

CURIOSIS

SINCE 1889  
Yamato

Yamato Scientific  
America



# Celloger<sup>®</sup> Series

Capture the moments of dynamic cellular processes,  
improving your research with comprehensive insights



Automated live cell imaging system

Celloger<sup>®</sup> Nano · Celloger<sup>®</sup> Mini Plus · Celloger<sup>®</sup> Pro · Celloger<sup>®</sup> Stack



# ■ Celloger® Line-up



## Celloger® Pro

The Celloger® Pro is **the most advanced and latest product** in the Celloger® series. Providing researchers with **state-of-the-art functionalities**, it offers unmatched convenience and **exceptional image quality**, enhancing and expanding the scope of experiments.



## Celloger® Mini Plus

The Celloger® Mini Plus is **a fundamental system** for live cell imaging. By offering essential and user-friendly tools for analyzing live cells, it **serves as a basic system** for researching dynamic cellular events, **representing a model** within the Celloger® series.



## Celloger® Nano

The Celloger® Nano is **the most compact and economical system** among the Celloger® series. It can **wirelessly connect to a tablet or laptop**, enabling users to observe and analyze cells from anywhere. With its manual stage compatible with any vessels, it makes it easy to **quickly check the state of cells**.



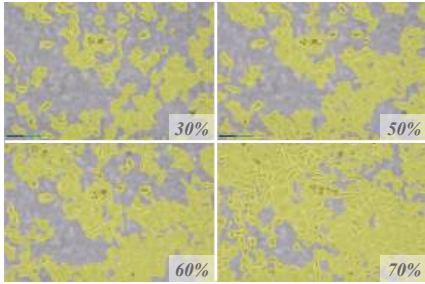
## Celloger® Stack

Celloger® Stack is an automated **multi-layer vessel monitoring** device, a useful system for **large-scale cell cultures**. By utilizing **the alarm system** to notify users when the optimal confluency level has been reached, it enables easy harvesting of cells at the appropriate times.

## List of Awards



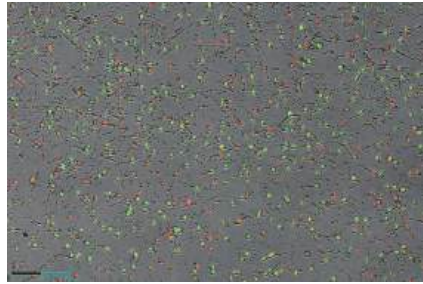
# ■ Key Applications of Celloger®



## Cell proliferation

Taken from Celloger® Nano (10X)

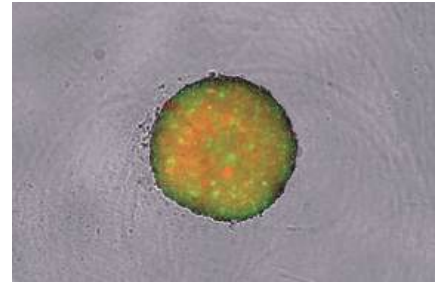
*NIH3T3*



## Apoptosis

Taken from Celloger® Pro (4X)

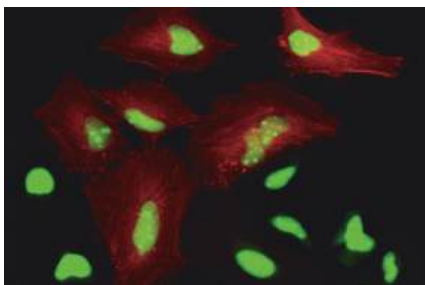
*HeLa*



## Spheroid cytotoxicity

Taken from Celloger® Pro (2X)

*HEK293-GFP*



## Sublocalization

Taken from Celloger® Pro (10X)

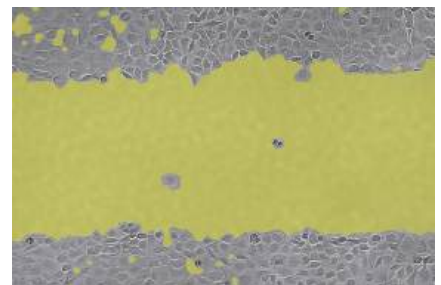
*HeLa-tdTomato*



## Co-culture monitoring

Taken from Celloger® Nano (4X)

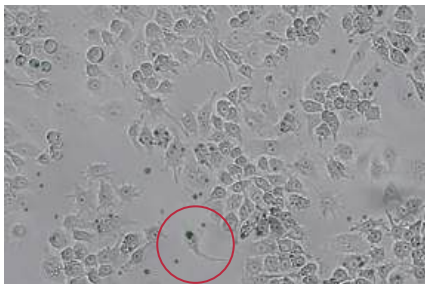
*NIH3T3 & MCF-7*



## Wound-healing assay

Taken from Celloger® Mini Plus (4X)

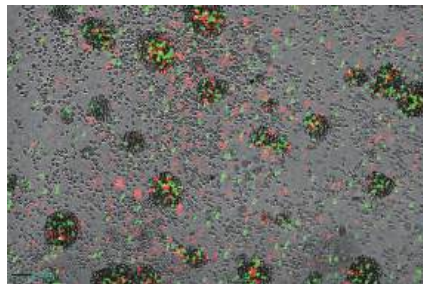
*L929*



## Phagocytosis monitoring

Taken from Celloger® Mini Plus (10X)

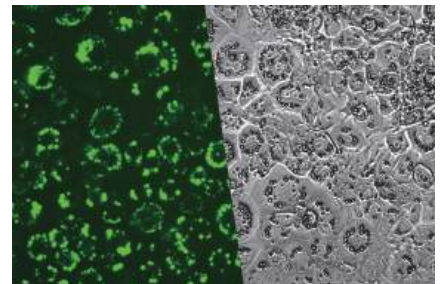
*Raw 264.7*



## NK cell killing assay

Taken from Celloger® Pro (4X)

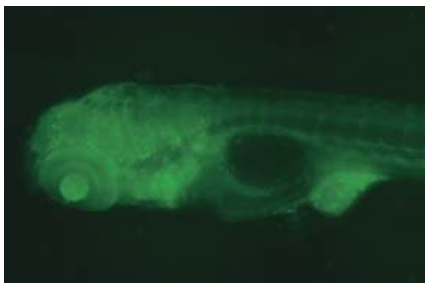
*K562 & NK92*



## Adipogenesis

Taken from Celloger® Pro (10X)

*HeLa*

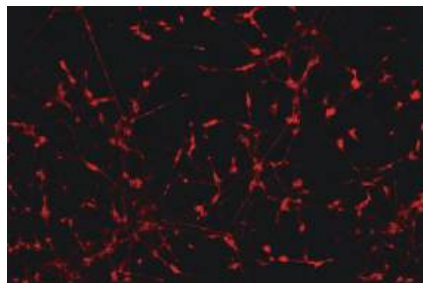


## Zebrafish observation

Taken from Celloger® Mini Plus (4X)

\*using Z-stacking and stitching functions

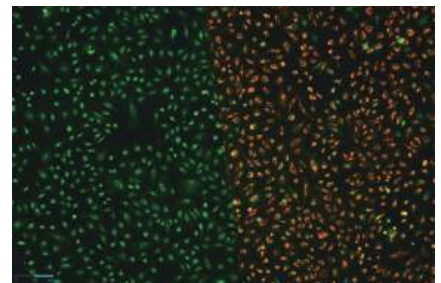
*Zebrafish*



## Neurite outgrowth

Taken from Celloger® Mini Plus (4X)

*SH-SY5Y*



## Mitochondrial membrane potential

Taken from Celloger® Pro (2X)

*HeLa*

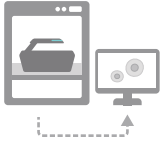


▶ Youtube

Find out more applications and time-lapse videos of Celloger® series

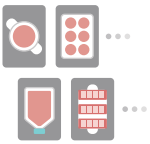
# ■ Key Features of Celloger®

Pro Mini Plus Nano Stack



## ***Real-time cell monitoring inside an incubator***

The Celloger® series is designed for efficiently monitoring cells in real-time without disturbing cell-growth conditions. By simply placing the devices within the incubator and connecting them to an external PC, researchers can remotely observe cells in real time.



## ***Compatible with different vessel types***

To accommodate for a wide range of experiments, different cell culture vessels such as well plates, flasks, dishes, and slides can be used by simply replacing the vessel holders for specific needs.

\*Celloger® Stack is used for multi-layer vessel types.



## ***Time-lapse imaging capability***

Using the time-lapse function, cell images are captured automatically according to the schedule set by the researcher and the images are easily converted into time-lapse videos.



## ***User-friendly functions included in the software package***

The Scanning and Analysis software are included as standard packages, allowing users to create unlimited copies of both software. Researchers can easily set multiple image capture modes and generate productive experimental data using a range of analysis tools available in these software.



## User-interchangeable objective lens

Pro



## Wireless connection

Nano



## Efficient image-processing method

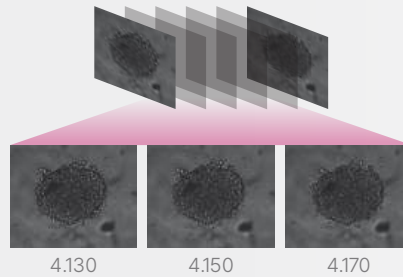
### Cell confluency

Pro Mini Plus Nano Stack



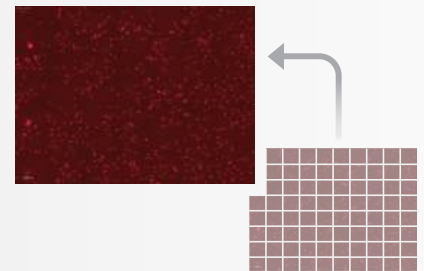
### Z-Stacking

Pro Mini Plus Nano



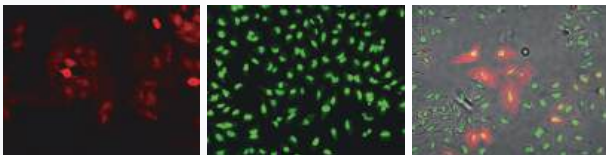
### Stitching

Pro Mini Plus



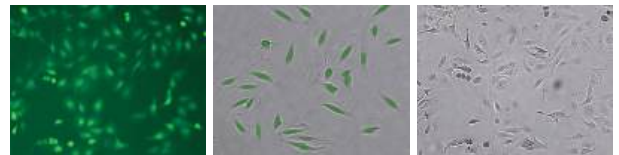
## Dual color fluorescence (green and red)

Pro



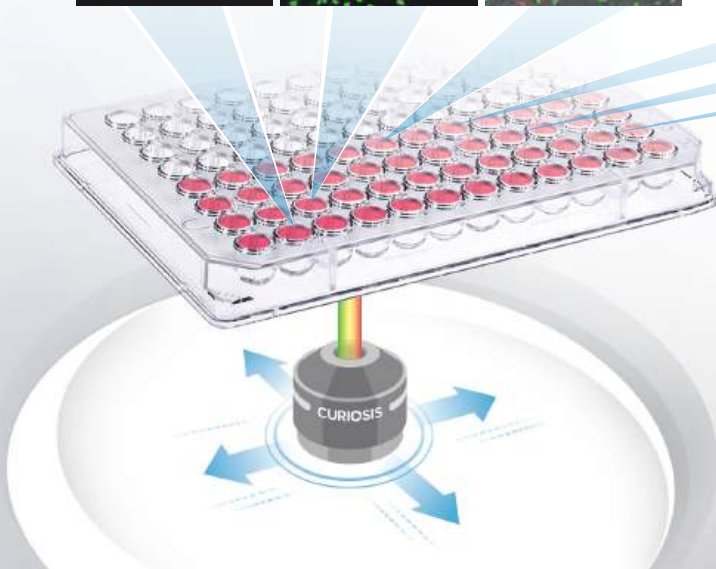
## Single color fluorescence (green or red)

Mini Plus Nano

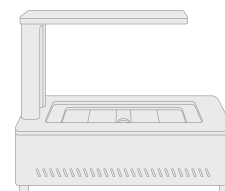
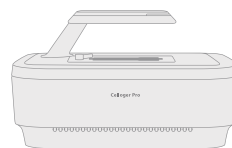


## High-quality images from multiple positions (camera moving type)

Pro Mini Plus Stack



# Specification



**Celloger® Nano**

**Celloger® Mini Plus**

**Celloger® Pro**

**Celloger® Stack**

|                          |                            |  |                    |   |  |
|--------------------------|----------------------------|--|--------------------|---|--|
| Dimension (H x W x L)    |                            | 188 × 146 × 211 mm                             | 215 × 226 × 358 mm | 250 × 338 × 412 mm                          | 350 × 330 × 450 mm                       |
| Weight                   |                            | 3.2 kg   | 5.6 kg             | 9.6 kg                                      | 15 kg                                    |
| Imaging modes            |                            | Bright-field,<br>Green or Red fluorescence     |                    | Bright-field,<br>Green and Red fluorescence | Bright-field                             |
| Magnification            |                            | 2X / 4X / 10X                                  |                    | 2X, 4X, 10X<br>(User interchangeable)       | 2X                                       |
| Fluorescence             | Green                      | Ex: 470/40 Em: 510lp                           |                    | Ex: 470/40 Em: 540/50                       | -  |
|                          | Red                        | Ex: 525/30 Em: 570lp                           |                    | Ex: 562/40 Em: 641/75                       | -  |
| Field of view            | 2X                         | 2.5 × 1.9 mm                                   | 2.0 × 1.5 mm       |   | 2.5 × 1.9 mm                             |
|                          | 4X                         | 1.2 × 0.9 mm                                   | 1.4 × 1.0 mm       |   | -  |
|                          | 10X                        | 0.6 × 0.4 mm                                   | 0.7 × 0.5 mm       |   | -  |
| Imaging positions        |                            | Single   | Multiple           |   |  |
| Focusing                 |                            | Manual and Auto                                |                    |   |  |
| Culture vessels          |                            | Slide, Dish, Flask, Well plate (up to 96-well) |                    |   | Multi-layer chamber<br>(up to 10 layers) |
| Operating environment    |                            | 10-40°C temperature, 20-95% humidity           |                    |   |  |
| File export format       |                            | TIFF, AVI, CSV (JPEG, PNG)                     |                    |   |  |
| O/S required             |                            | Windows 10 and above                           |                    |   |  |
| Software functionalities | Real-time recording        | ●  | ●                  | ●   | ●  |
|                          | Time-lapse video           | ●  | ●                  | ●   | ●  |
|                          | Cell confluency            | ●  | ●                  | ●   | ●  |
|                          | Z-stacking/projection      | ●  | ●                  | ●   |  |
|                          | Stitching                  |  | ●                  | ●   |  |
|                          | Spheroid/organoid analysis |  | ●                  | ●   |  |
|                          | Deconvolution              |  | ●                  | ●   |  |
|                          | Dual screen analysis       |  |                    | ●   |  |
|                          | Cell counting (FL)         |  |                    | ●   |  |

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