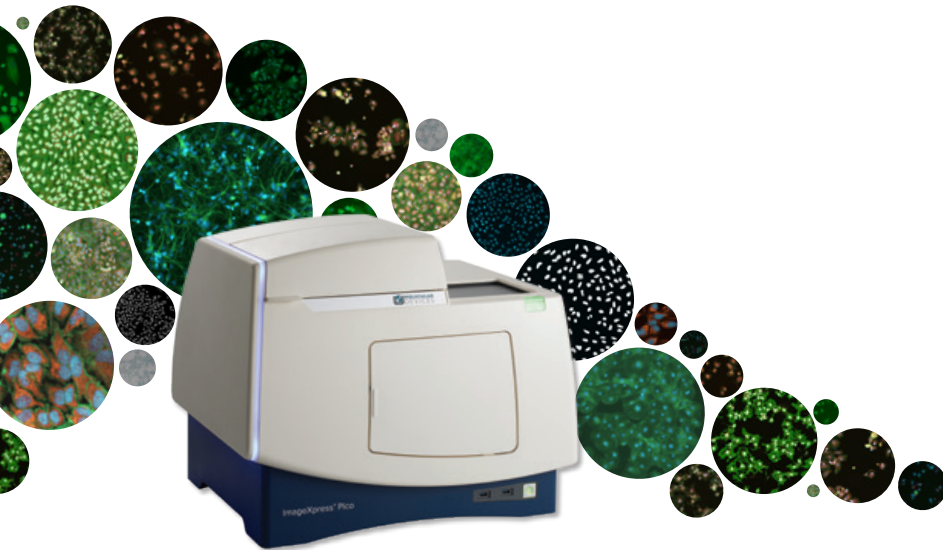
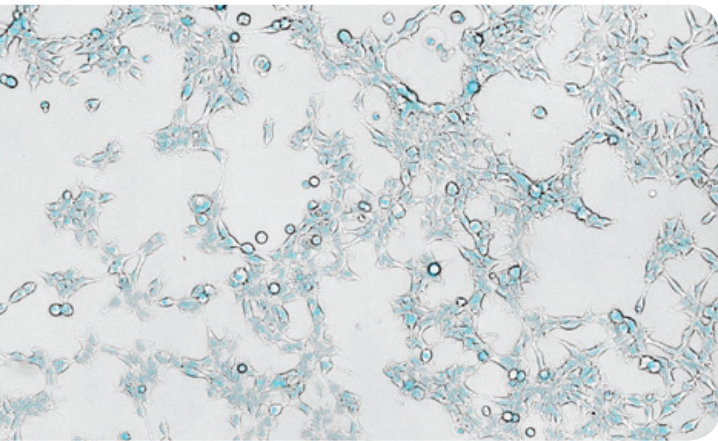
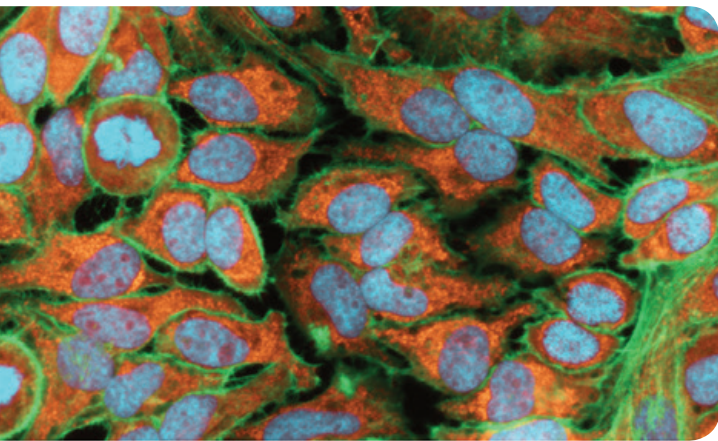


ImageXpress Pico Automated Cell Imaging System

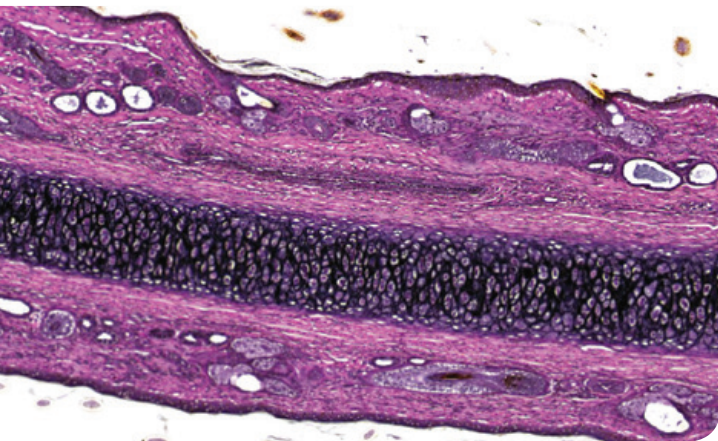




Transmitted light with fluorescence overlay



Fluorescence imaging



Color imaging brightfield



Intelligent cellular imaging and analysis

The ImageXpress® Pico system does more than imaging—it offers unparalleled analysis capabilities that simplifies image analysis for cell-based assays.

Get started in a snap

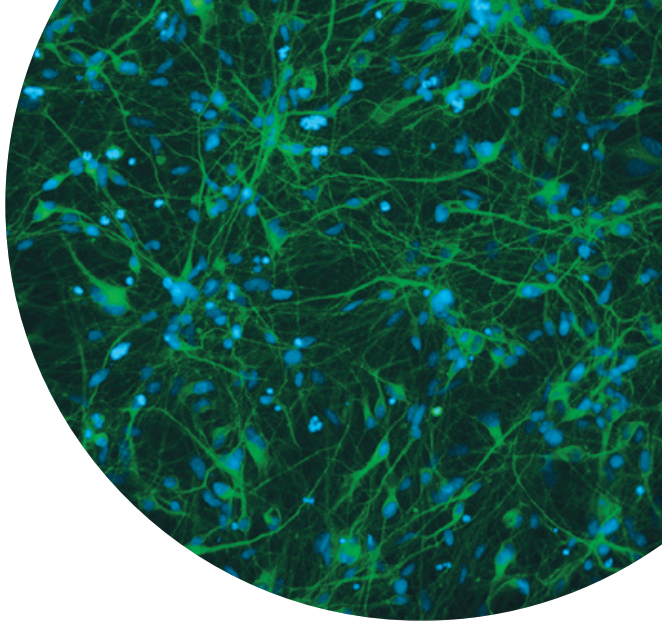
With the icon-driven, user-friendly CellReporterXpress Image Acquisition and Analysis Software, everyone can start capturing and analyzing images with minimal training.

Do more than cell counting

Expand your assays with various preconfigured templates optimized for many cell-based experiments including apoptosis, mitochondrial evaluation, and neurite tracing.

Automate imaging affordably

Alleviate the hassle of going to the core lab to run your samples. The system's lab-friendly price allows researchers to afford the convenience of automated imaging and analysis on their lab bench.



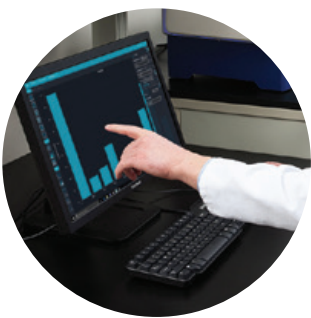
Now you can get answers immediately

Replace tedious manual microscope manipulations with the fully automated ImageXpress Pico system.



Acquisition

Place a microplate or slide into the system. After a few clicks in the software, the system will run automatically and allow users to walk away.



Analysis

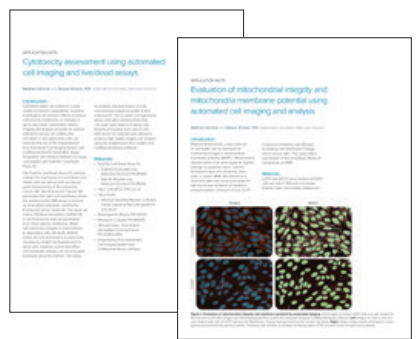
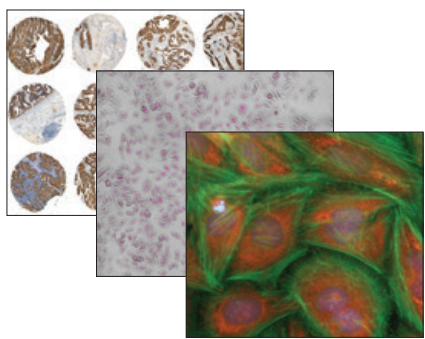
Immediately view results, which are automatically extracted from images, in various formats including image montages, bar graphs, tables, scatter plots, and movies.

The system can run and analyze over 25 preconfigured protocol templates.



Answers

Export and share data and images for presentations and publications with the built-in sharing and remote access capabilities. The system supports a multi-user environment and can be accessed and operated online via Chrome or Safari.



Capture images with a guided, step-by-step workflow

Getting started with image acquisition is easy. The CellReporterXpress software offers an icon-driven, step-by-step workflow that guides users to take their first image in minutes.



1. Select the “Acquire” tab on the homepage to get started.

2. Choose the preconfigured template appropriate for your assay.

3. Follow the easy icon-driven workflow.



Minimize setup time with preconfigured protocol templates

The ImageXpress Pico system features preconfigured templates optimized to collect the most pertinent information for various cell-based assays removing the guesswork from optimizing parameters.

Over 25 protocol templates are available. Some of the commonly used ones are listed here.

Not seeing what you want?

You can still customize!



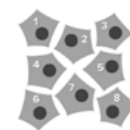
Angiogenesis



Autophagy



Cell count



Cell count –
transmitted light



Cell scoring



Cell scoring –
transmitted light



Endocytosis



Internalization



Live cells



Lysosomes



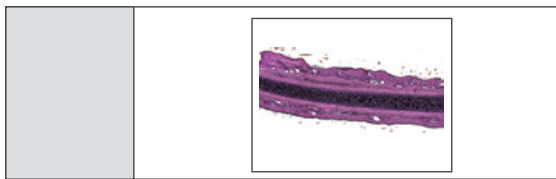
Mitochondria



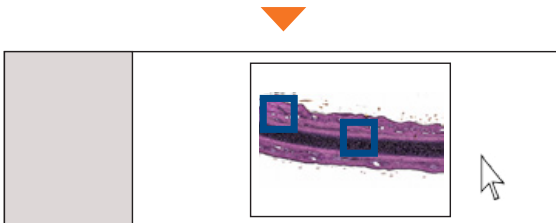
Phagocytosis

Get to your targets faster with a quick overview scan

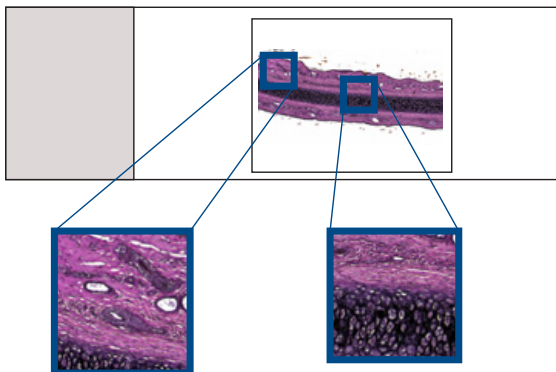
Reduce time and data storage with the Overview feature. The whole slide or well can be quickly scanned to generate an overview image that helps locate regions of interest. The user can then select multiple regions of interest to acquire at a high resolution.



Create a quick, whole-slide image overview.



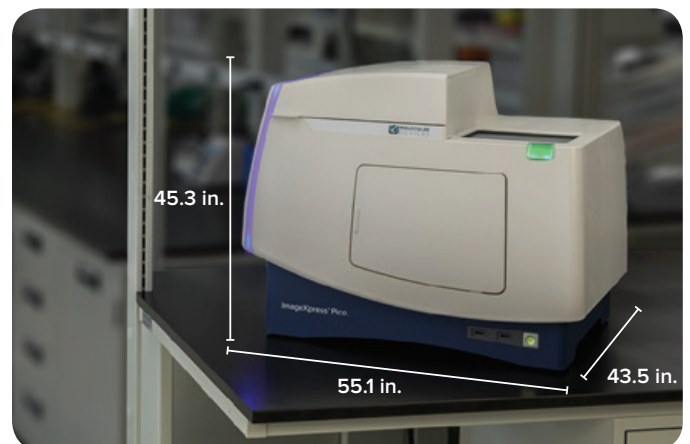
Select regions of interest.



Selected regions are rescanned at a higher magnification to view detailed phenotypes.

Compact size fits on lab benches

Setup is easy with no special needs associated with manual microscopes such as a darkroom or air table.



Analyze data easily with preconfigured templates

The preconfigured templates are optimized to automatically determine critical information for various cell-based assays. Users need not worry about tweaking parameters or exporting to third party software for analysis.

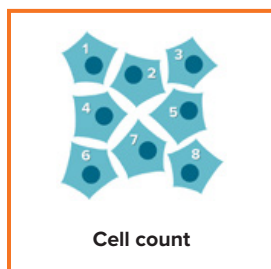
Below are some example templates and possible applications.

Cell counting

The protocol automatically allows image segmentation and cell counting in different modes:

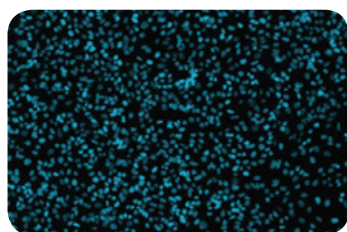
- Fluorescence
- Label-free transmitted light

Cells are identified and shown with a white mask.

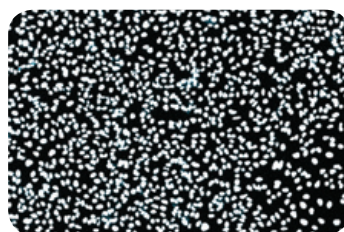


Select the appropriate cell counting analysis protocol template.

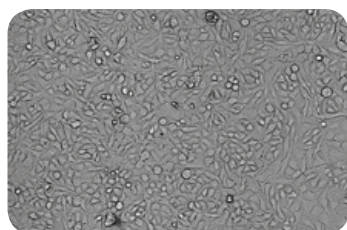
A few clicks



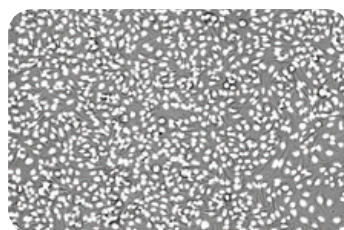
Fluorescent nuclei stain



Nuclei mask



Label-free cells

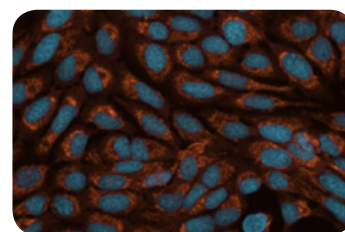


Cell mask

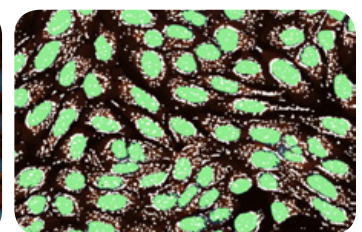


Choose the "Mitochondria" analysis protocol template.

A few clicks



Control image



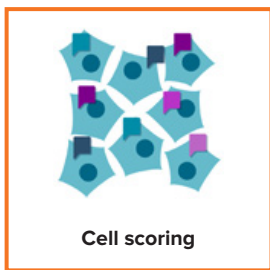
Control mask

• Nuclei • Mitochondria

• Nuclei ○ Mitochondrial particles

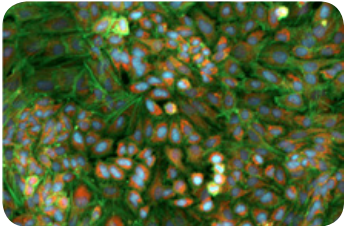
Phenotypic analysis of drug effects

The protocol automatically characterizes multiple readouts including cell viability, cell shape, cell adhesion and spreading, and cytoskeleton integrity (morphology).



Choose the appropriate cell scoring analysis protocol template.

A few clicks



Control image

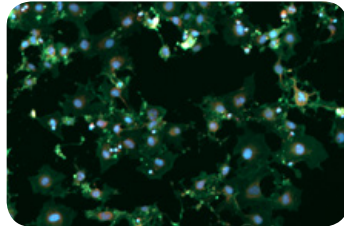
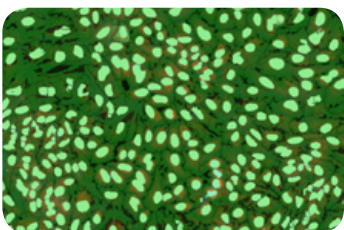
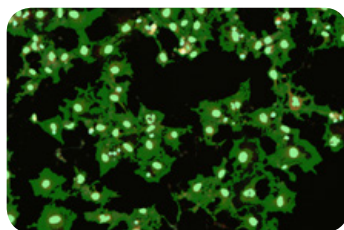


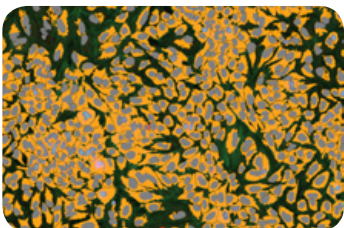
Image of cells treated with compound



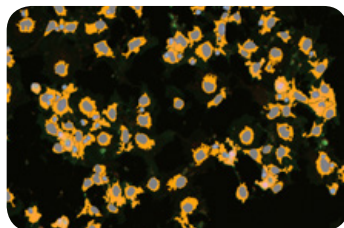
Control actin analysis mask



Treated actin analysis mask



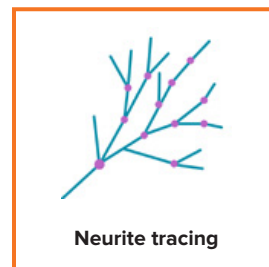
Control mitochondria analysis mask



Treated mitochondria analysis mask

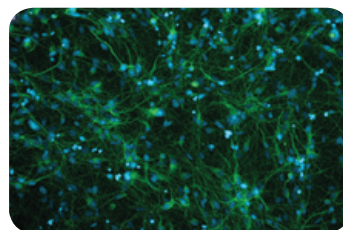
Neurite tracing

Phenotypic readouts for neurite outgrowth include characterization of the extent of the outgrowth, the number of neurite processes, and the extent of branch.

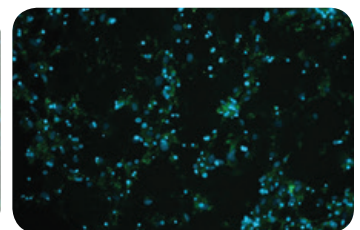


Choose the "Neurite tracing" analysis protocol template.

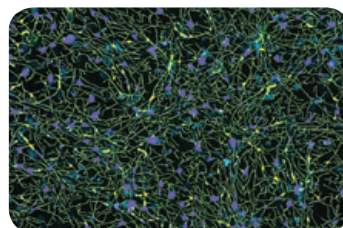
A few clicks



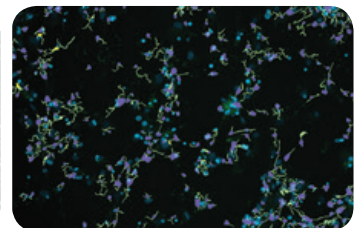
Control image



Neurites treated with compound



Control mask

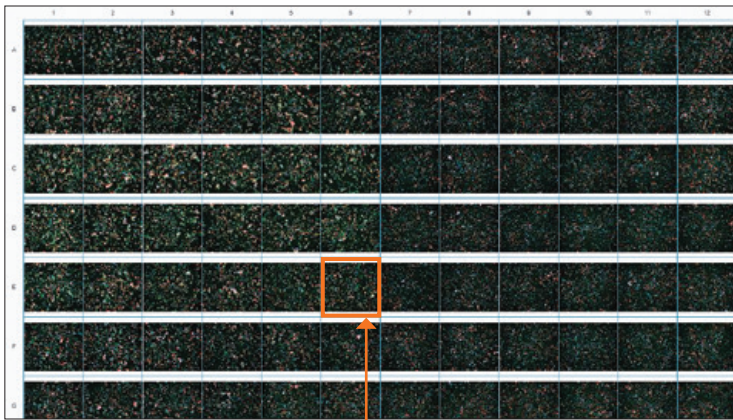


Neurites treated with compound mask

Find answers in various data formats

Cell gallery

The cell gallery feature allows users to navigate back and forth between a whole plate or slide and individual cells of interest with a few clicks.



Visualize an entire plate with the thumbnail view.



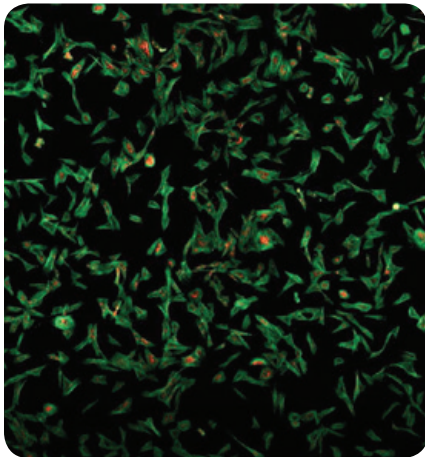
View populations of cells across the entire well in different formats like scatter plots, tables, or histograms.



Use the simple select-and-zoom feature to drill down to a specific cell image or back to the entire well or graph.

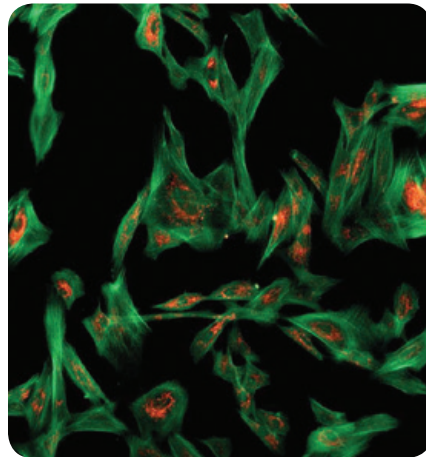
Zoom in and out digitally with the CellMagnify View

This feature allows users to digitally zoom or pan high-resolution images from whole-well view down to cell-level view while maintaining resolution and important phenotypic data.



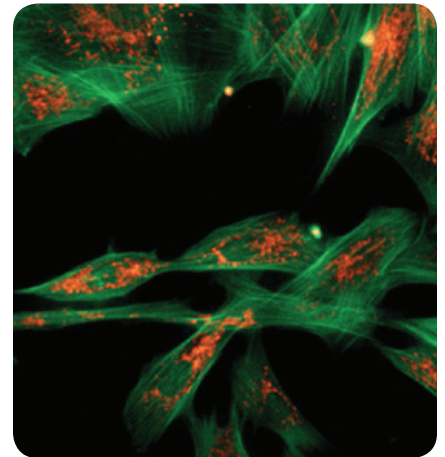
Muntjac cells 20X

Zoom



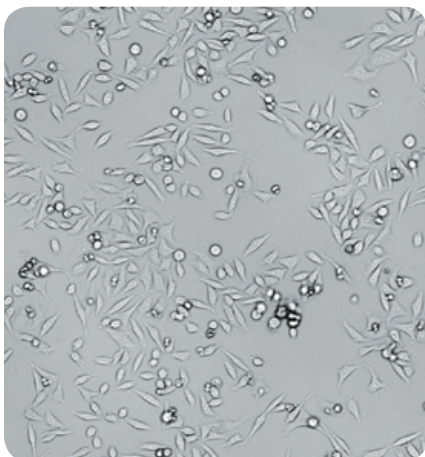
Muntjac cells 20X

Zoom

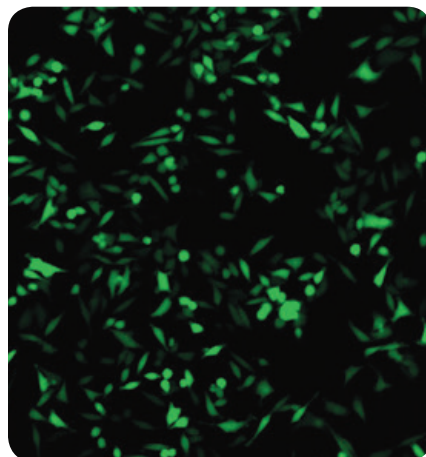


Muntjac cells 20X

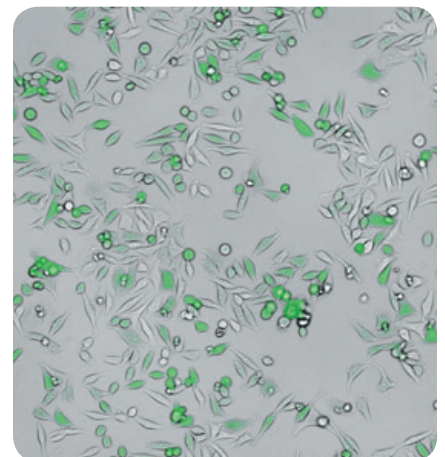
Easily compare images from different wells with the Comparison Mode.



Transmitted light



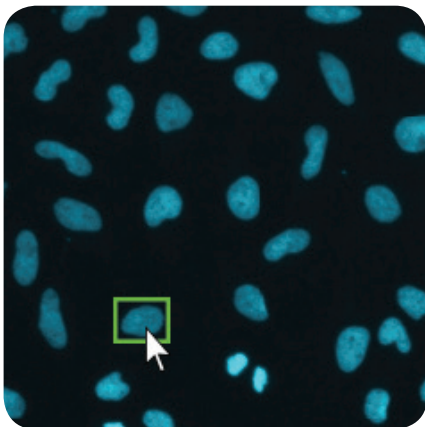
Fluorescence



Fluorescence overlay

Click-to-find tool

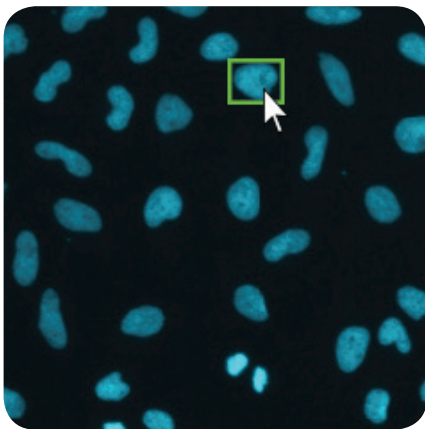
The ImageXpress Pico system offers a click-to-find tool in which the software automatically defines the parameters of a feature with a single click. The system then finds and identifies objects that match the selected criteria.



1. Baseline parameters of the object are automatically identified based on what the user clicks.

Parameters are automatically populated and remembered.

| | |
|-------------|---------------------------------|
| Parameter 1 | <input type="text" value="63"/> |
| Parameter 2 | <input type="text" value="10"/> |
| Parameter 3 | <input type="text" value="7"/> |



2. Optimize the parameters by selecting more objects of interest.

Select additional cells to train the software on feature variability. Users can continue to select as many objects as they like.

| | |
|-------------|---------------------------------|
| Parameter 1 | <input type="text" value="70"/> |
| Parameter 2 | <input type="text" value="15"/> |
| Parameter 3 | <input type="text" value="9"/> |



3. The software automatically identifies and analyzes objects based on the ones selected by the user.

| | |
|----------------------|----------|
| Cell count | 118 |
| Cell Total Intensity | 30517.5 |
| Average Area | 527.7434 |

Browser-based software

The browser-based CellReporterXpress software enables access and convenient operation of the ImageXpress Pico system from anywhere, even when away from the lab.



PC and Mac friendly



Tablet friendly

Touchscreen compatible



- Easily export images for PowerPoint presentations and articles with 1 click.
- Select the data you want and export easily to a CSV file.

| Specifications | |
|-------------------------------|---|
| Imaging modes | Transmitted light (brightfield), colorimetric, fluorescence |
| Illumination | High power LEDs with >60,000 hour life |
| Objectives | 6 position automated turret with user-exchangeable objectives. Optics by Leica Microsystems: FLUOTAR 4x/NA 0.13, 10x/NA 0.32, 20x/NA 0.40, 40x/NA 0.60, 63x/NA 0.70 |
| Camera | Sony CMOS, 5 megapixel |
| Channels | Cy5, TRITC, FITC, DAPI, white light, and RGB |
| Stage resolution | 0.625 μ m |
| Stage precision | 5 μ m |
| Autofocus method | LED autofocus or image autofocus with LED assist |
| Supported labware | 6- to 384-well plates and 25 mm x 75 mm (1 in. x 3 in.) slides |
| Supported operating systems | Windows 10 (main computer), Windows 10 and macOS (clients) |
| Image output | 16 bit TIFF, JPG, WMV |
| Dimensions (in) | 17.8 (H) x 21.7 (W) x 17.1 (D) |
| Dimensions (cm) | 45.3 (H) x 55.1 (W) x 43.5 (D) |
| Weight (kg) | 38 kg (84 lb) including options |
| Power | 100 VAC to 240 VAC, 50/60 Hz, 1.6A nominal at 115V, 200 Watts Max |
| Ambient operating temperature | 18°C to 30°C (59°F to 86°F) |

The ImageXpress Pico system features optics by Leica Microsystems.

Ordering information

| Product | VWR Cat. # (US) |
|---------------------------|------------------|
| IMAGEXPRESS PICO | 76230-060 |
| IMAGEXPRESS PICO ADVANCED | 76230-062 |

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