher
SCIENTIFIC



Building a legacy of advancing flow cytometry technology

Technological advancements in flow cytometry are creating an entirely new lineage of reagents and instruments. Innovative flow cytometry solutions enable researchers to create more transformative, efficient, and flexible solutions. Thermo Fisher Scientific is committed to developing products that fuel groundbreaking research. Our suite of comprehensive flow cytometry solutions, including Invitrogen™ Attune™ Flow Cytometers and the Invitrogen™ CytKick™ family of autosamplers and automation options, together with the Invitrogen™ cell health reagent portfolio and Invitrogen™ eBioscience™ antibody conjugates, helps drive discovery of new biological insights for many applications.

Find out more at [thermofisher.com/attune](https://www.thermofisher.com/attune)

Transformative 14-color cell analyzers with high-speed camera option

Both Attune Flow Cytometer models are efficient, flexible, and transformative cell analyzers with acoustic focusing and up to 14 colors. Choose between the Invitrogen™ Attune™ CytPix Flow Cytometer with high-speed camera and the Invitrogen™ Attune™ NxT Flow Cytometer without it.



Table 1. Features of Attune Flow Cytometers.

Category	Feature	Attune CytPix Flow Cytometer	Attune NxT Flow Cytometer
Optics	Number of lasers	2–4	1–4
	Number of detection channels	2 scatter channels, up to 14 fluorescence channels	
	Imaging illumination	405 nm laser with <50 nanosecond pulse width	N/A
	Optical alignment	Fixed alignment with pre-aligned welded fiber; no user maintenance required	
Fluidics	Acoustic focusing	✓	✓
	Custom sample flow rates	✓	✓
Performance (fluorescence detection)	Fluorescence sensitivity	≤80 MESF for FITC, ≤30 MESF for PE, ≤70 MESF for APC	
	Fluorescence resolution	CV <3% for the singlet peak of propidium iodide–stained chicken erythrocyte nuclei (CEN)	
	Maximum electronic speed	Up to 35,000 events/sec with all parameters	
Performance (imaging)	Image capture rate	Up to 6,000 images/sec depending on image size and event rate	N/A
	Objective	Magnification 20x, Numerical aperture 0.45	N/A
	Pixel resolution	0.3 μm/pixel	N/A
	Detection limit	Visually detect 800 nm particles	N/A
Quality and regulatory	Instrument tracking	Automated daily baseline and performance test with Levey-Jennings plots	
	Regulatory status	For Research Use Only	
Physical	Dimensions (H x W x D) including fluid bottles	~49 x 58 x 43 cm (~19 x 23 x 17 inch)	~40 x 58 x 43 cm (~16 x 23 x 17 inch)
	Biosafety hood compatibility	✓	✓
Computer	Memory	64 GB (4 x 16 GB) DDR4 2666 MHz UDIMM Non-ECC	32 GB
	Hard drives	2 x 8TB SSD, 2.5-inch Samsung 870 QVO, 560 MB/s	2 x 2TB SATA 3.0 GB/s, 8MB data burst cache; Controller RAID1, integrated
	Graphics processor	Nvidia™ Quadro™ P2200 GPU	N/A

Innovative flow technology—acoustic focusing and high-speed camera

Acoustic focusing fluidics is the key to the high sensitivity of Attune Flow Cytometers, even at high throughput. The Attune CytPix model adds a high-speed camera that captures brightfield images of cells passing through the flow cell to verify that cell populations consist of single cells and verify morphology.

Acoustics-assisted hydrodynamic focusing technology

Attune Flow Cytometers combine ultrasonic waves like those used in medical imaging with hydrodynamic forces to precisely position cells into a single, focused line in the central axis. Enabling cells to be tightly focused at the point of laser interrogation allows the system to collect more photons, helping to ensure data quality regardless of the sample-to-sheath ratio (Figure 1). This allows for a higher degree of data, detail, and throughput that enables processing of a large range of sample types, including large clumpy cells, samples with low concentration of cells, and precious samples, more quickly and accurately than ever before with no loss in data quality.

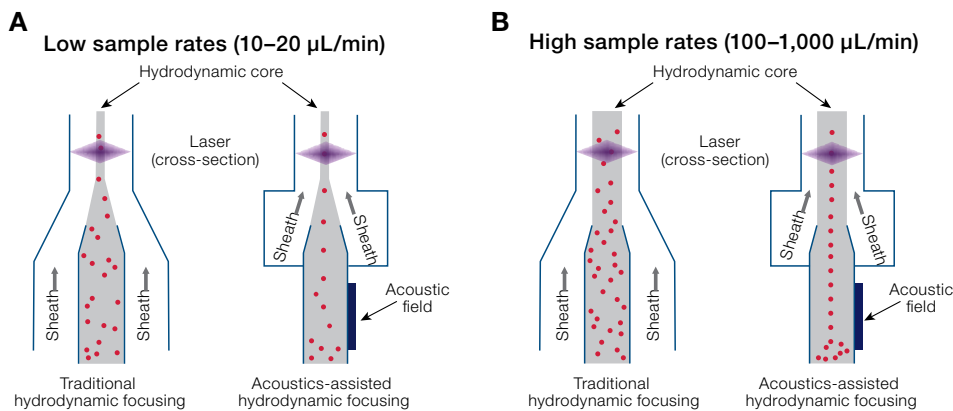


Figure 1. Acoustic focusing vs. traditional hydrodynamic focusing as particles pass through the laser. (A) In acoustic focusing, cells remain in tight alignment even at higher sample rates, resulting in less signal variation and improved data quality. **(B)** In traditional hydrodynamic focusing, increasing the sample rate results in widening of the sample core stream, resulting in increased signal variation and compromised data quality.

High-speed camera

The distinguishing feature of the Attune CytPix Flow Cytometer is a high-speed brightfield camera that records images of individual events coming through the flow cell (Figure 2). The camera and Attune Cytometric Software help ensure that events recorded by the detector are single cells as opposed to doublets, clumps, or debris. This is crucial in cell and gene therapy research applications, but is useful in almost any flow cytometry experiment to help researchers understand and record the morphology of each cell population identified for analysis. The images can also aid in identifying debris and optimizing protocols.

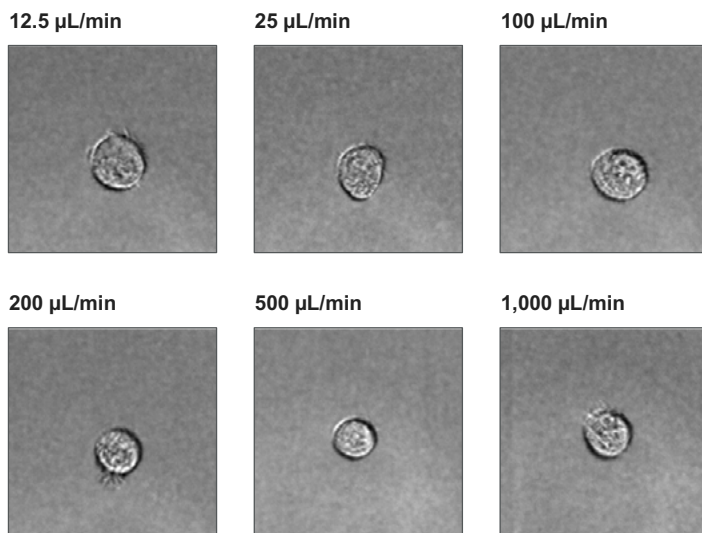


Figure 2. Consistent image quality even at high flow rates. Acoustic focusing and a high-speed camera combine to image these CAR T cells consistently at low or high flow rates. No changes to sample rate are required for imaging capabilities. Easily adjust focus and camera settings to meet experimental requirements.

Novel optical design

Attune Flow Cytometers feature a novel optical design that delivers first-class reliability and superior performance over time. The flat-top beam profile of the solid-state lasers minimizes the effects of changes in fluidics or optics, which in turn can lead to instability or alignment issues and instrument downtime.

Laser misalignment is a major concern with users of conventional flow cytometers. The flat-top lasers used in Attune Flow Cytometers have an intensity profile that allows a wider window of alignment over Gaussian lasers used in traditional systems (Figure 3). The flat-top lasers also have a higher tolerance for misalignment that allows them to maintain high sensitivity and low CVs.

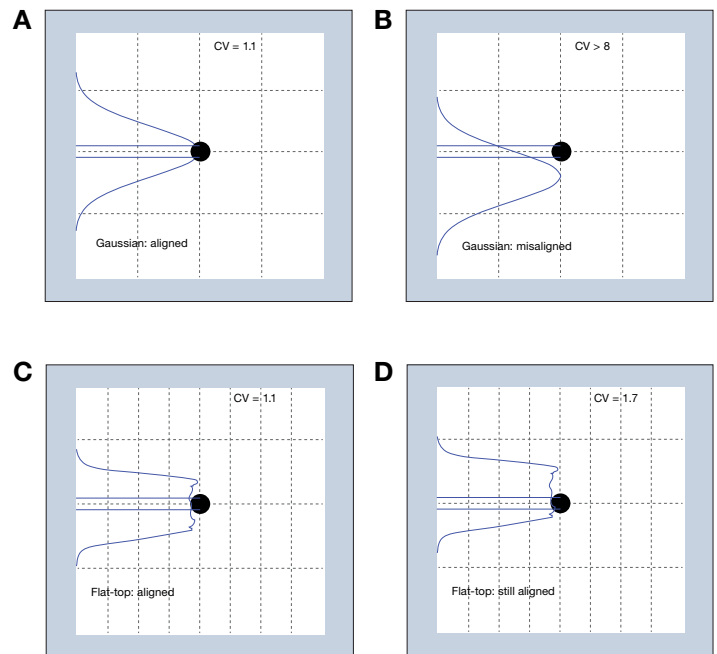


Figure 3. Emission profile of lasers used in flow cytometers. (A) Gaussian laser profile with proper alignment, (B) Gaussian laser profile with misalignment, (C) flat-top laser profile with proper alignment, and (D) flat-top laser profile still in proper alignment.

Transformative—break the mold of traditional flow

Reduce clogging from difficult samples

Your research samples are precious, as they are often difficult to produce. Attune Flow Cytometers are less prone to clogging than traditional flow cytometers, allowing challenging samples such as cardiomyocytes, heterogeneous blood cells, and cancer cells to flow with confidence.

Engineered to actively resist clogging, a syringe-driven system (Figure 4) and larger flow cell help prevent the loss of precious sample such as cancer stem cells from primary pancreatic tumors, and is drastically less susceptible to clogs. Attune Flow Cytometers employ a non-pressurized system that mechanically decreases the occurrence of clogging.

No lyse, no wash, with no compensation

Acoustic focusing allows Attune Flow Cytometers to deliver a no-wash, no-lyse protocol (Figure 5) to minimize cell loss, significantly reduce time, and simplify sample preparation (Figure 6).

Protocol

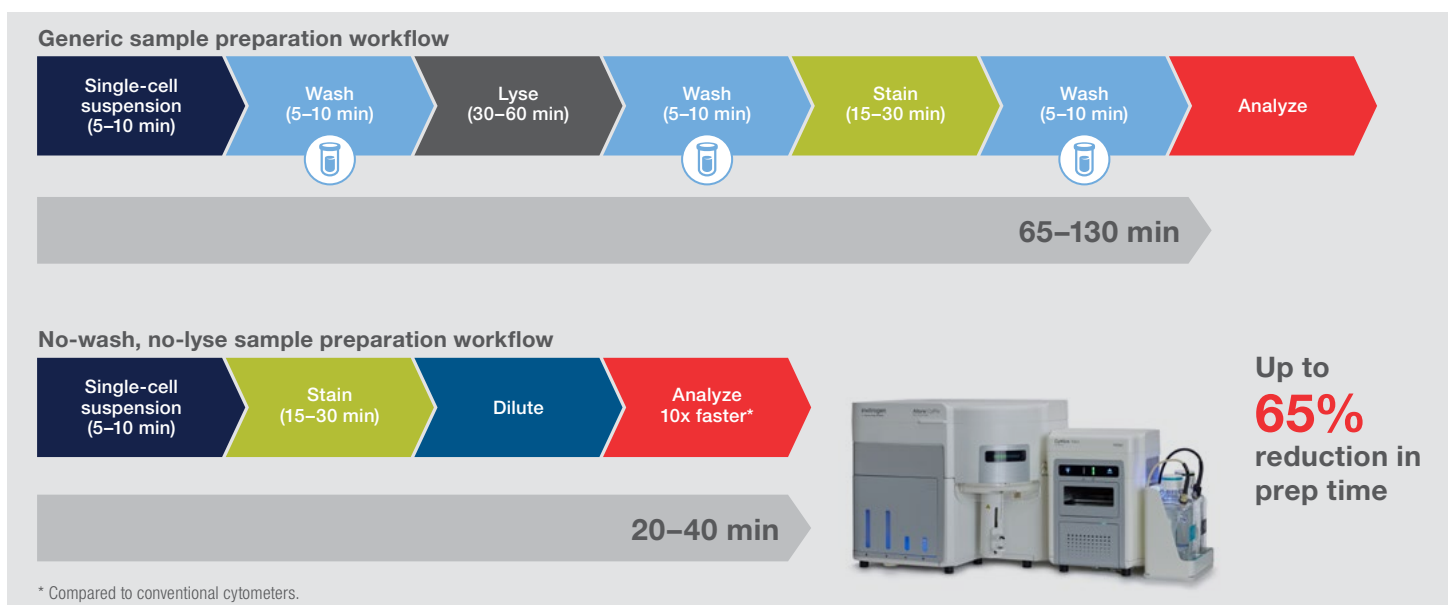


Figure 5. No-wash, no-lyse sample preparation workflow.

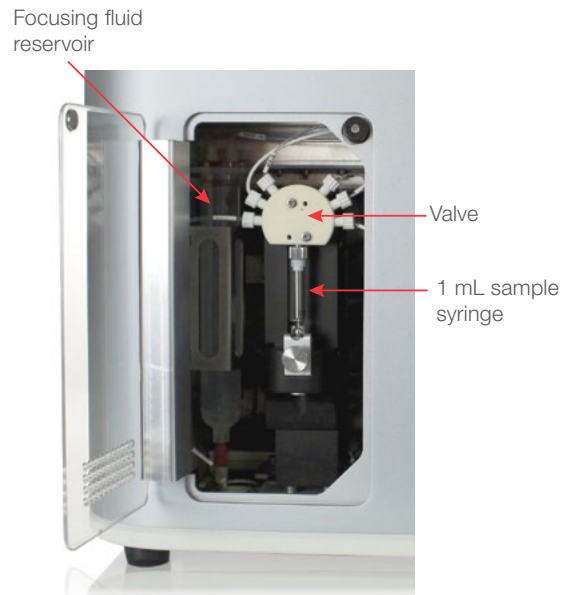


Figure 4. Positive-displacement syringe pump. The syringe is easily removed for cleaning or replacement.

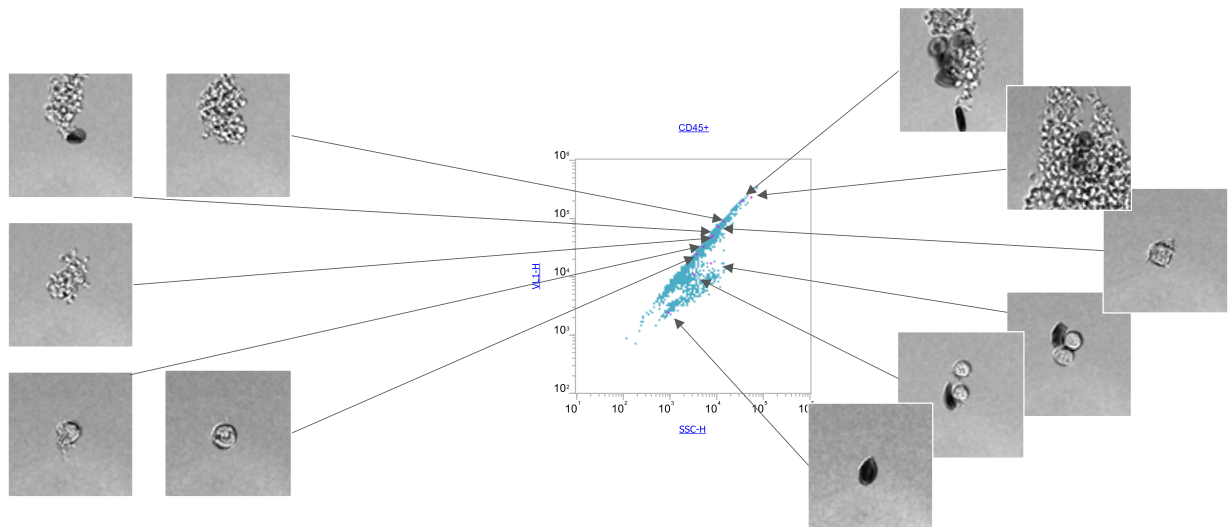


Figure 6. Gain insight with rare-population analysis. Cells were acquired from 24-hour old blood diluted in 1 mM EDTA (<1:4,000). Samples were acquired at 25 μ L/min. The image gate was set to record only CD45⁺ events.

Revealing—brightfield imaging; capture up to 6,000 images per second

With the Attune CytPix Flow Cytometer, you can highlight structural features of large populations in record time (Figure 7). Using image gallery view, you can scan your cell populations rapidly for outliers. This allows you to adjust your gates, if you wish, to include cells of interest while excluding aggregates, unwanted cells, and debris.

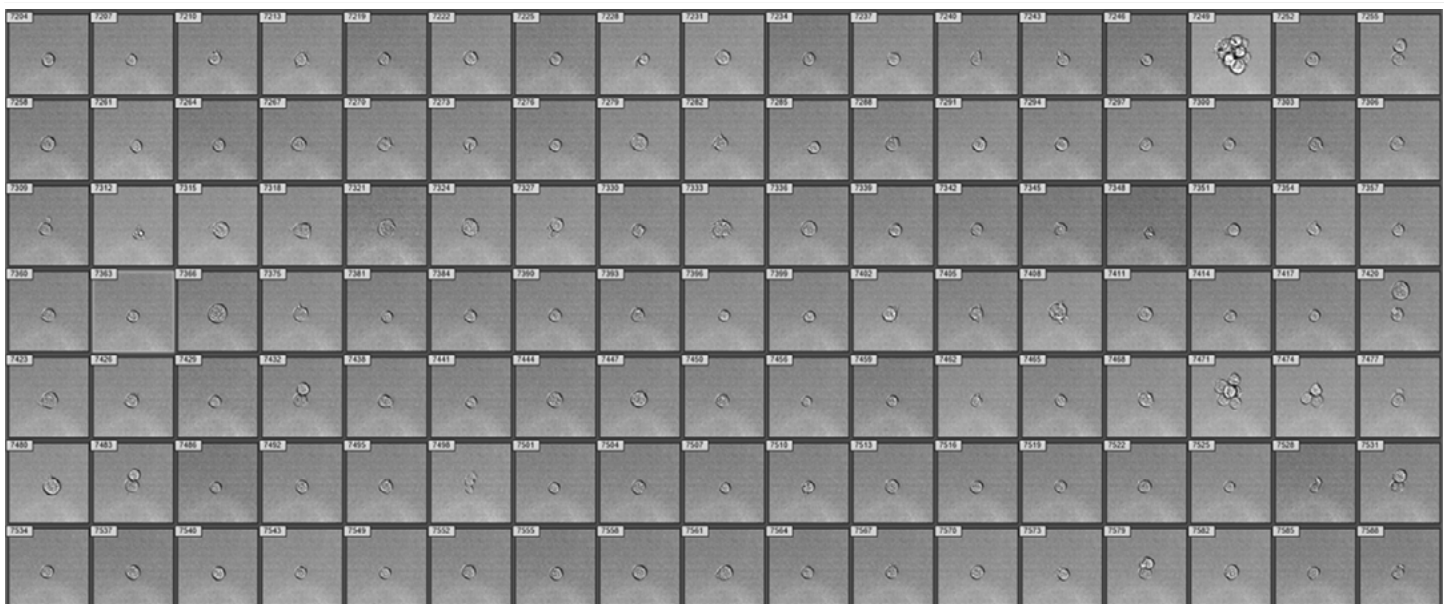


Figure 7. High-level image gallery view. Early log phase Jurkat cells were acquired unfiltered on the Attune CytPix Flow Cytometer at 200 μ L/min, >10⁵ cells/mL. Image gallery view was used to rapidly scan cellular events.

Efficient—rapid, accurate acquisition

Acoustic focusing can run 10x faster than conventional cytometers

Fast, accurate acquisition

Acoustic focusing empowers your lab to rapidly acquire high-quality data. You can achieve sample throughput rates of 12.5 $\mu\text{L}/\text{min}$ or 1,000 $\mu\text{L}/\text{min}$, up to 10 times faster than traditional hydrodynamic focusing systems and acquisition speeds of up to 35,000 events per second. This means you can process all of your samples—including low-concentration and precious samples—more quickly and accurately with minimal loss in quality.

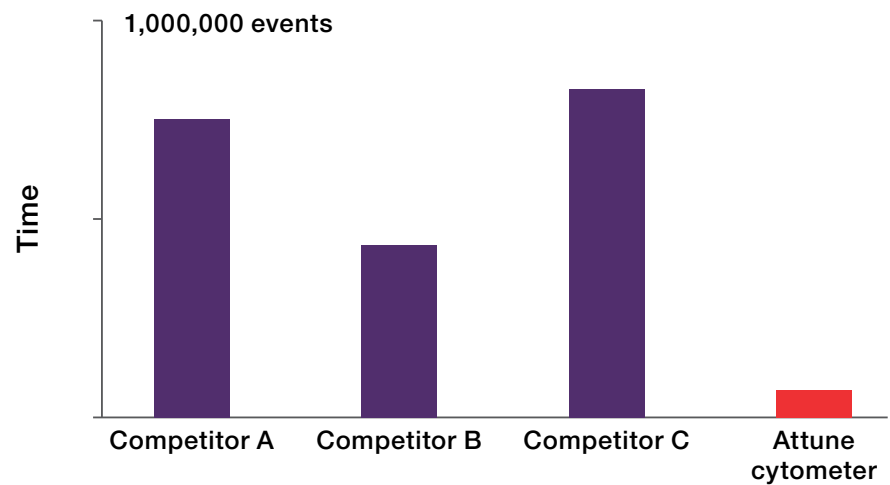


Figure 8. Rapid data acquisition. The time required to acquire 1,000,000 events is compared to three competitor instruments running at maximum sample rates.

“What I like most about the Attune NxT Flow Cytometer is its accuracy and its speed of processing. I could list a range of other things that I like about it because we are building up that list as we discover more aspects of its functions, but the core things are speed and accuracy that are not available with hydrodynamic flow cytometers.”

— Tim Inglis, BM, DM, PhD, FRCPATH, FRCPA, DTM&H
School of Medicine, University of Western Australia,
PathWest Laboratory Medicine

Rare-event detection

Detection of rare events requires acquisition of high numbers of cells to attain a reliable measure of accuracy. Attune Flow Cytometers allow dilute samples to be processed quickly at sample input speeds of up to 1 mL/min, significantly faster than conventional cytometers that support maximum sample input rates of 60–100 $\mu\text{L}/\text{min}$. Acoustic focusing thus offers a unique combination of speed and quality, cutting the time to collect rare events significantly over long acquisition times.

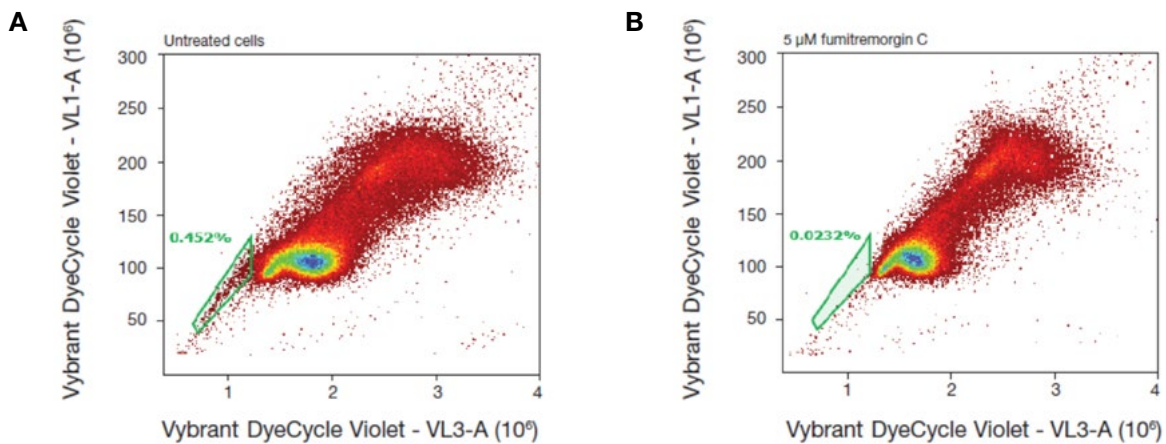


Figure 9. Identifying limbal stem cells (LSC) in a population of differentiated corneal cells. (A) Untreated cells have a side population of limbal stem cells (0.452% of total cells) with decreased Invitrogen™ Vybrant™ DyeCycle™ Violet fluorescence due to ABCG2-mediated dye efflux. **(B)** The percentage of cells in the side population is reduced (0.023% of total cells) when the ABCG2 membrane pump is inhibited with 5 μM fumitremorgin C, preventing efflux of DyeCycle Violet dye.

“I can’t believe how quick and easy it is to collect a large body of empirical evidence on the Attune NxT Flow Cytometer to fully support our hypothesis.”

— Jordi Petriz, PhD
Group Leader, Functional Cytomics Group;
Josep Carreras Leukaemia Research Institute, Barcelona, Spain

Flexible—multiple configurations and upgradable

Designed for flexibility

Whether you configure your system now or upgrade later, Attune Flow Cytometers can grow with you and your research needs. Attune Flow Cytometers accommodate up to 14 color panels. The filters and lasers are configurable and field upgradable, giving the freedom to upgrade up to 4 lasers and 16 detection channels (Table 2).

- Modular design for 1–4 laser systems (single laser not available on the Attune CytPix Flow Cytometer)
- Ability to run 96-well and 384-well plates with optional Invitrogen™ CytKick™ and CytKick™ Max Autosamplers
- Up to 14-color flow cytometry
- Available with violet 6-channel configuration
- Plate hotels and towers add high-throughput capabilities in combination with the Thermo Scientific™ Orbitor™ RS2 Microplate Mover

Table 2. Attune Flow Cytometer system laser and detector configurations.

Lasers	Laser configuration (Cat. No.)	Number of detection channels for included lasers					Total detection channels*	Attune CytPix Cat. No.	Attune NxT Cat. No.
		Violet 405 nm	Blue 488 nm	Yellow 561 nm	Green 532 nm	Red 637 nm			
1	Blue	Available as upgrade**	4	Available as upgrade**	Available as upgrade**	Available as upgrade**	6	N/A	A24864
2	Blue/green	Available as upgrade**	3	–	4	Available as upgrade**	9	N/A	A28995
	Blue/yellow	Available as upgrade**	3	4	–	Available as upgrade**	9	A51842	A24861
	Blue/red	Available as upgrade**	4	Available as upgrade**	Available as upgrade**	3	9	A51840	A24863
	Blue/violet	4	4	Available as upgrade**	Available as upgrade**	Available as upgrade**	10	A51841	A24862
	Blue/violet 6	6	3	Available as upgrade**	–	Available as upgrade**	11	A51843	A29002
3	Blue/green/red	Available as upgrade**	3	–	4	3	12	N/A	A28997
	Blue/red/yellow	Available as upgrade**	3	4	–	3	12	A51845	A28993
	Blue/green/violet	4	3	–	4	Available as upgrade**	13	N/A	A28999
	Blue/violet/yellow	4	3	4	–	Available as upgrade	13	A51846	A24859
	Blue/red/violet	4	4	Available as upgrade**	Available as upgrade**	3	13	A51844	A24860
	Blue/red/violet 6	6	3	Available as upgrade**	–	3	14	A51847	A29003
4	Blue/red/violet/green	4	3	–	4	3	16	N/A	A29001
	Blue/red/yellow/violet	4	3	4	–	3	16	A51848	A24858
	Blue/red/yellow/violet 6	6	2	3	–	3	16	A51849	A29004

* Number of detection channels includes all fluorescence channels as well as a forward scatter and a side scatter channel.

** Green laser not available on Attune CytPix.

Expand the range of performance for your violet laser

Attune Flow Cytometers are easily upgradable to 6-channel detection for the violet (405 nm) laser (Table 3). Attune Flow Cytometers with the violet 6-channel configuration are designed to accommodate a wide variety of experimental conditions. Combined with the Invitrogen™ Super Bright and other appropriate dyes, the system provides expanded choices for panel design (Table 4). See the available Super Bright dyes at thermofisher.com/superbright.

Table 3. Attune Flow Cytometer configuration using 6 fluorescence detectors for the violet laser.

Laser	Fluorescence detectors		
	2-laser	3-laser	4-laser
Violet, 405 nm	6	6	6
Blue, 488 nm	3	3	2
Yellow, 561 nm			3
Red, 637 nm		3	3
Total fluorescence detectors available	9	12	14
Total parameters per configuration*	11	14	16

* Includes FSC and SSC.

Table 4. Suggested Invitrogen™ fluorophore for the 6 available fluorescence detectors for the violet laser available in the violet-6 configuration of Attune Flow Cytometers.

Detector	Bandpass (nm)	Fluorophores*
VL1	450/40	Super Bright 436, eFluor 450, LIVE/DEAD™ Fixable Violet, Vybrant™ DyeCycle™ Violet, SYTOX™ Blue, CellTrace™ Violet, VioBlue™, Brilliant Violet™ 421, Pacific Blue™, BD Horizon™ V450
VL2	525/50	eFluor 506, LIVE/DEAD™ Fixable Aqua, CFP, VioGreen™, Brilliant Violet™ 510, Pacific Green™, BD Horizon™ V500
VL3	610/20	Super Bright 600, LIVE/DEAD™ Fixable Yellow, Qdot™ 605, Pacific Orange™, Brilliant Violet™ 605
VL4	660/20	Super Bright 645, Brilliant Violet™ 650
VL5	710/50	Super Bright 702, Qdot™ 700, Brilliant Violet™ 711
VL6	780/60	Super Bright 780, Brilliant Violet™ 786

* List is not inclusive of all available fluorophores.

Superior automation and robotic solutions

Anchor your automation with proven reliability in operation and innovative mechanical integrity

CytKick Autosamplers allowing walkaway automation

Improve workflow efficiency by choosing the autosampler option that best fits your throughput and experiment requirements (Table 5). Two models of autosamplers are available to deliver walkaway automation seamlessly integrated with your Attune Flow Cytometer for increased productivity.



Table 5. Comparison of CytKick autosamplers.

Category	CytKick Autosampler	CytKix Max Autosampler
Throughput	42 min for 96-well plate using high-throughput mode	22 min for 96-well plate (Boost mode, using one rinse and one mix and full analysis of a 20 μ L sample)
Compatibility	<ul style="list-style-type: none"> 96 deep-well 96-well standard depth 384 deep-well 384-well standard depth 	<ul style="list-style-type: none"> 96 deep-well 96-well standard depth 384 deep-well 384-well standard depth 1.5 mL and 2 mL microcentrifuge tube rack (up to 24 per rack) 96-well foil covered 384-well foil covered customizable to accept additional plate types

“We looked at several metrics and compared the CytKick autosampler to other 96-well plate readers. The autosampler proved to have very good stability and very low carryover. We were most impressed by the way that the autosampler took advantage of the Attune NxT Flow Cytometer’s fluidics and high-volume throughput. Without compromising stability or precision, the autosampler was able to run plates much faster than any other plate reader.”

– EM Meyer
University of Pittsburgh Cancer Institute

Robotic automation

Extend your unmanned runtime settings and scalability with robotic integration application for Attune Flow Cytometers. Our range of automation solutions include robotic plate taxiing, extended fluidics, temperature-stable plate storage, and software for operations. You can leverage both scheduling and integration to get the most from your solution.



Figure 10. Optional automation configuration. Maximize operating capacity, mitigate human operator error, and enable rich, reproducible data with the Orbitor RS2 Microplate Mover as part of a comprehensive, multicomponent workcell for robotically automated flow cytometry. The multicomponent workcell, which includes the Attune Flow Cytometer and the Orbitor RS2 Microplate Mover, is configured with 2 hotels and 1 stack.

Comprehensive specifications available at [thermofisher.com/flowautomation](https://www.thermofisher.com/flowautomation)

Integrated, powerful, and intuitive software

Attune Cytometric Software

Invitrogen™ Attune™ Cytometric Software is designed for compatibility with Thermo Scientific™ Momentum™ Workflow Scheduling Software. The buttons on the ribbon in Attune Cytometric Software control the automation settings within the software. When automation is enabled, the Momentum software connects the Orbiter RS2 Microplate Mover to the Attune Flow Cytometer and manages the operations between the instruments.

A

Quick-access toolbar for frequently used commands

Preview panel to easily determine which plots to add to workspace

Smart gate labeling

Drag and drop instrument, workspace, or compensation settings to apply to new experiments

Acquisition status lets you see the event rate and the total number of events collected

Batch processing can easily be accomplished by moving between sample-specific workspaces by clicking on the "WS" indicator for each sample

Easily set run parameters

Achieve workspace flexibility by creating different workspaces for samples, groups, or an entire experiment

Choose from a variety of plot types

Further illustrate your analysis with text or add from a full range of statistics

B

Image analysis settings

Dot plot view

Image view for brightfield image capture

Figure 11. Intuitive, user-friendly software interface with familiar workflow. (A) Typical Attune NXT interface and (B) typical Attune CytPix interface.

Momentum Integration Software

Momentum Integration Software includes an easy-to-learn dashboard for operations, scheduling features to handle multiple workflows, and compatibility drivers to speed implementation.

A key factor in choosing your automation solution is ensuring that the software is both performant and easy to use. The dashboard in Momentum Integration Software is fast to learn, and helps users to actively prioritize and reprioritize runs, visualize progress, and trace plates.

Dynamic scheduling in Momentum Workflow Scheduling Software allows users to successfully create multiple workflows. The software's compatibility drivers support over 200 instruments. They have proven success in numerous implementations and can speed your integration project.

Attune 21 CFR Part 11 Compliance Software

Regulatory-compliant electronic records and signatures

Invitrogen™ Attune™ 21 CFR Part 11 Compliance Software provides users with secure software that authenticates user login information, logs any unauthorized attempts to access system software, and notifies user of any data that has been tampered with. The software also provides the user with a full audit trail—electronic records and electronic signatures that are trustworthy, reliable, and equivalent to paper records.



Learn more about Attune Cytometric Software at [thermofisher.com/attune-cytometer-software](https://www.thermofisher.com/attune-cytometer-software)

Flow cytometry reagents

Accelerate your science with a comprehensive suite of solutions for the analysis of cells and their function with Invitrogen™ eBioscience™ flow cytometry antibodies and Invitrogen™ cell health reagents.

Antibodies—Build and expand your panels using our extensive portfolio of antibodies conjugated to over 30 types of fluorophores, including traditional, eFluor™, Alexa Fluor™, and Super Bright violet-excitable polymer dyes.

Reagents—Incorporate a comprehensive variety of cell function assays for studying viability, apoptosis, cell cycle, metabolism, and cell proliferation.

Fixable viability dyes—Invitrogen™ LIVE/DEAD™ fixable dead cell stains are fixable viability dyes that help ensure accurate assessment of cell viability in samples, and are compatible with fixation and/or permeabilization (Figure 12). Now there are more colors to choose from, which offers you flexibility when designing multicolored panels.

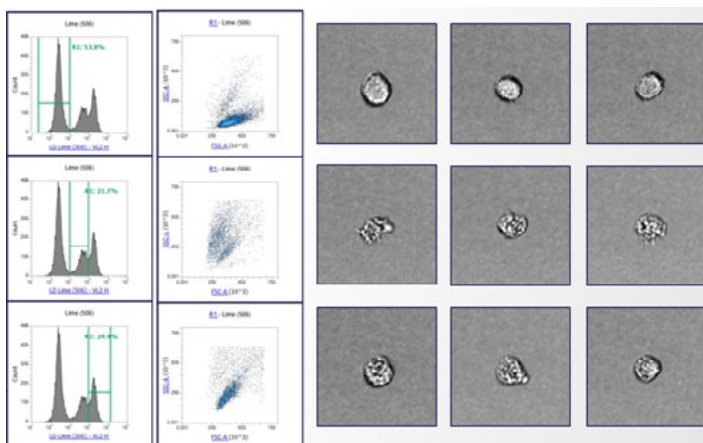


Figure 12. LIVE/DEAD dyes have minimal spillover and allow for larger and more accurate flow cytometry experiments. Incubate cells with the Invitrogen™ LIVE/DEAD™ Fixable Lime (506) Viability Kit for 405 nm excitation to distinguish viable from dead cells. Viable cells show rounded and intact cell membranes; dead and dying cells show compromised membranes.

Instrument and compensation—Beads are essential to perform quantitative measurements on individual cells and other particles with high precision, speed, and accuracy, especially when performing flow cytometry using multiple channels, markers that are poorly expressed, or samples of limited quantity. Select from our wide range of easy-to-use beads for your experimental needs.

Buffers—We offer a wide variety of buffers to suit your research needs, whether your experiment calls for extracellular, intracellular, and/or nuclear cell staining.

Compensation and instrument beads—Build flow cytometry panels with more accurate compensation using Invitrogen™ UltraComp eBeads™ Plus Compensation Beads. When a fluorophore-conjugated antibody is added to the beads, both positive and negative populations result (Figure 13).

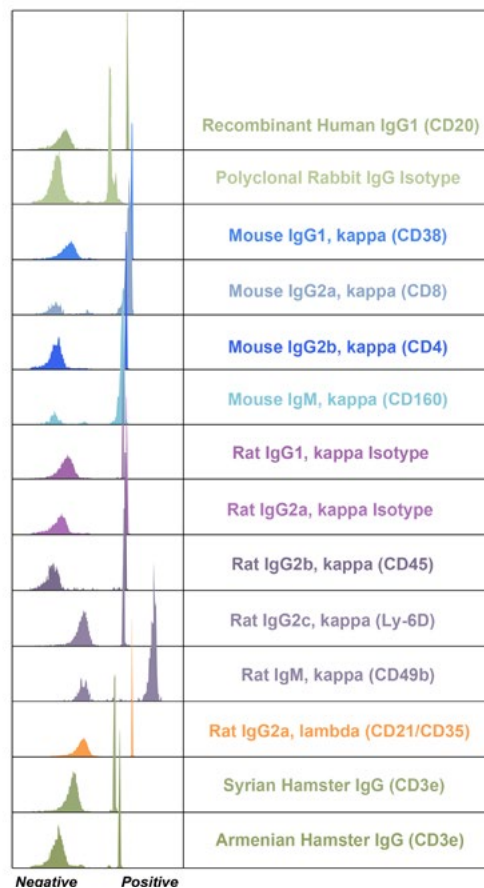


Figure 13. Staining of UltraComp eBeads Plus Compensation Beads with 14 different Invitrogen™ PE-conjugated monoclonal antibodies, including one of each subclass commonly used in flow cytometry. Beads were stained with 0.25 µg of each antibody and analyzed by flow cytometry. Each histogram represents one staining antibody.

Flow Cytometry Panel Builder

Design your panel for your Attune Flow Cytometer using the Invitrogen™ Flow Cytometry Panel Builder:

- A quick and easy-to-use web tool (Figure 14)
- Allows incorporation of antibodies using the configuration of your Attune Flow Cytometer
- Fluorophore selection built on spectral visualization of all fluorophores per laser

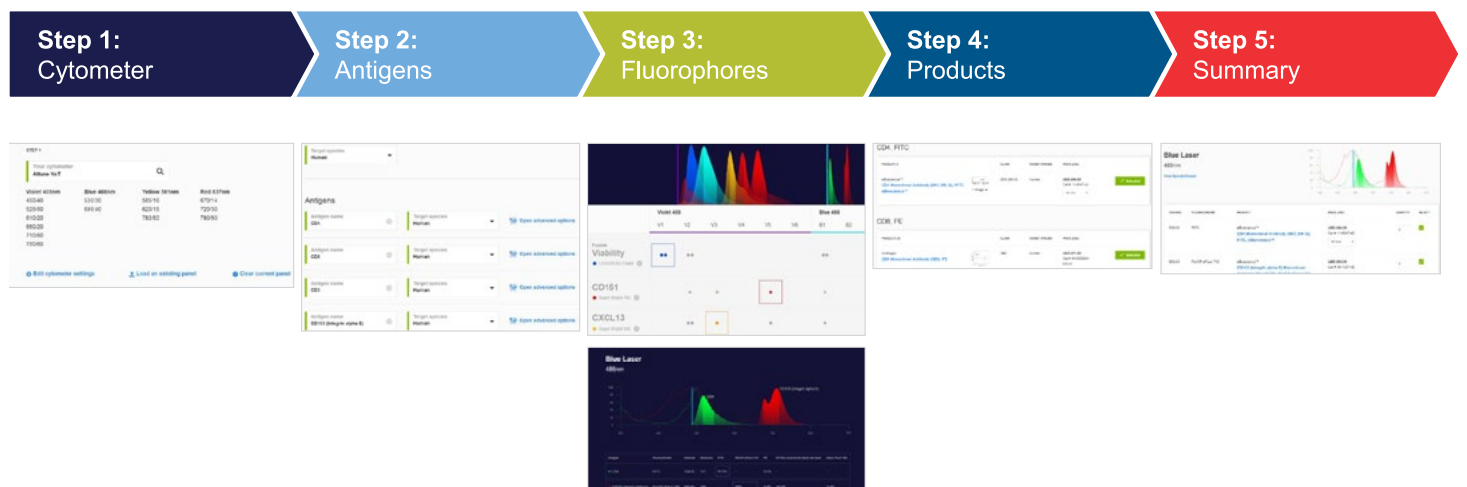


Figure 14. Simplified panel design with a 5-step panel design strategy. The Flow Cytometry Panel Builder offers a customizable panel building process to fit your flow cytometry experimental needs, whatever your experience level.

Get more information at [thermofisher.com/flow-cytometry](https://www.thermofisher.com/flow-cytometry)

Services and support

Partner with a flow cytometry company invested in supporting you through a lifetime of research

Choose a service plan that is right for you—beyond repair to proactive care

Our technical services, field engineering, and training teams are fully committed to your success using Attune Flow Cytometers for your research. Instrument service plans, consulting, and training programs are designed to ensure instrument performance, team readiness, and overall optimal research outcomes using the system (Table 6). In the field or on the phone, our team has the professional know-how to support your research, and the personal dedication to help ensure your satisfaction with our instruments.

- **Peace of mind**—during every stage of ownership: instrument install, repair, and maintenance
- **Flexible service options**—over 1,000 technical specialists delivering 30 years of experience servicing life sciences instrumentation
- **AB Assurance plan and extended warranty**—covers all costs associated with instrument repairs

Table 6. Comparison of service plans.

	AB Maintenance Plus	AB Assurance	AB Complete
Response time	3 business days*	2 business days**	Next business day
Planned maintenance	✓	✓	✓
Access to technical support (Monday–Friday, standard business hours)	✓	✓	✓
Parts, labor, and travel	10% discount	✓	✓
Qualification service	Available as add-on	Available as add-on	Available as add-on
Field application scientist (FAS) consultation	Available as add-on	Available as add-on	✓

* After receipt of purchase order.

** Availability limited in some geographic areas.

Get more information at [thermofisher.com/attuneservices](https://www.thermofisher.com/attuneservices)

Technical resources

Videos and webinars

Check out how-to videos and virtual demos at [thermofisher.com/attunevideos](https://www.thermofisher.com/attunevideos)

Customer stories

See what researchers around the world have to say and how they are advancing research using Attune Flow Cytometers at [thermofisher.com/attune](https://www.thermofisher.com/attune)

Protocols and application notes

View protocols and learn more about how to use the Attune Flow Cytometers in different applications at [thermofisher.com/attune](https://www.thermofisher.com/attune)



Ordering information

Product	Cat. No.
Automation options	
CytKick Autosampler	A42901
CytKick Max Autosampler	A42973
Attune NxT External Fluid Supply	A28006
Orbitor RS2 Microplate Mover	ZG30SCORBROBNXT
Orbitor RS2 Microplate Mover, Stacks	A33007
Orbitor RS2 Microplate Mover, Hotels	A33008
Orbitor RS2 Microplate Mover, Stacks/Hotels	A35220
Upgrade options	
Attune NxT Yellow Laser Upgrade Kit	100022779
Attune NxT Red Laser Upgrade Kit	100022778
Attune NxT Green Laser Upgrade Kit	A32701
Attune NxT Violet 6 Conversion Kit, Blue Laser	A35428
Attune NxT Violet 6 Conversion Kit, Violet Laser	A36569
Attune NxT Violet 6 Conversion Kit, Red Laser	A36571
Attune NxT Violet 6 Conversion Kit, Yellow Laser	A36572
Attune NxT Fluorescent Protein Filter Kit—GFP, YFP, mCherry	100022775
Attune NxT Custom Filter Holder Kit	A27784
Attune NxT Small Particle Side-Scatter Filter	100083194
Reagents and consumables	
Attune Debubble Solution (1X), 50 mL	A10496
Attune Focusing Fluid (1X), 1 L	4488621
Attune Focusing Fluid (1X), 10 L	A24904
Attune Wash Solution, 250 mL	A24974
Attune Shutdown Solution (1X), 250 mL	A24975
Attune NxT No-Wash No-Lyse Filter Kit	100022776
Attune Performance Tracking Beads	4449754
Software	
Attune Software, single license	A25554
Attune Software, 5 licenses	A24856
Attune Software, 10 licenses	A24855
Attune Software 21 CFR Part 11, single license	A47288
Attune Software 21 CFR Part 11, server license, 5 users	A47289
Attune Software 21 CFR Part 11, server license, 10 users	A47290
Attune IQ/IPV, Attune Operation Qualification and Instrument Performance Qualification (IQ/IPV)	4465413
Attune IQ/OQ, Attune Installation Qualification and Operation Qualification (IQ/OQ)	4465445

Find out more at thermofisher.com/attune