

UP.SIGHT™

The ultimate upgrade
in cell line development



Elevate your cell line development workflow

The UP.SIGHT streamlines cell line development (CLD) workflows by automating labor-intensive and time-consuming steps. We have combined our patented, highly efficient, fast and gentle single-cell dispensing technology with a superfast, high-quality imaging system that provides a full well image and no need for image stitching. Our all-in-one solution enables nozzle imaging and 3D Full Well Imaging for double assurance of clonality from two independent optical apparatuses, leading to a probability of clonality >99.99%. Researchers can also bypass centrifuging their plates prior to imaging and can be assured that all concerns of hidden, ghost cells in a well have been eliminated.

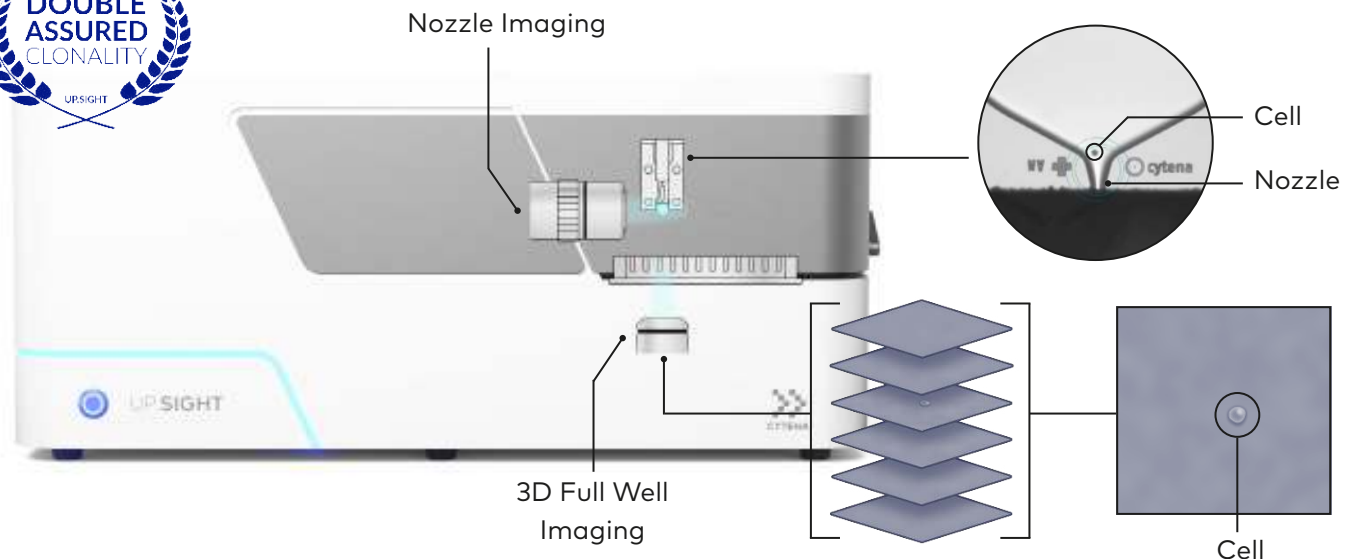
When developing biologics, which account for 8 out of 10 of the best-selling drugs worldwide, it is essential to apply an optimized cell line development workflow with assured clonality to pro-

duce high-performing clonal cell lines for therapeutic protein production. Our product portfolio enables such an optimized CLD workflow where the all-in-one UP.SIGHT is the ultimate upgrade.



Double assurance of clonality

The revolutionary UP.SIGHT offers two independent methods of assuring monoclonality. First, images are taken at the dispensing nozzle to ensure only one cell is placed in each well. If more than one cell or no cells are detected within the nozzle, then that nonclonal droplet is discarded. Second, the single cells are confirmed once more inside the well with 3D Full Well Imaging, a new and innovative method that images the full volume of each well from the point of dispensing, in order to eliminate the concerns of ghost wells or artifacts and edge effects from well plates. Together, these two assurances of clonality result in a probability of clonality >99.99%.



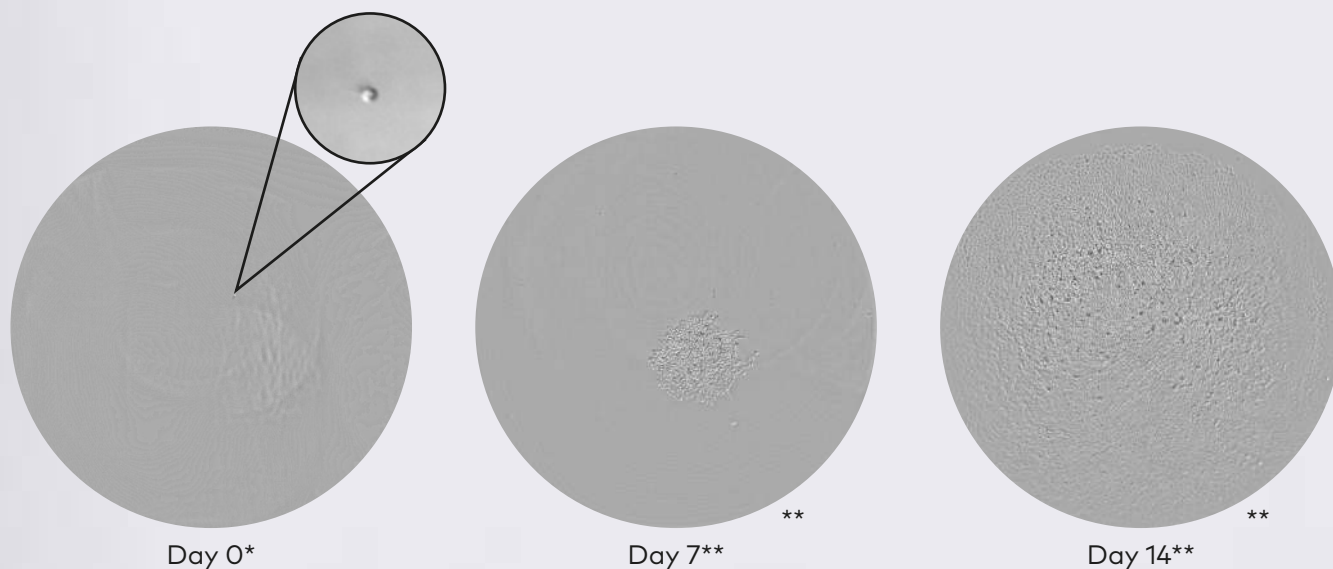
Reducing the risk of cross-contamination

The UP.SIGHT's exclusive EASY.ON cartridge was precisely engineered by microfluidic experts to ensure cell viability with the gentlest handling. The ability to dispose of the cartridges eliminates the risk of cross-contamination between samples. Plus, setting up your experiments has never been easier as the EASY.ON cartridge is magnetically mounted for quick and easy loading.



All-in-one single-cell cloning solution, from single cell to colony

With an integrated imager, the UP.SIGHT enables a full single-cell cloning workflow in one instrument. From gentle single-cell isolation to doubly assured clonality to colony tracking from Day 0, the UP.SIGHT does it all.



* 3D Full Well Imaging

** Traditional bottom-up imaging



Higher yields, greater insights and faster processing

The UP.SIGHT combines our patented single-cell dispensing technology with an industry-leading imaging system for improved single-cell cloning workflow, enabling higher clonal yields and faster processing speeds. The instrument's operating software analyzes cell morphology to isolate single cells according to set parameters such as size, roundness and even fluorescence intensity (if working with fluorescent cells).

The quick and intuitive setup of thresholds for each parameter ensures that only desired cells are dispensed into wells in order to yield more monoclonal colonies. This automation and increased processing speed provide researchers with hundreds of clones isolated and imaged in under 30 minutes with a fraction of the hands-on time typically required.

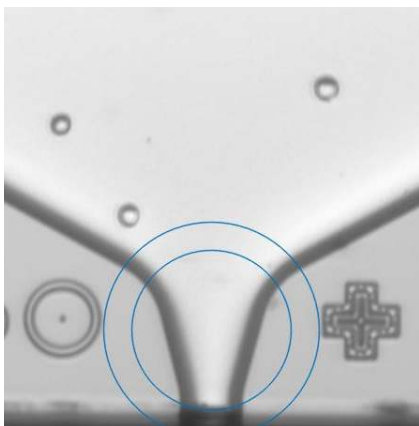
The screenshot displays the software interface for the UP.SIGHT instrument. The main window is titled "LOAD SETTINGS IMAGER DROPLET-QC DISPENSE". It includes fields for Name, Description, Plate ID, Well, Cartridge ID, and MTP Configuration. A 24-well plate grid is shown with columns 1-24 and rows A-H. The first column (A-H) is highlighted in green. Below the grid, there are settings for "Dispense Fluorescence En." (HIGH), "Tech Processing Status" (checked), "Number of Cells" (1), "Size" (142 µm), "Roundness" (65%), and "Fluor. Intensity" (7%). A "Cell Camera" view on the right shows a micrograph of a cell with a blue circle around it. Below the camera view is a "Results" section with a scatter plot of "Roundness Intensity" (y-axis, -0.1 to 1.0) versus "Size (µm)" (x-axis, 0 to 40). The plot shows several data points, with a cluster of points in the upper right quadrant. Buttons for "Collect Samples", "Clear Results", "DISPENSE", and "Log" are visible at the bottom right. The CYTENA logo and "A BICO COMPANY" are at the bottom center.



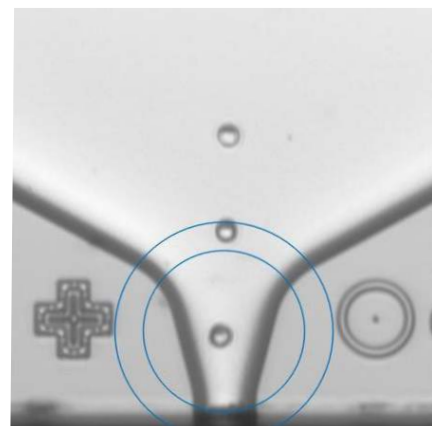
Cell Focusing - Minimizing cell loss

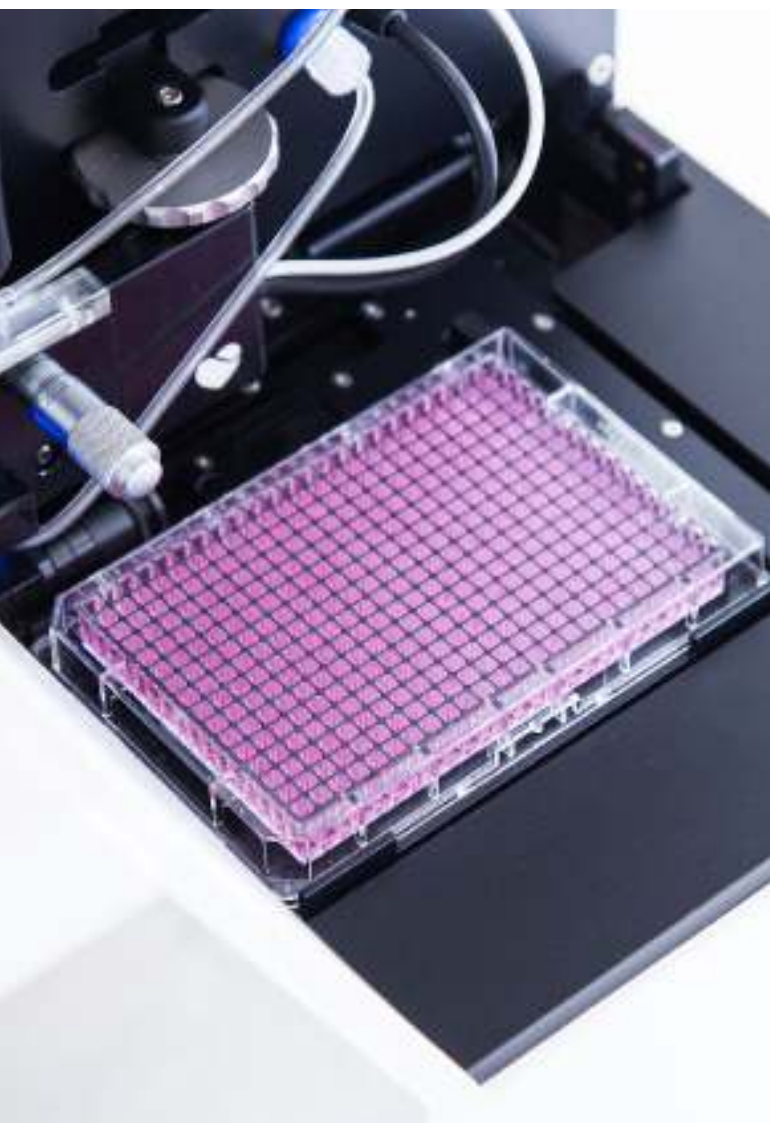
Add an additional layer of optimization with Cell Focusing technology, which gently aligns cells at the center of the dispensing cartridge for superior cell detection. It offers significant improvements when working with rare cell types as this alignment ensures that cells and their morphology are perfectly captured and measured, reducing cell loss and even increasing processing speeds.

Cell Focusing **Off**



Cell Focusing **On**





Technical Specifications

Footprint	635 x 400 x 282 mm
Weight	40 kg
Power consumption ca.	200 W
Net voltages	100-240 Vac
Nozzle imaging	<p>File type (JPEG)</p> <p>Camera CMOS, 0.81 MP</p> <p>Magnification 10x</p> <p>Optical resolution 3 μm</p> <p>Excitation wavelength 488 nm</p> <p>Emission wavelength 520 +/- 36 nm</p>
Well imaging	<p>File type (JPEG)</p> <p>Camera CMOS, 13.4 MP</p> <p>Magnification 5x</p> <p>Optical resolution 2.2 μm</p>
Processing times	<p>Single-cell dispensing into 96-well plate: ~2 min</p> <p>Single-cell dispensing into 384-well plate: ~8 min</p> <p>Single-cell dispensing plus 3D Full Well Imaging 384-well plate: ~25 min</p> <p>Well bottom imaging of 96-well plate: ~8 min</p> <p>Well bottom imaging of 384-well plate: ~8 min</p>
<p>Embedded computer (Win 10 x 64 Prof.)</p> <p>Automation-ready incl. API and DLLs</p> <p>Compatible with standard biosafety cabinets class 2</p>	
Certified CE, CB, UL (TÜV), RoHS	





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