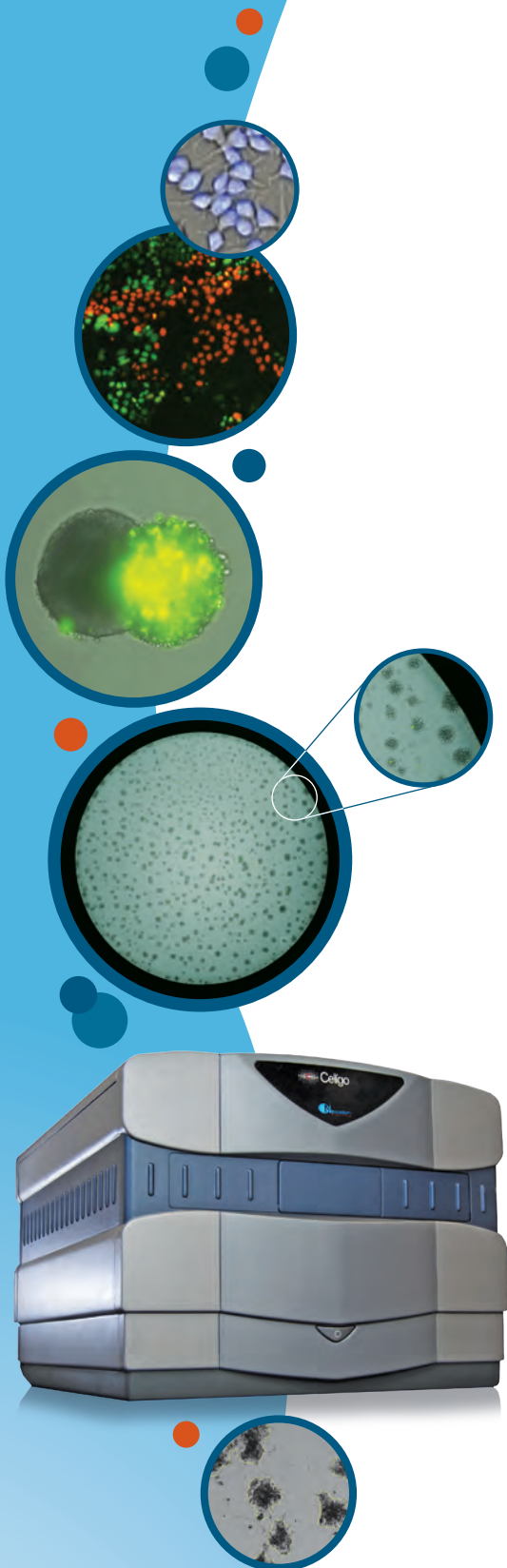


 **Celigo**<sup>®</sup> Image Cytometry



Every Cell. Every Well.

*Product Guide*



# Celigo Image Cytometer

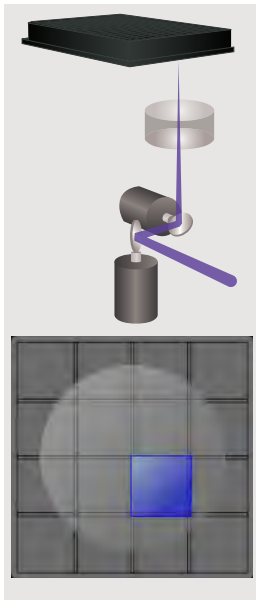
The bench-top Celigo image cytometry system provides high-throughput, whole-well imaging and quantitative data through image analysis in bright field and up to four fluorescent channels, for a wide variety of cell-based assays. It is routinely used to investigate adherent and suspension cells, 3D tumor spheroids and colonies of iPSC and cancer stem cells. It is compatible with microwell plates from 6 to 1536-well and T-flask formats.

The work-flow based intuitive software provides concurrent imaging and analysis; kinetic analysis such as time-lapse growth tracking, flow cytometry-like gating analysis and reporting of cell populations. Cell images of specific populations may be displayed with color overlays.

The Celigo product allows users to perform high-speed, fully automated imaging and quantification of a wide range of cell types across complex sample types. It enables an extensive menu of applications including label-free cell counting, confluence-based cell growth tracking, killing assays, apoptosis, cell cycle analysis, migration and invasion assays, as well as cellular assays for receptor internalization, protein expression and detection, phosphorylation and phagocytosis.

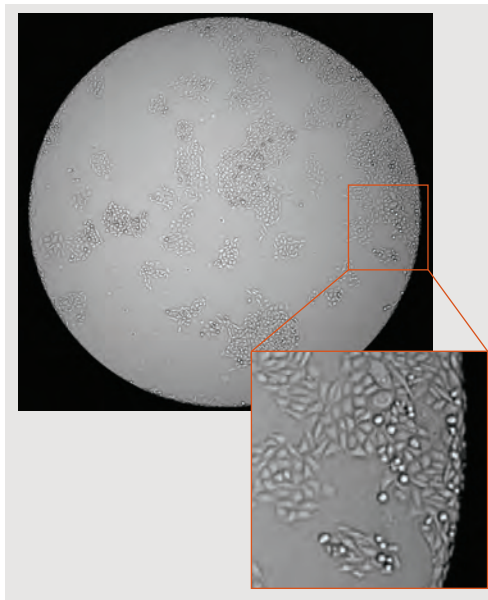
## Core Technology

### Proprietary Optics



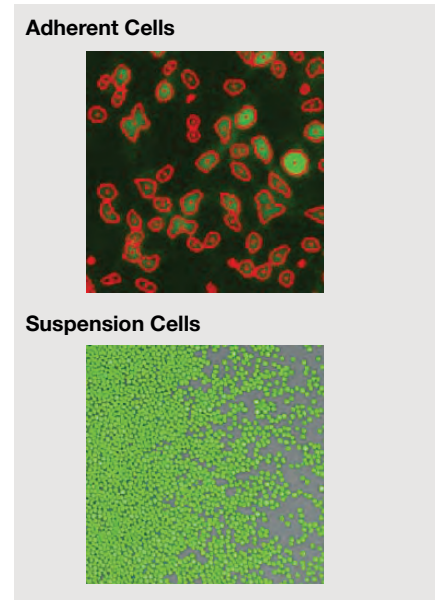
*Whole-well images are captured moving the plate once per well.*

### Illumination



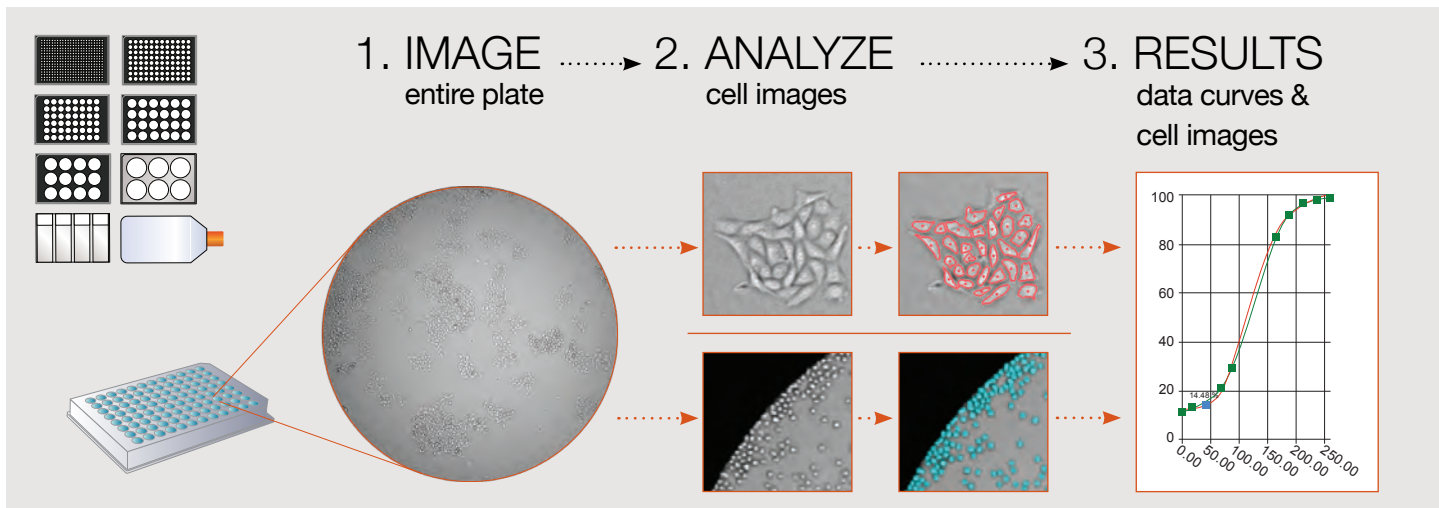
*Flat illumination and excellent edge-to-edge contrast images every cell in every well.*

### Image Segmentation



*Bright field and fluorescence algorithms for accurate segmentation of adherent and suspension cells.*

# Whole-Well, High Resolution Images Acquired at High Speed



## 1. Image

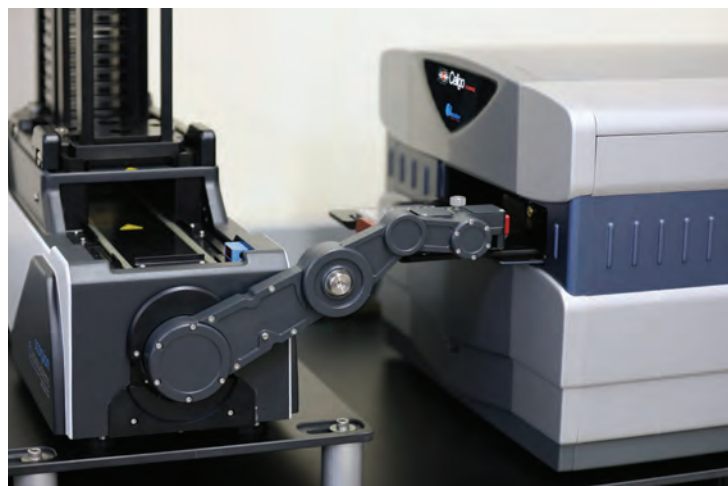
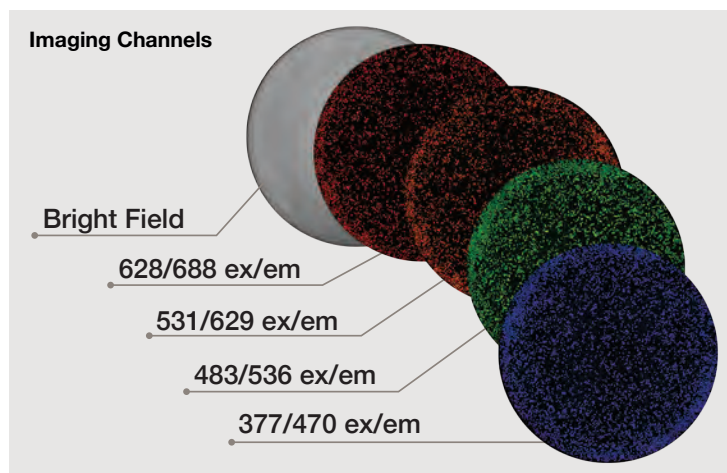
- Proprietary optical design enables uniform illumination and consistent edge contrast
- Image and count every cell in each well: 0 - 100,000 cells/96-well
- 5 imaging channels with bright field and 4 fluorescent channels

## 2. Analyze

- Fast scanning for image acquisition and analysis with minimal plate movement ensuring minimal sample disruption
- Accurately quantify cells and colonies with a non-invasive method
- Measure adherent cells without trypsinization

## 3. Results

- Save experiment settings – quickly run the same assay on many plates without additional set up
- System automatically stitches multiple fields of view into a single full resolution image



*Celigo easily integrates with robotic arms, plate stackers, automated incubators and liquid handlers.*



# Integrated Cell Imaging and Analysis in the Same Software

## Oncology

- Apoptosis
- Cell cycle
- Cell viability
- DNA synthesis
- Cytotoxicity
- Cell migration
- Cell morphology
- Immunophenotyping
- Metabolism
- Wound healing
- Chemotaxis

## Immuno-Oncology

- Direct cell-mediated cytotoxicity
- Antibody-dependent cell-mediated cytotoxicity (ADCC)
- Complement-dependent cytotoxicity
- Antibody-mediated cytotoxicity

## 3D Tumor Spheroid Modeling

- Growth tracking
- Growth inhibition
- Apoptosis / Viability
- Invasion / Migration
- Patient derived organoids (PDOs)

## Stem Cell Research

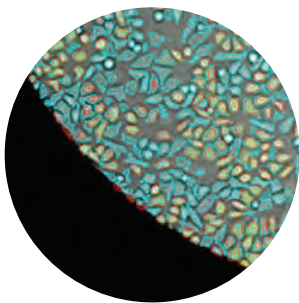
- iPS cell line generation
- Embryoid body morphology
- Stem cell marker analysis

## Virology Assays

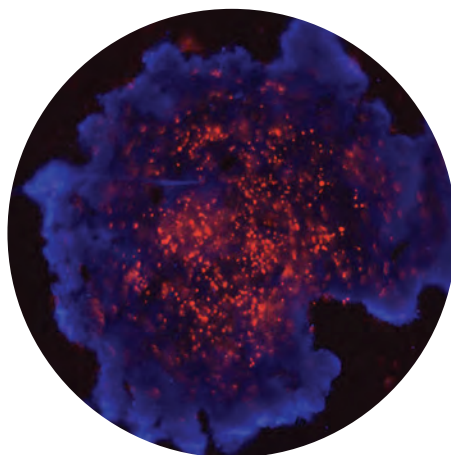
- Foci and plaque counting
- Antibody neutralization
- Hemagglutination assay

## Cell Line Development and Biologics Production

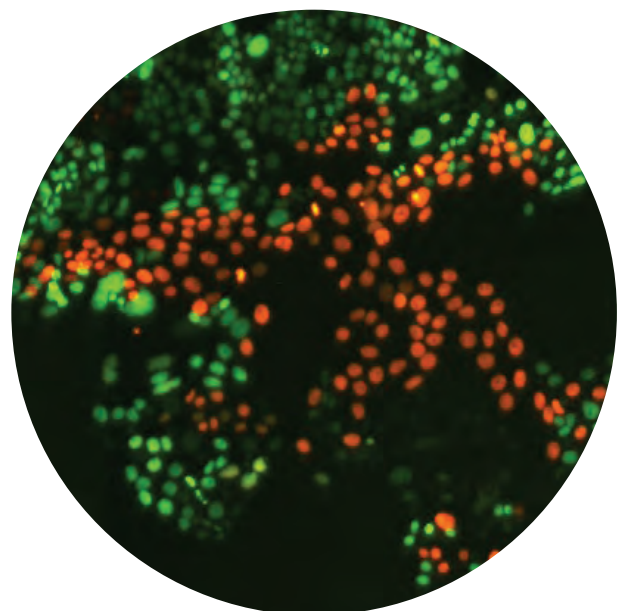
- Single cell detection
- Transfection / Transduction efficiency
- CRISPR gene editing monitoring
- Single cell to single colony monitoring
- Growth tracking
- Cell secretion
- Hybridoma screening
- Routine quality control



*Cells counted to the well edge*



*Propidium iodide and Hoechst stained 3D spheroid*



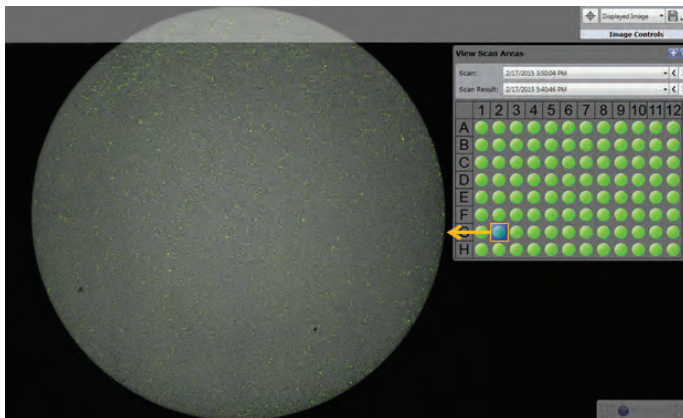
*Surface marker stained iPS cells*

# Accurate & Consistent Cell-Mediated Cytotoxicity Assay for Immuno-Oncology

The Celigo images and counts cells directly within the experimental environment, while other methods often require the removal of cells from the experimental plate to perform end point assays. Improve your data by performing consistent and accurate direct cell counts. Immuno-Oncology (I-O) assays additionally benefit from Celigo's increased sensitivity since cell death is measured at the individual cell level. Consequently, fewer target and effector cells are required, allowing for effective use of precious primary cell samples to generate the most number of data points. Typically, only a few minutes are required for imaging and analyzing a 96- or 384-well plate

Citations:  
Somanchi SS, et al. *PLoS ONE*. 2015 Oct 10(10)  
Kummerow C, et al. *Eur J Immunol*. 2014 Jun 44(6):1870-2

## ✓ Quantify Killing & Visualize Formation of Immune Complexes: Direct Cell Counting Assay in a 96-Well Plate



### Count every cell in every well

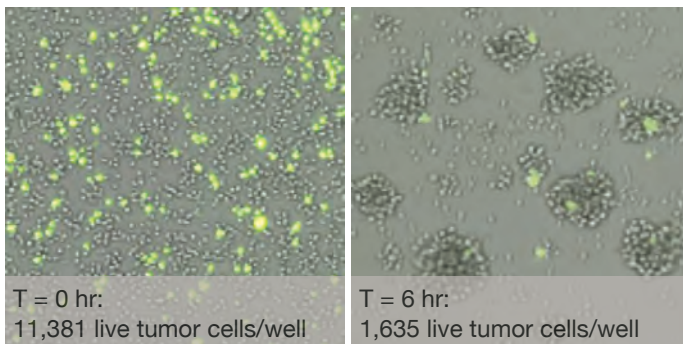
Acquire whole-well, high resolution images (in bright field and fluorescent) and count every cell in every well.

### Auto-save hi-res images

Celigo images are used to verify results and are automatically saved for all wells.

### Kinetic measurement of tumor cell killing

Images from the same 96-well plate (shown left) were acquired at 0 hours and 6 hours during a non-destructive, kinetic assay using calcein AM. Celigo images verify the decrease of calcein positive live tumor cells from 11,381 to 1,635 within the same well.



“ The Celigo has allowed our department to standardize and centralize the work within the institution.



## Antibody-Dependent Cell-Mediated Cytotoxicity (ADCC) Assays

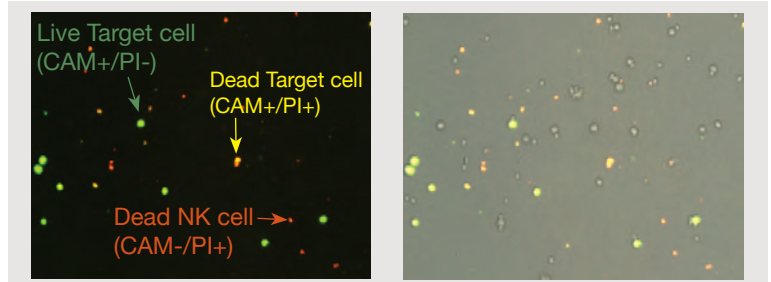
### NK cell mediated cytotoxicity effects on targeted cells

Count live calcein AM positive cells to determine the effect of a bimodal fusion protein (M7824) on NK cell-mediated cytotoxicity in co-cultures.

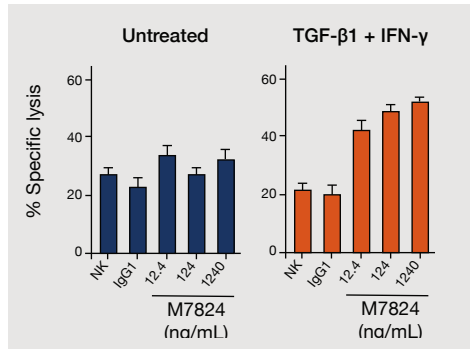
Target cells (A549) were pretreated with TGF- $\beta$ 1 and IFN- $\gamma$  and stained with calcein AM (CAM). The NK cells were isolated from PBMCs and co-cultured with the A549 cells.

- Image cytotoxicity in co-cultures
- Determine the percent specific lysis

*Oncoimmunology* 2017, 6(10):e1349589



Fluorescent and bright field images of A549 treated with M7824 proteins. After 16 hours of co-culture with NK cells, propidium iodide (PI) was added, and live cells (CAM+/PI-) target cells were counted.



Specific Lysis (%): Pre-treatment with TGF- $\beta$ 1 and IFN- $\gamma$  sensitized A549 target cells to ADCC by M7824.

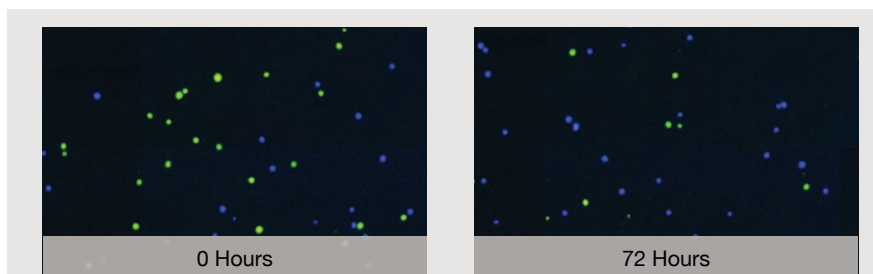


## Tracking Bispecific Antibody Induced Cytotoxicity in Complex Co-Culture

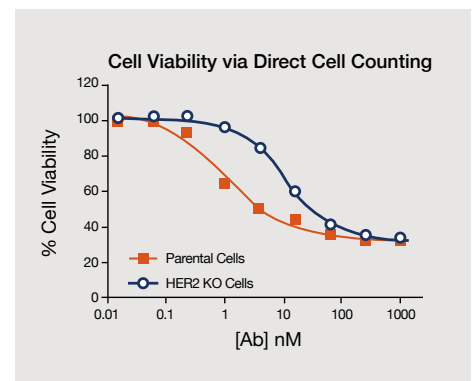
### Multi-valent antibody analysis (DuetMab Assay)

The Celigo was used to directly count co-culture of prenatal cells and HER2 KO cells stained with CellTracker™ Green and Violet, respectively.

The assay investigated the selective cytotoxicity effect of the monovalent bispecific IgG (DuetMab) on a co-culture of prenatal cells and HER2 KO cells.



Fluorescent images of time 0 and 72 hours of prenatal and HER2 KO cells incubated with DuetMabs.



Cell viabilities were calculated by direct cell counting, which showed differences in DuetMabs dose response between the Prenatal and HER2 KO cell types (IC50: 1.08 nM and 10.71 nM, respectively).

# Discover Combination Therapies

## Investigate Mechanisms of Drug Resistance, Signaling Pathways

Fast and high throughput cell counting assays are needed for drug discovery to satisfy the need to test an increasingly large number of cell models with large numbers of compounds and compound combinations. Gene editing technologies, such as CRISPR/Cas9, are rapidly expanding phenotypic *in vitro* cell models for oncology, and the success of immune and combination therapies has increased the number of compounds to be tested.

- Count and analyze cells directly in experimental plates
- Up to 5 imaging channels (e.g. BF, Far Red, Red, Green, Blue)
- Whole- well imaging for more accurate analysis
- Direct high-throughput counting of suspension and adherent cells

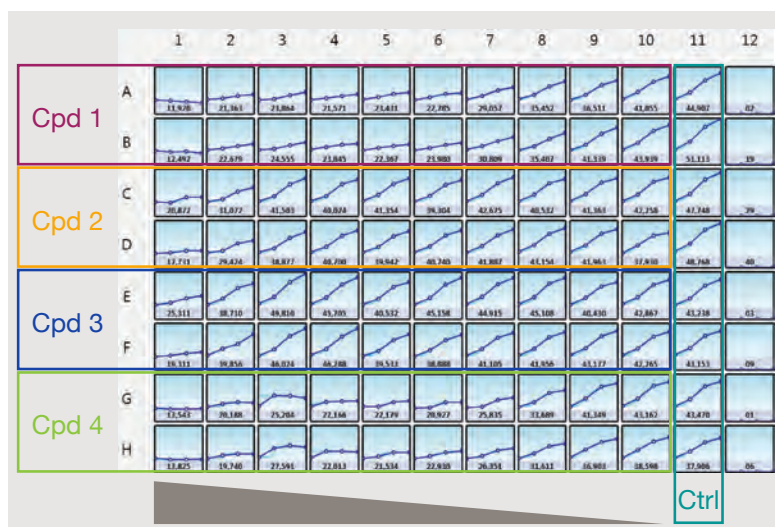
Citation:  
 Fu X, et al. *Breast Cancer Res.* 2014 Sep 11;16(5):430  
 Giuliano M, et al. *Clin Cancer Res.* 2015 Sep 1;21(17):3995-4003



## Label-Free Kinetic Cytotoxicity Assays

### Multi-drug growth inhibition

- 96-well plate set-up with 4 compounds at 10 concentrations and a control
- Scans the plates at multiple time points over hours or days
- Automatic growth curve generation for each well

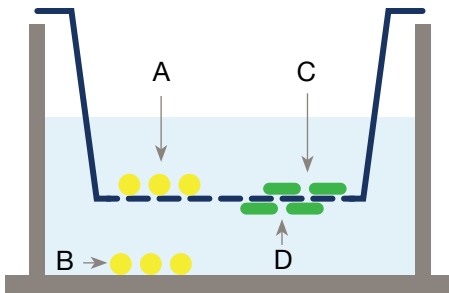




“ We utilize the high throughput aspect of the Celigo. Instead of only having 3 data points you get 96 data points. You can look at small changes and actually get some statistical significance out of it.

## ✓ Automatically Quantify 2D Migration / Invasion Assays

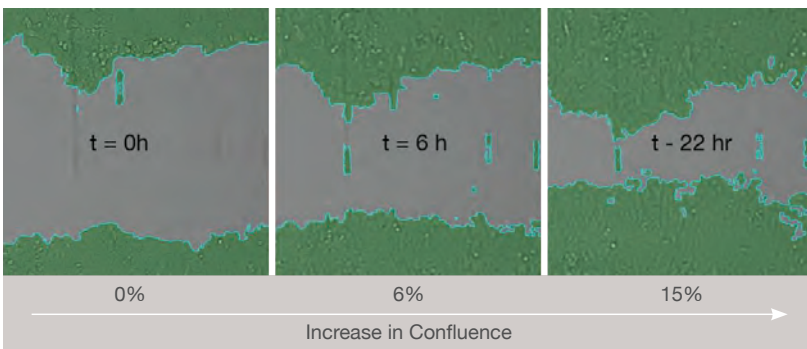
Image and quantify transwell-based chemotaxis, invasion and migration of suspension and adherent cells.



Suspension cells located inside the insert (A) migrate through the porous membrane toward the chemoattractant in the bottom of the plate.

Adherent cells located on the top of an ECM coated insert (C) invade and migrate to the bottom side of the membrane insert.

Celigo automatically images and counts the migrated suspension and adherent cells (B, D).

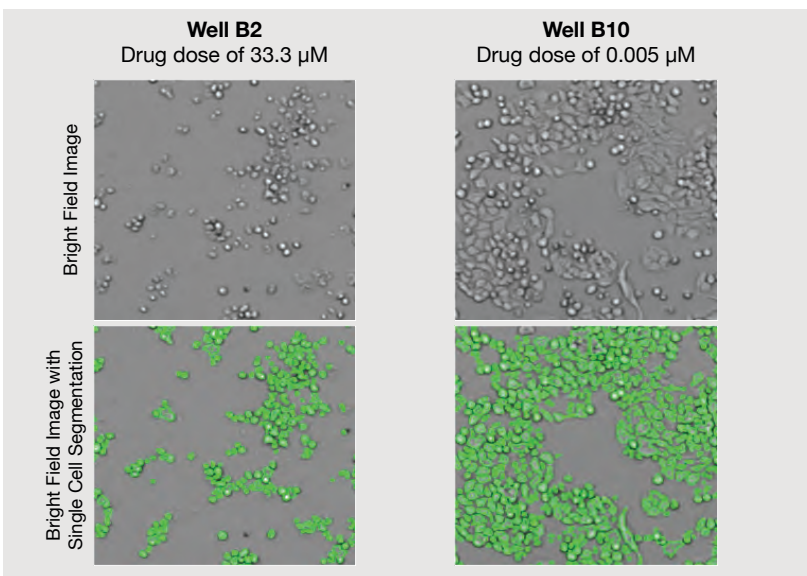


### Wound Healing Assays: Image and Quantify

Image the entire well at multiple time points.

Software automatically, and concurrently with imaging, calculates the cell confluence in each well.

## ✓ Monitor Growth Inhibition Using Direct Cell Counting



### Dose-Dependent Growth Inhibition

Generated images (shown left) are from two wells, B2 and B10, post drug treatment at doses of 33.3  $\mu\text{M}$  and 0.005  $\mu\text{M}$  respectively.

- Visual determination of Growth inhibition (greater in B2 than B10).
- Individually identify and segment cells (green) for each drug treatment.

# Image Cytometry Enabling High-Throughput 3D Tumor Spheroid Screening

3D tumor spheroid is a highly complex model increasingly used for cancer drug screening assays due to their better physiological relevance. Unlike 2D models, where cells can be enumerated and analyzed individually, the 3D model, which consist of clustered cells, requires a more advanced analysis method to characterize and quantify the effect of drugs on the entire spheroid. Therefore, to create a multi-parametric analysis platform, various orthogonal assays are required to screen the drug compounds. Celigo's high-throughput imaging and analysis is achieved by acquiring a single image from a single focal plane per well, which allows rapid screening of 96- and 384-well plates, typically in less than 2 minutes.

#### Citations:

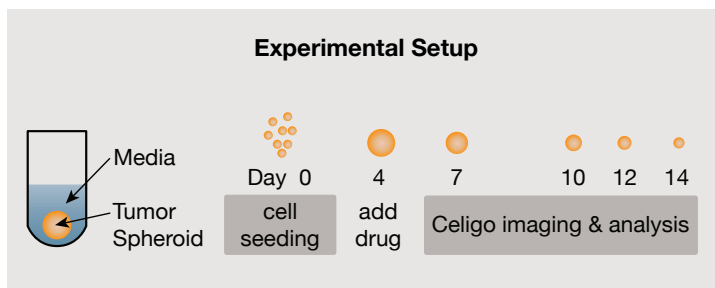
Vinci M, et al. *BMC Biol.* 2012 Mar 22;10:29

Guo WM, et al. *Mol Pharm.* 2014 Jul 7;11(7):2182-9

SLAS Discov 2017, 22 (5):547-557

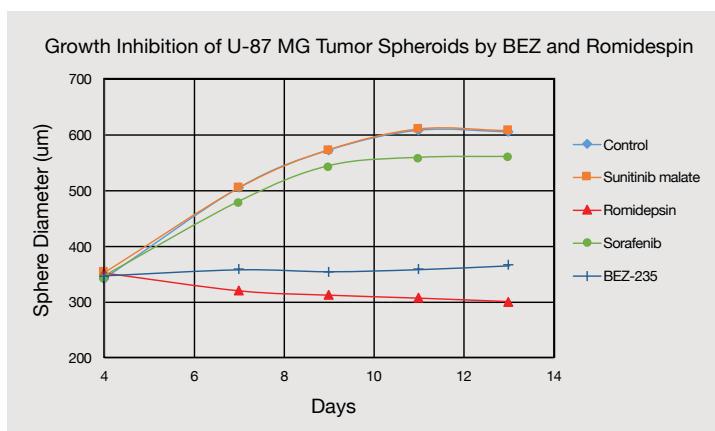


## Growth Inhibition Studies in Microwell Plates



### 1. Form and Treat 3D Tumor Spheroids

Four days after seeding, spheroids were treated with compounds for 72 hours in u-bottom ultra low attachment 96-well plates.



### 2. Analyze 3D Tumor Spheroids

Acquire and analyze whole-well images at multiple days after adding drug compounds.

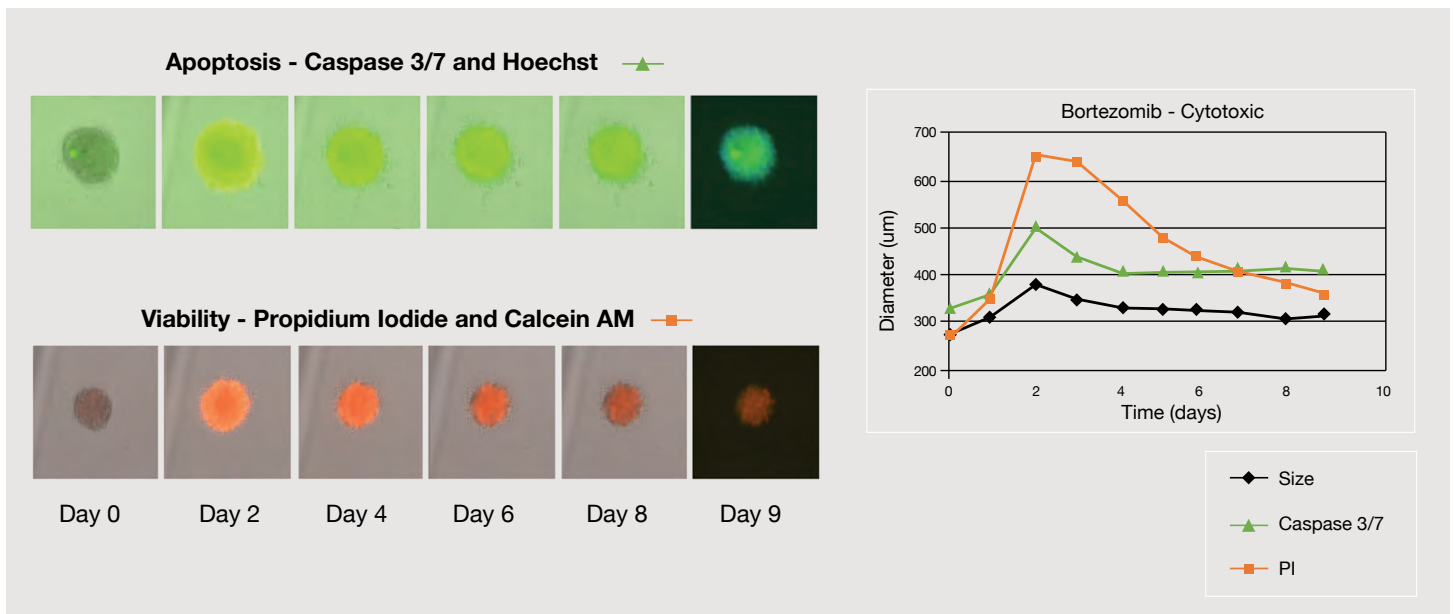
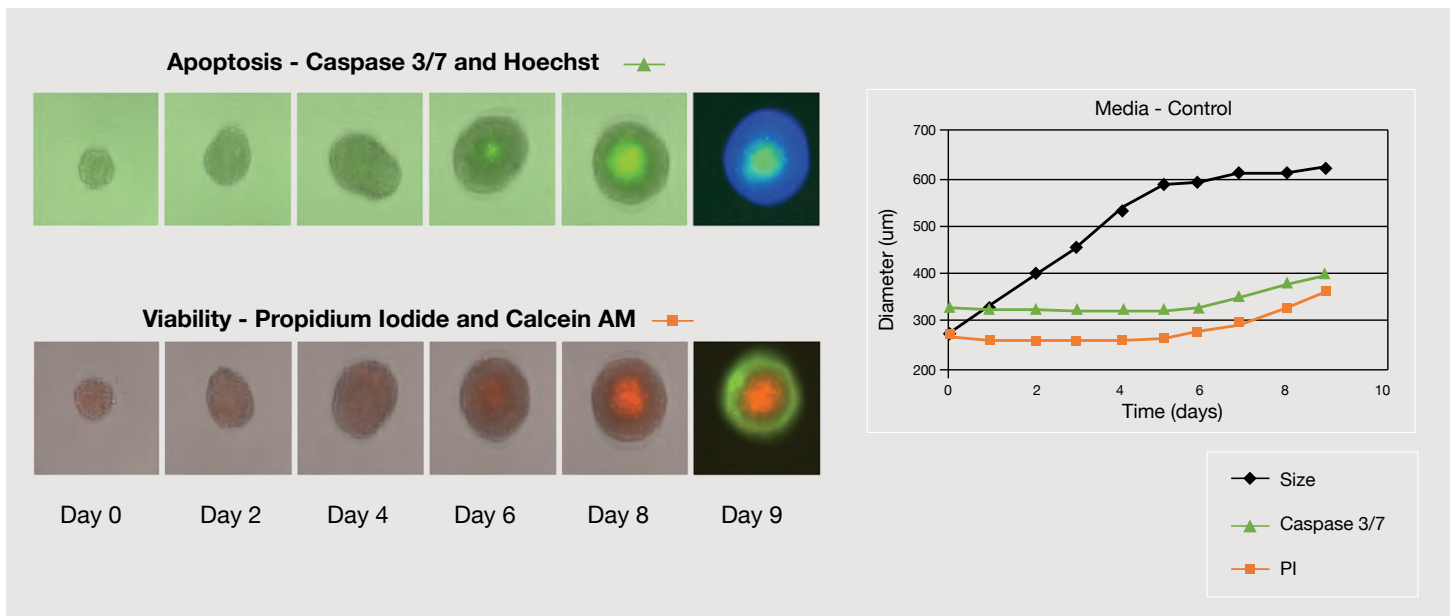
Tumor sphere diameter under different drug treatments is exported into excel for further data analysis.

“ The Celigo is a great instrument for fluorescent tumor sphere counting and even fluorescent colony counting. I would recommend it! - Northwestern University

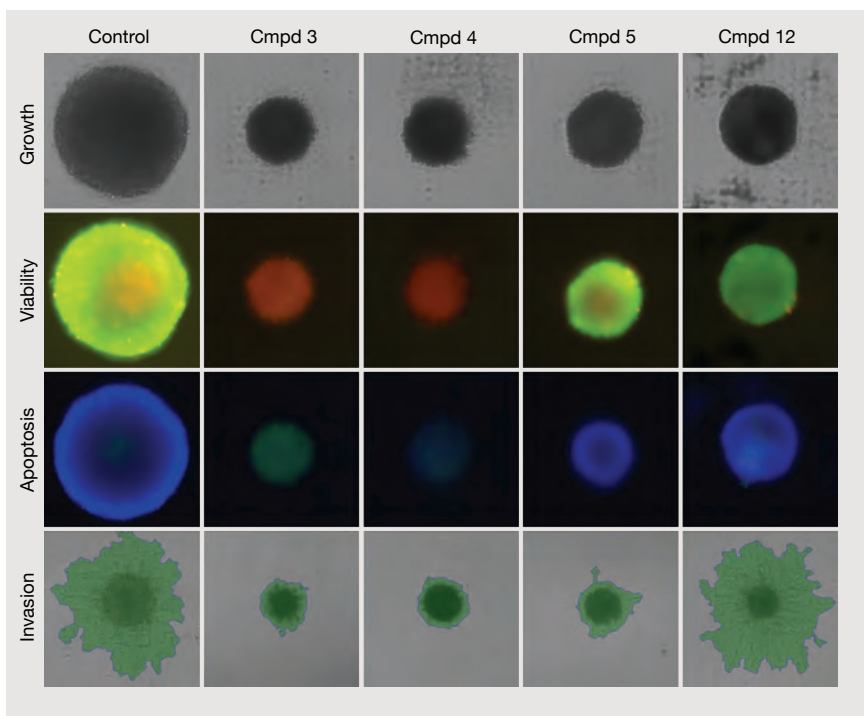
## Real-Time Kinetic Apoptosis and Viability Screening

### Measure the effects on apoptosis and viability with fluorescent image analysis

Tumor spheroids were treated with different drug compounds and screened to measure the effects on apoptosis and viability. The drug effects are characterized by measuring caspase 3/7 and Propidium iodide (PI) fluorescent intensities over time.



## ✓ Tumor Spheroid Drug Screening



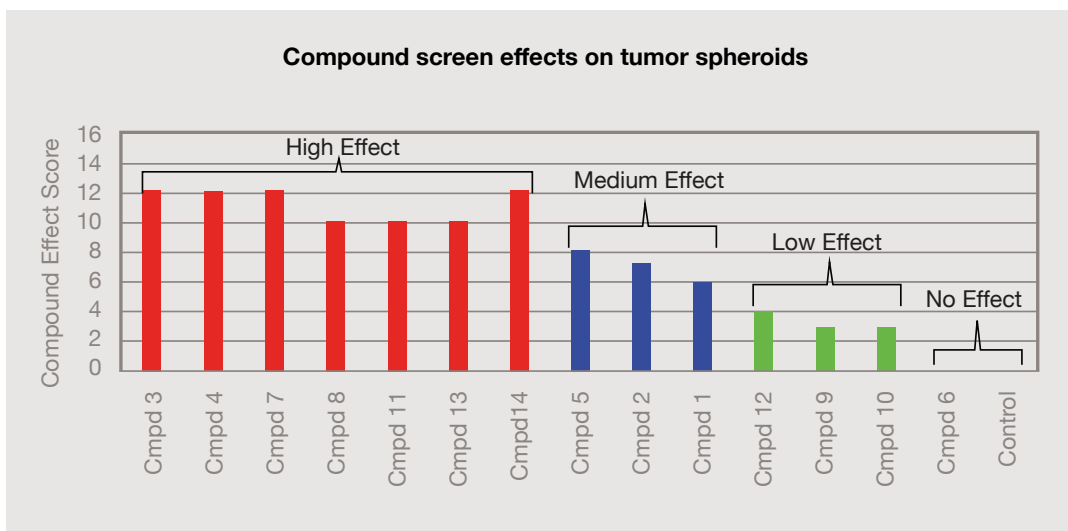
### Visualize drug compound screening

Analyze spheroid growth, viability (calcein AM/PI), apoptosis (Caspase 3-7/Hoechst) and invasion.

Bright field and fluorescent images acquired by the Celigo visually confirm the state of the spheroid under different drug treatments.

### Drug screening data analysis

Data generated from image analysis: Compound 3 and 4 were highly cytotoxic to the spheroids, while compound 5 and 12 showed cytostatic effects.



“ The Celigo is our “go to” for low resolution, high speed scans, particularly when working with spheroid biology. - NIH NCATS

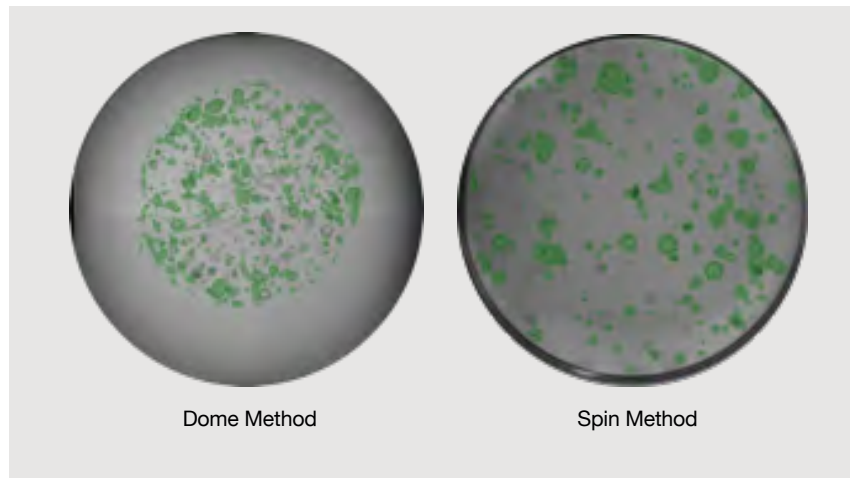


## Growth Tracking and Viability of Organoids

### 3D organoid analysis

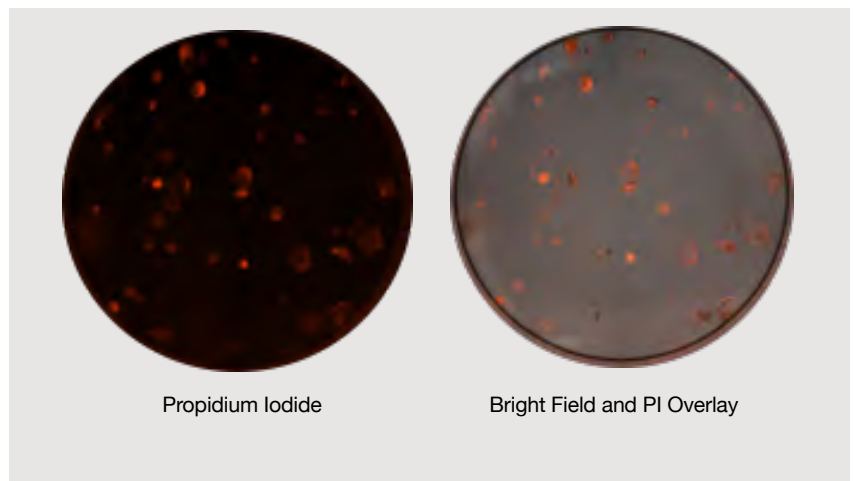
Organoids are a 3D *in vitro* culture system derived from self-organizing stem cells. They can recapitulate the *in vivo* architecture, functionality, and genetic signature of original tissues and are thought to be a relevant model for evaluating drug effects.

In the examples shown here, green segmentation is added to bright field images for quick and easy identification of Celigo counted organoids.



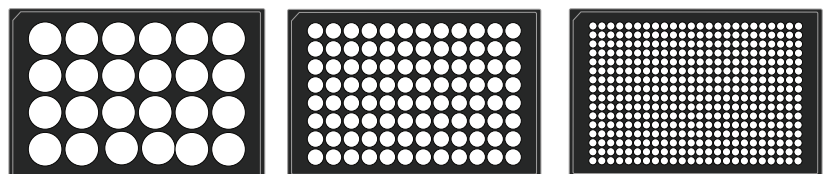
### Viability determination

Addition of non-perturbing dyes like Propidium iodide (PI) generates valuable viability data, as seen in these whole-well images.



### Perform organoid analysis in 24- to 384-well plates

Whole-well imaging for organoid screening can be done in 24-well plates down to 384-well plates.



## Quantify and Monitor Cell Line Development Mediated by CRISPR/Cas9 System

Chinese hamster ovary (CHO) cells are widely used as cell factories for the production of biologics. Gene editing technologies are used to alter function and to enhance production. During gene editing optimization and monitoring of stable clones, Celigo whole-well imaging allows for:

- Direct cell counting and quantification of transfection/transduction efficiencies
- Rapid high-throughput imaging platform
- Direct documentation and verification of single cell to a single colony



### Monitor Cell Health and Expansion During Cell Line Development

#### Quantify transfection efficiencies\*

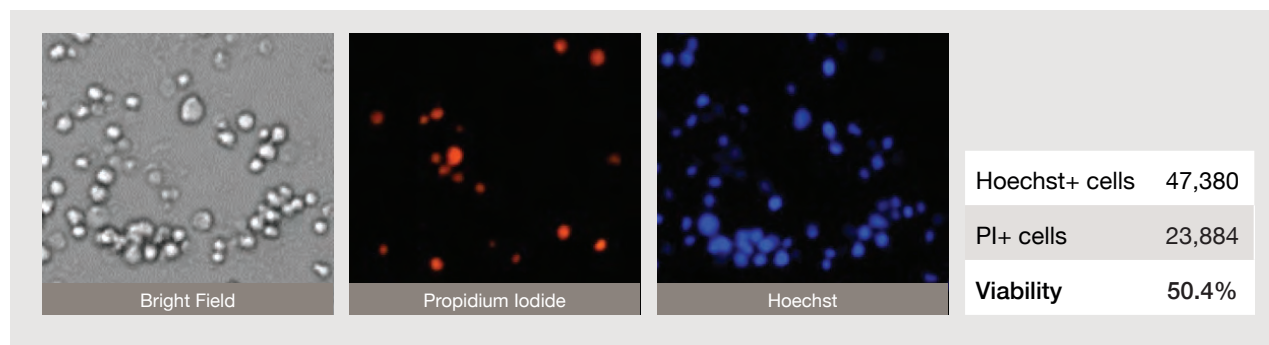
Whole-well imaging combined with the 2D gating interface, allows high-throughput testing of transfection constructs and as a quality control measure during expansion to verify cell line stability.

#### Monitor single cell to single colony formation†

Generated colonies are imaged and analyzed for colony number, size, shape and expression of a fluorescent marker indicative of a successful transfection.

#### Monitor cell expansion during batch culturing‡

During culture expansion, cell growth and viability were measured using a bright field and multi-channel fluorescent assay. (Images below BF = total cells, PI = dead cells, Hoechst = live cells)



\*Grav LM, Lee JS, Gerling S, et al. (2015) One-step generation of triple knockout CHO cell lines using CRISPR/Cas9 and fluorescent enrichment. *Biotechnol. J.* 10, 1446-1456

†Lee JS, Kallehaug TB, Pedersen LE, Kildegaard HF (2015) Site-specific integration in CHO cells mediated by CRISPR/Cas9 and homology-directed DNA repair pathway. *Sci Rep.* Feb 25;5

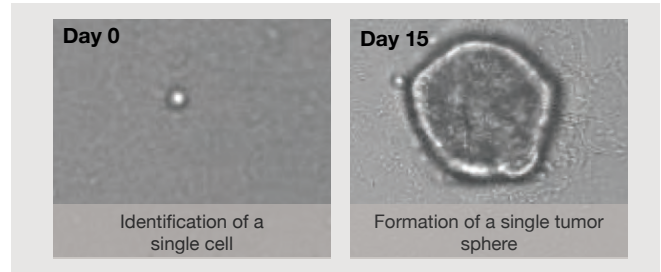
‡Hansen HG, Nilsson CN, Lund AM, et al. (2015) Versatile microscale screening platform for improving recombinant protein productivity in Chinese hamster ovary cells. *Sci Rep.* Dec, 11:5

“ The Celigo is really multifunctional – it can do an awful lot. If you want to track growth rates, it will do it perfectly. If you want to do large analysis, like [embryoid bodies], it will be perfect.

## ✓ Monitor Tumor Sphere Formation in Microwell Plates: Single Cell to a Single Sphere

### Single cell to single tumor sphere

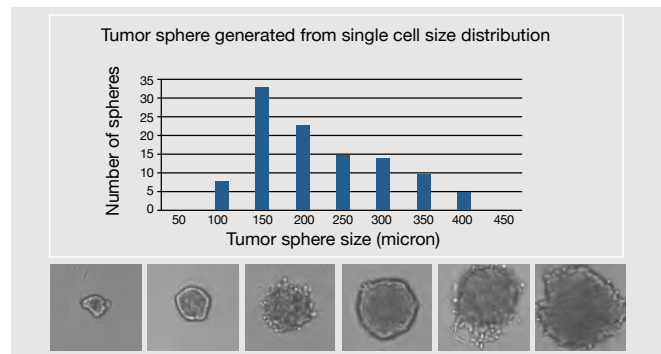
Use whole-well imaging to confirm a single cell per well (shown on Day 0) and verify its formation into a single tumor sphere (shown on Day 15).



### Quantification of tumor sphere size

Each tumor sphere (shown at right) grew from a single cell clone seeded on day 1.

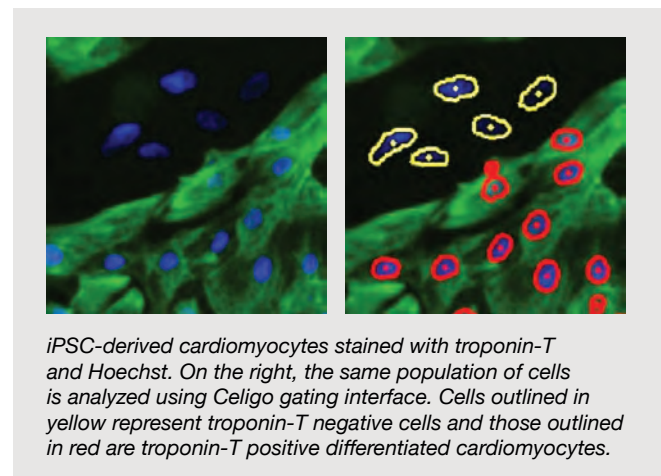
- Images show the variation in formed tumor sphere size and morphology.
- Generate a size distribution graph showing the variation of tumor sphere sizes.



## ✓ Automated, High-Throughput, Characterization and Differentiation of Induced Pluripotent Stem Cells

Celigo image cytometer is utilized during the multi-stage process of iPSC generation.

- Bright field confluence and fluorescent viability assays.
- Track fibroblast growth, monitor cell expansion during pre and post freeze/thaw cycles.
- Image iPSC colonies using fluorescent fixed and live-cell markers for monitoring the re-programming process.
- Examine differentiation by imaging and quantifying embryoid bodies and cell-line specific markers



Citations:  
 Paull D, et al. *Nat Methods*. 2015 Sep;12(9):885-92  
 Zhou H, et al. *Stem Cell Rev*. 2015 Aug;11(4):652-65  
 Proschel C, et al. *EMBO Mol Med*. 2014 Apr;6(4):504-18

iPSC related markers:  
 Cellular markers: *Nanog, Sox2, KLF4, MYC, Oct4*  
 Cell surface markers: *SSEA-3, TRA-1-60, TRA-1-81*  
 Differentiation markers: *Troponin-T, alpha-actinin*

# Analysis of Viral-Based Assays for Vaccine, Therapy and Disease Research: Automation, High Throughput and Multi-Parameters

The Celigo imaging cytometer is an essential technology for the standardization and optimization of viral based assays. With rapid image acquisition and data analysis, viral plaque, antibody neutralization, and multiplexed high-throughput assays are achieved in minutes. Also, enhanced sensitivity, for measuring viral titers of low-level infections is achieved through direct cell counts of whole-well images. The versatility of the Celigo instrument provides fast, efficient and reliable results for your virology research.

Citation:  
Yang ML, et al. *Sci Rep.* 2017 Mar 6;7:43829  
Randhawa P, et al. *Antiviral Res.* 2014 Dec 112:113-9

## ✓ Large Dynamic Range for Viral Titers Via Direct Cell Counting

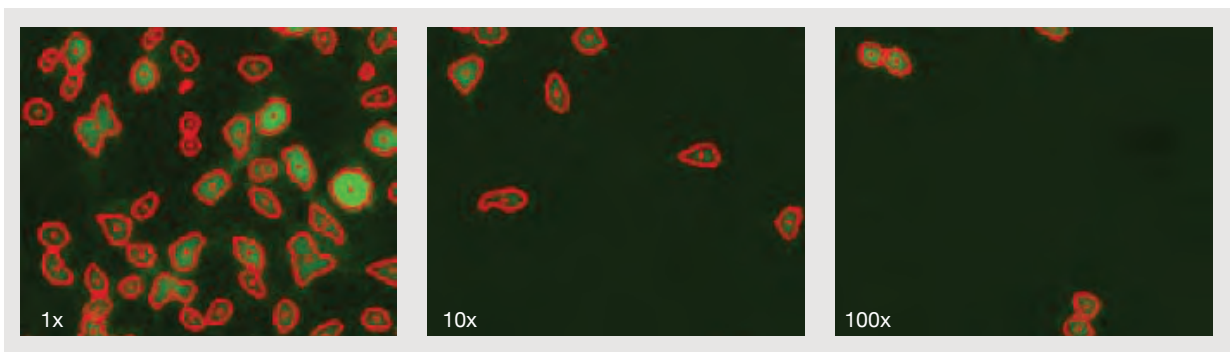


Figure 1A

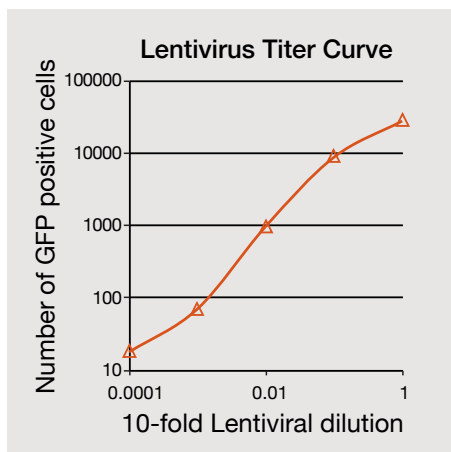


Figure 1B

### Count every infected cell to determine the viral titer

HEK293T cell seeded at 80 % confluence and infected with a 10-fold serial dilution of GFP-labeled lentivirus. Post infection, cells were imaged on the Celigo (outlined in red; Figure 1A), and the fluorescent cell count for each well was used to generate a viral titer curve (see Figure 1B)



“ Every night we’re scanning between 50-100 plates. You can’t look at 50-100 plates by eye, so we just come in and review the scans and data each morning. The Celigo makes everyone more efficient.

## ✓ Increase Throughput by Automating Plaque Imaging and Analysis

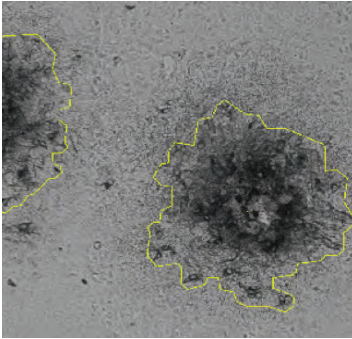


Figure 2A.

### Count bright field, fluorescent and stained viral plaques

Image and analyze plaques from cytolitic and non-cytopathic viruses: areas of infection in confluent cell culture indicated by horseradish peroxidase (HRP) for non-cytopathic viruses (figure 2A) and zones of clearing for cytolitic viruses (figure 2B).

Early viral infections can be seen by detecting zones of viral infection (plaques) by detecting the GFP signal within the infected cells (Figure 2C).

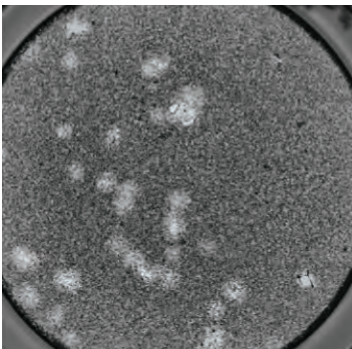


Figure 2B.

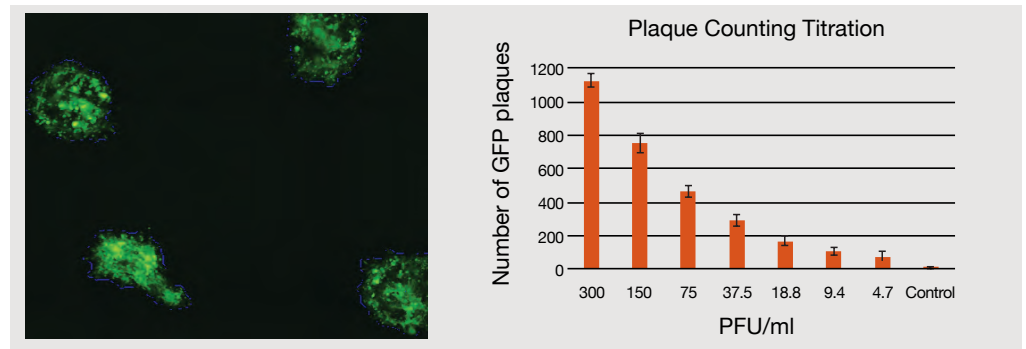


Figure 2C.

## ✓ Perform Real-Time and End Point Monitoring of Viral Infections

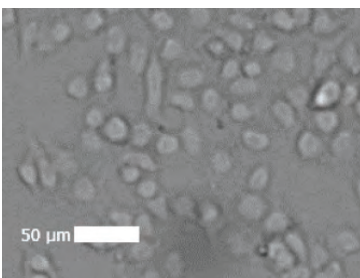


Figure 3A.

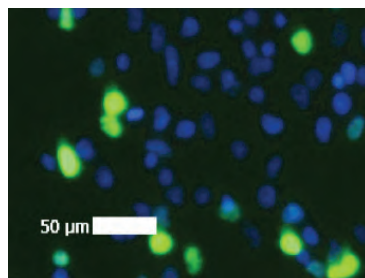


Figure 3B.

### Monitor the influenza virus infection

Influenza infected cells were fixed, stained and imaged (Figure 3A and 3B). The software identifies and enumerates the number of infected cells (Figure 3D), as well as total number of cells (Figure 3C).

- Whole-well imaging allows for the identification of infected cells even at low viral titers.

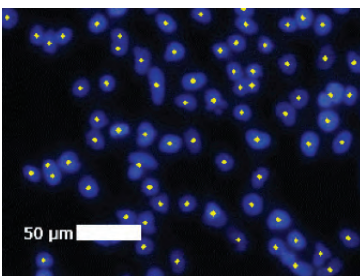


Figure 3C.

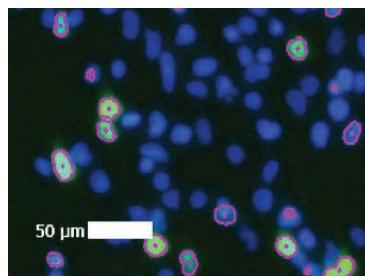


Figure 3D.

# Celigo Specifications

Software	Proprietary image acquisition and processing software Powerful analysis software/Computer workstation Microsoft Windows				
Illumination/Optics	1 LED-based enhanced bright field imaging channel with uniform well illumination 4 LED-based fluorescent channels Proprietary F-theta lens with superior well edge-to-edge contrast Galvanometric mirrors for fast imaging of large areas Large chip CCD camera (2024x2024 pixels) 1, 2, 4 or 8 um/pixel resolution				
Fluorescent Channels	Channel	Excitation	Dichroic	Emission	Typical Dyes
	Blue	377/50	409	470/22	Hoechst, DAPI
	Green	483/32	509	536/40	FITC, Calcein, GFP, AlexaFluor® 488
	Red	531/40	593	629/53	R-PE, PI, Texas Red, AlexaFluor® 568
	Far-Red	628/40	660	688/31	DRAQ5®, AlexaFluor® 647
Plate Compatibility	6, 12, 24, 48, 96, 384, 1536 well plates (black, white and clear wall plates) T-25 and T-75 flasks Slides and cell array plate profiles available upon request				
High-Speed Imaging	Less than 2 minutes per 384-well plate				
Weight and Dimensions	Dimensions: 19.5" W x 16"H x 24"D (49.5cm x40cm x 61cm) Weight: 117 lbs. (53 kg)				
Power Requirements	110-220 VAC 50-60 Hz				
Regulatory Compliance	CE marking				
Focusing modes	Hardware-Based Auto Focus, Image-Based Auto Focus, Manual Focus				

## Plate Scan Times

Plate Type	Images / Well	Resolution (µm / pixels)	Typical Time
24-well Plate	1	2	< 7 minutes
96-well Plate	16	2	< 3.5 minutes
96-well Plate	16	1	< 5 minutes
384-well Plate	1	2	< 2 minutes
384-well Plate	4	2	< 7 minutes

## Supported Plate Types

Plate Name	Manufacturer	Well Type
6-Well BD Falcon™ 353046 Plate	Corning	Clear
6-Well Corning™ 3516 Plate	Corning	Clear
12-Well Corning™ 3513 Plate	Corning	Clear
24-Well Corning™ 3524 Plate	Corning	Clear
24-Well PE Visiplat™ 1450606 Plate	Perkin Elmer	Black
96 Well-ULA Nexcelom ULA-96U-020 Plate	Nexcelom	Clear, Round Bottom
96-Well Corning™ 3603 Plate	Corning	Black, White
96-Well Greiner™ 655090 Plate	Greiner	Black, White
96-Well Greiner 675090 Plate	Greiner	Black, White, Half-Area
384 Well-ULA Nexcelom ULA-384U-020 Plate	Nexcelom	Clear, Round Bottom
384-Well Corning™ 3542 Plate	Corning	Low vol, Black
384-Well Corning™ 3680 Plate	Corning	Clear
384-Well Corning™ 3764 Plate	Corning	Black, White
1536-Well Corning™ 3838 Plate	Corning	Black, White

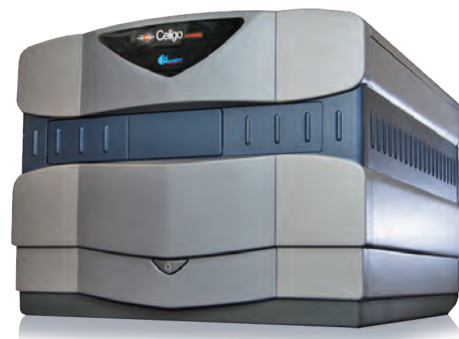
See our website for a complete listing of all supported plates at [www.nexcelom.com/Celigo/celigo-vessels](http://www.nexcelom.com/Celigo/celigo-vessels)

# Celigo Platform Highlights

Celigo's modular design allows you to customize for your laboratory's needs. With the integration of modular systems, specific to your research application need, automated microplate handling for either kinetic end-point analysis or time-point analysis, as well as, complimenting reagent kits, Celigo can improve your lab's work-flow and increase its capabilities.

## Hardware Offerings

- Celigo BF Only
- Celigo 4 Channel
- Celigo 5 Channel



## Software 5.0 with Project Mode. Easy as 1-2-3!

### 1. Select project file

### 2. Load prepared plate & click run

Acquisition, analysis, and data export steps are done automatically

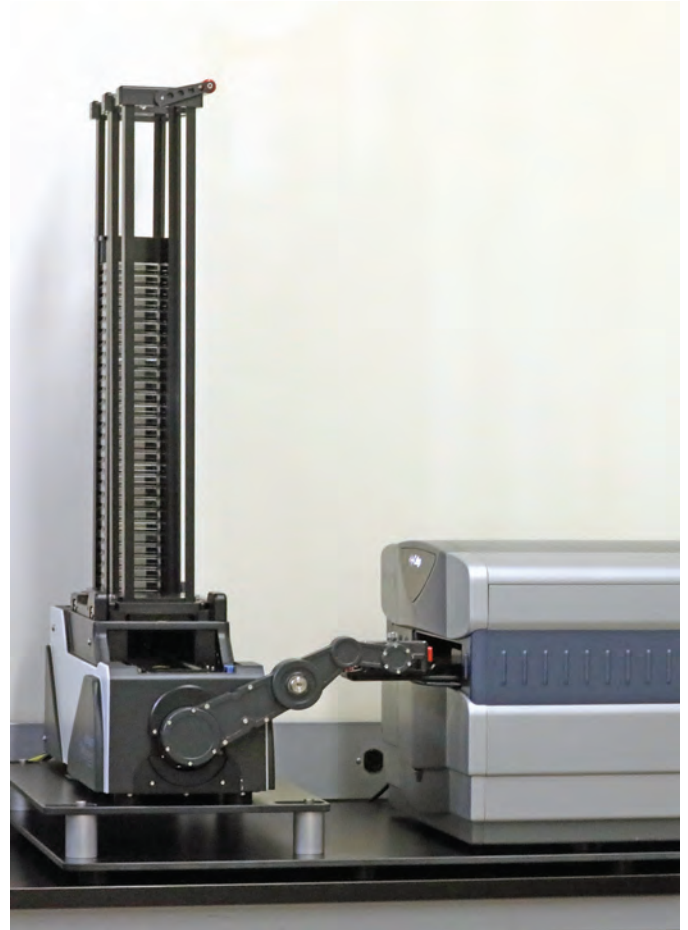
### 3. Get Results

- Report Templates: present data in customer defined layouts
- Multiple FCS Express file export options
- FCS and ICE file formats
- Single file per plate or individual files per well
- With images or without images in ICE file
- Compression option
- Auto open in templates
- Security and Logging add-ons in FCS Express

“ It's relatively simple to use – it's self-explaining actually, reliable, and the images you get out of it are really nice, underlining your results and you can make nice presentations with the Celigo images.

## Stacker Automation

- Up to 50 plate capacity
- 15 sec transfer rate between plates
- Set up experiment and run
- Data exports automatically for each plate
- Handles plates with or without lids
- 6-well up to 1536-well plate formats
- Fits on standard lab bench
- Ideal for endpoint assays
- Easy to add on to existing Celigo instruments



## Celigo Specific Reagents

- Formulations designed for Celigo
- Project files associated for each reagent kit

# Stacker Specifications

Parameter	Specification
Celigo only Dimensions	19 inch wide x 29 inch long x 17 inch high (with plate holder extended)
Celigo +Stacker Dimensions	25 inch wide x 44 inch long x 40 inch high (Total)
Electrical Power	5 Electrical outlets needed at 100-240VAC 50/60Hz (30Amps Total)
Compressor (sold with Stacker)	1.2 CFM @ 90 PSI with 1 gallon tank
Operating Temperature	15 °C to 25 °C
Operating Humidity	10% to 90% RH, non-condensing
Instrument Shipping & Storage Temperature	-18 °C to 65 °C
Instrument Shipping & Storage Humidity	10% to 90% RH, non-condensing
Manufacturer	<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;">                     Nexcelom Bioscience, LLC.                      360 Merrimack St., Building 9                      Lawrence, MA 01843                      SS143HS                 </div> <div style="width: 35%;">                     Kbiosystems Limited                      Units 5 to 10 Paycocke Close                      Basildon, Essex, UK,                 </div> </div>
Distributor/Support	Obtain information at <a href="http://www.nexcelom.com/purchase">http://www.nexcelom.com/purchase</a> or contact <a href="mailto:support@nexcelom.com">support@nexcelom.com</a>

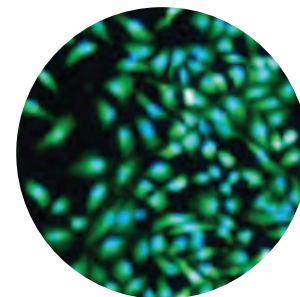


# Reagents

## ViaStain™ Viability Reagents

- Perform in-plate staining and analysis of suspension and adherent cells
- Measure percent viability and number live/dead cells

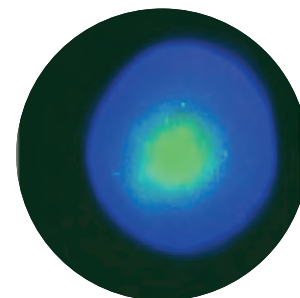
Name	Catalog #
AO / PI Staining Solution	CS2-0106
Calcein AM	CS1-0119
Calcein-AM / PI Cell Viability Kit	CSK-0118
Calcein AM / PI / Hoechst Viability Kit	CSK-V0006-1
Hoechst/PI Viability Kit	CSK-V0005-1



## ViaStain™ Apoptosis Reagents

- Measuring programmed cell death using various apoptosis detecting reagents: Annexin V, Caspase 3/7-Live cell, Caspase 3 and Caspase 8
- Use Caspase 3/7 reagents for 2D and 3D cultures

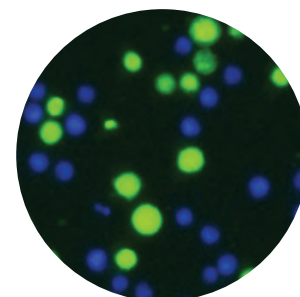
Name	Catalog #
Live Caspase 3/7 Detection for 2D/3D Culture	CS1-V0002-1
Live Caspase 3/7 Detection for 2D/3D Culture with Hoechst	CSK-V0003-1
Annexin V-FITC	CS1-0114



## ViaStain™ Proliferation/Tracer Reagents

- Fluorescent proliferation and cell-labeling dyes for cell identification, cell tracking and co-culture experiments

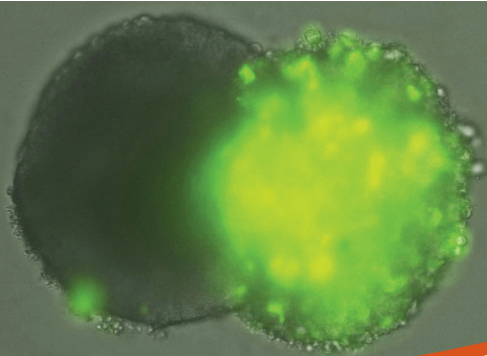
Name	Catalog #
CMFDA	CS1-P0001-1
CFSE	CS1-P0002-1
Tracer Blue	CS1-P0003-1
Calcein AM	CS1-0119



See our website for a complete listing of reagents at [www.nexcelom.com/products/nexcelom-reagents](http://www.nexcelom.com/products/nexcelom-reagents) or contact customer support.



Nexcelom Bioscience  
360 Merrimack Street, Building 9  
Lawrence, MA 01843, USA



“ We have one Celigo, completely integrated, and we have 5 people using it consistently. But more and more people outside our team are approaching us to use the Celigo. We've made it popular within the company. People are starting to realize the advantages of the robust system, and of what they can get out of it.

## Innovation and Expertise in the Science of Cell Counting

Schedule a FREE on-line demonstration, on-site demonstration or technical seminar with a Nexcelom Applications Specialist today.

Call 978-327-5340 or  
E-mail [info@nexcelom.com](mailto:info@nexcelom.com)

For Europe  
Call 44 (0) 161 232 4593 or  
E-mail [info@nexcelom.co.uk](mailto:info@nexcelom.co.uk)

For China  
Call +86 21 5886 0038 or  
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