

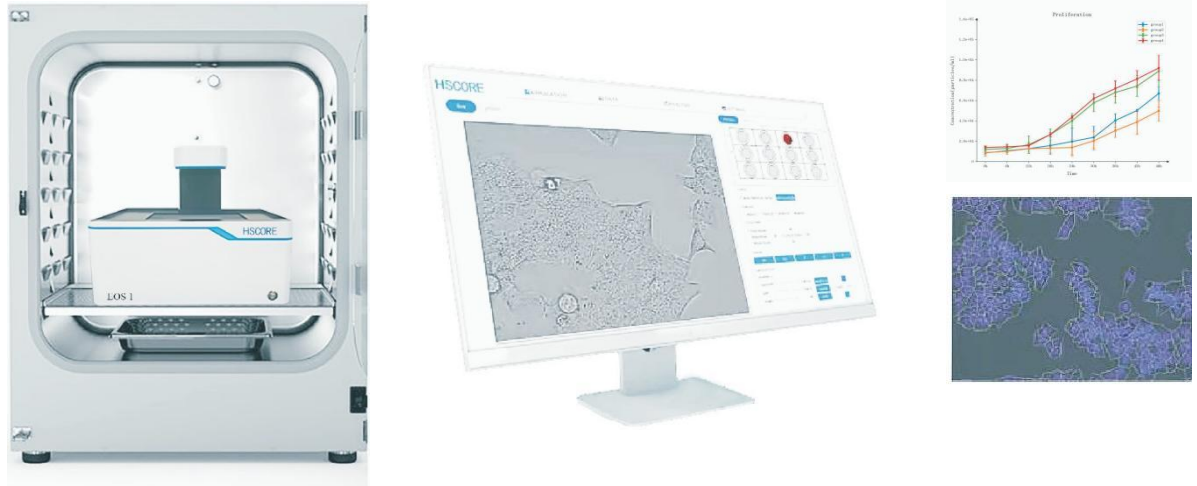
Live-cell imaging analysis system

Capturing every event of cell analysis

HSCORE

Cell analysis in a CO2 incubator

The EOS1 is a fully automated cell imaging system that can be placed inside a CO2 incubator, compatible with 6-384 well plates and various culture vessels. Its high-quality optical system captures continuous dynamic data of sample changes within each well. Coupled with powerful AI algorithms, it ensures no key cellular information is missed, directly generating time-lapse imaging videos and analytical charts.



Imaging, video, and data editing seamlessly integrated / Real-time cell status captured at a glance.

Performance features

- **Optical system:** Olympus objectives for HD cell images.
- **Objective configuration:** four position automated turret
- **Imaging modes:** bright field, phase contrast, multi-color fluorescence , Z-stack, whole well imaging.
- **Fluorescence channels:** red, green, blue, and near-infrared four-color fluorescence
- **Software algorithm:** artificial intelligence algorithm, accurate cell segmentation
- **Operating system:** user-friendly navigation and intuitive interface
- **Long-term observation:** inside CO2 incubator for time-lapse imaging

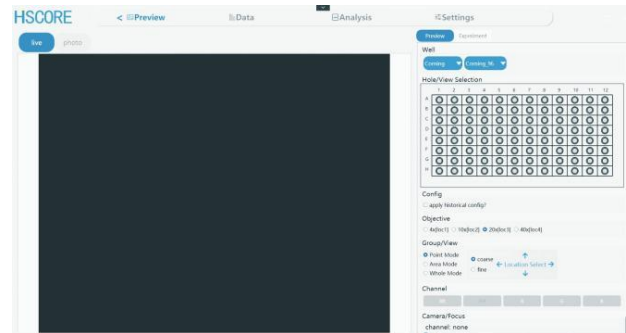
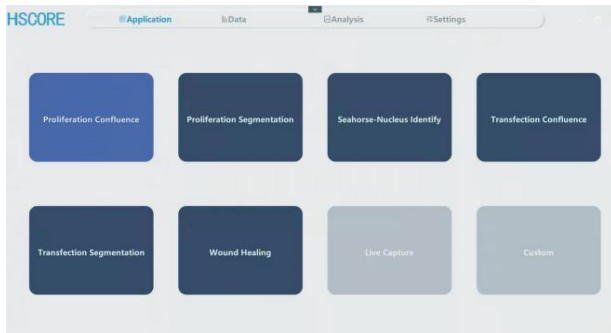
Analytical applications

- **Organoids:** cultivation and observation of organoids, monochrome and multi-color fluorescence analysis of organoids, monoclonal observation, and 3D tumor spheroids.
- **Cell viability analysis:** cell counting, cell proliferation, cell cycle, apoptosis, and neuronal cell analysis.
- **Gene expression:** transfection efficiency and reporter genes.
- **Cell migration and invasion:** transwell assays, cell migration, scratch assays, and chemotaxis.
- **Cell functions:** immune cell clustering, immune cell cytotoxicity, antibody internalization, phagocytosis, and angiogenesis.

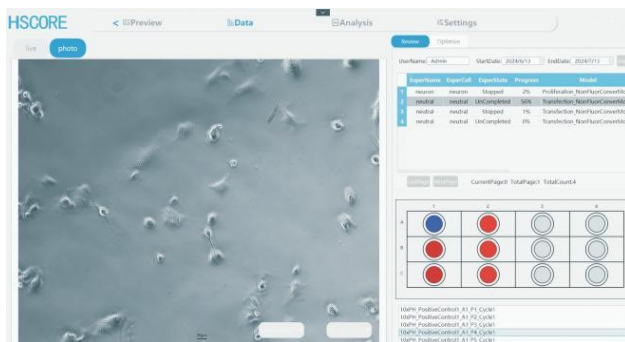
The EOS empower scientists a streamlined operational workflow and powerful AI analysis for above applications.

Rapidly design experimental, imaging, automatic analysis and obtain experimental data.

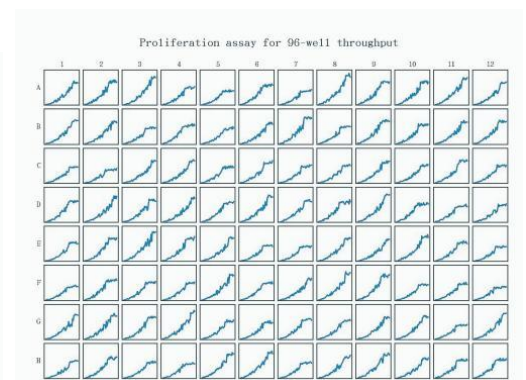
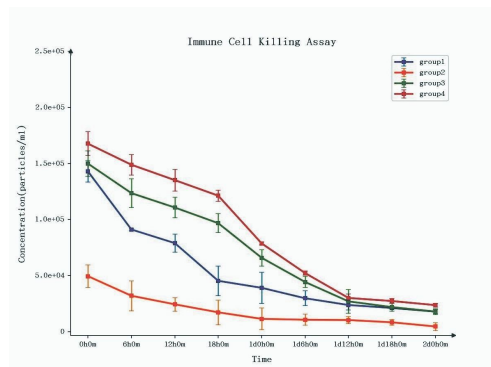
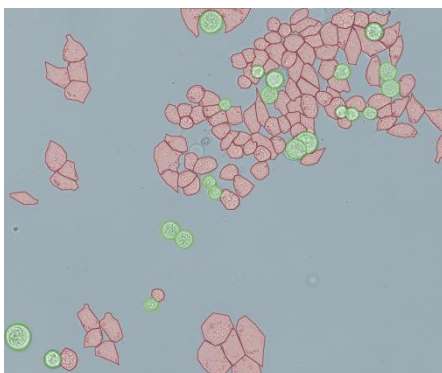
1. Intuitive app setup, preset algorithms, automatic experiments with simultaneous imaging and calculations, saving time.
2. Step-by-step design. Preview confirmation of field capture effects, eliminating uncertainties in experiments.



3. Imaging and algorithms running simultaneously, with analysis results displayed in real time.

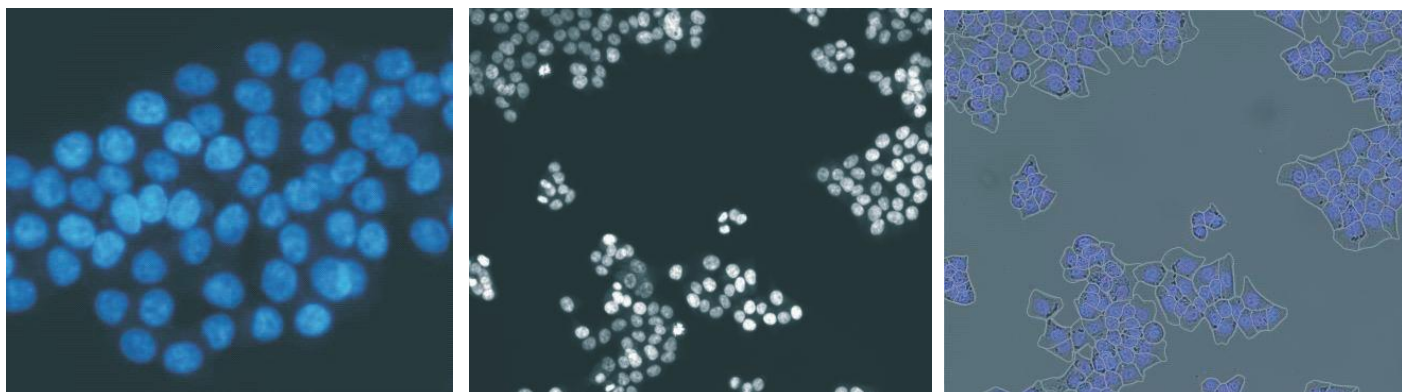


4. Utilizing deep learning algorithms combined with non-destructive imaging methods for long-term live cell monitoring, the analysis software automatically generates individual well curves and comparative curves for different groups, showcasing cellular physiological morphological changes under various treatments.



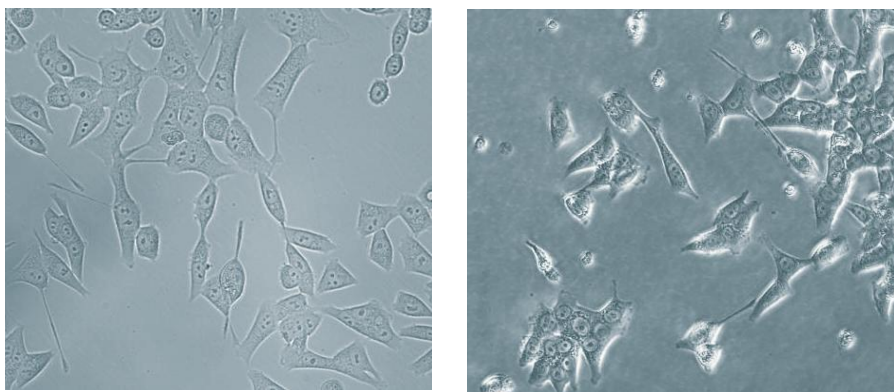
Nucleus counting

For cells that cannot be segmented using one-to-one methods, we can label the nuclei with nuclear dyes and the blue channel to quantify the accurate number and concentration of cells.



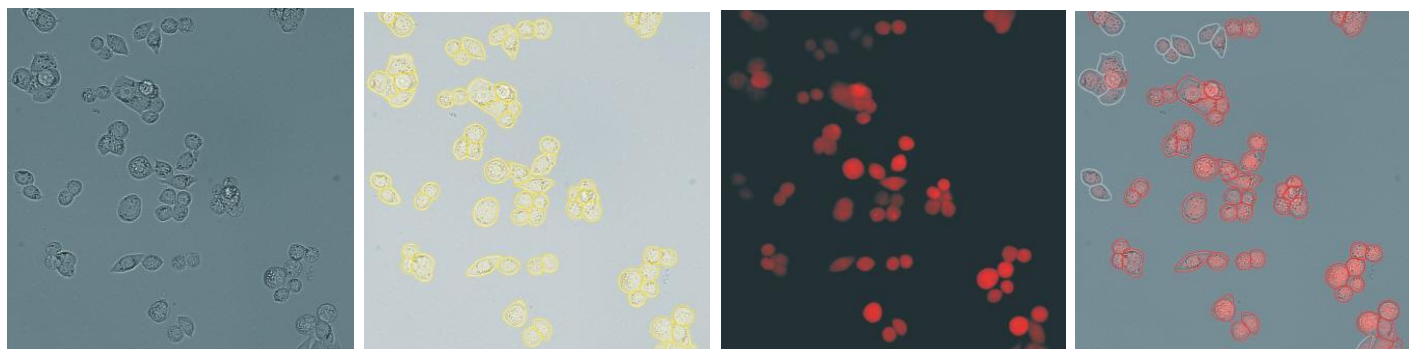
Precise cell segmentation

The EOS provides clear phase contrast and bright field cell images, enabling precise cell segmentation through AI algorithms.



Gene transfection fluorescent expression

The EOS provides red, green, and blue fluorescence images and fluorescence overlay. It is suitable for analyzing fluorescence expression and distinguishing between different regions of cells and organoids, as well as among various cell types. The system counts and scores the total number of observed cells against the number of fluorescently expressed cells, providing an accurate transfection efficiency.

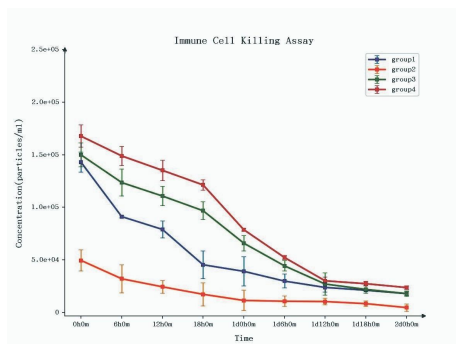


Quantitative tracking of transfection efficiency

Red circles indicate positive cells.

Co-culture of tumor and immune cells

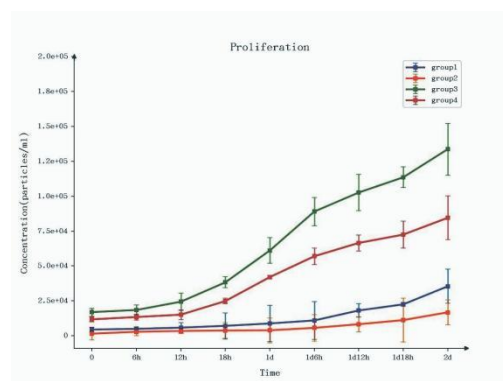
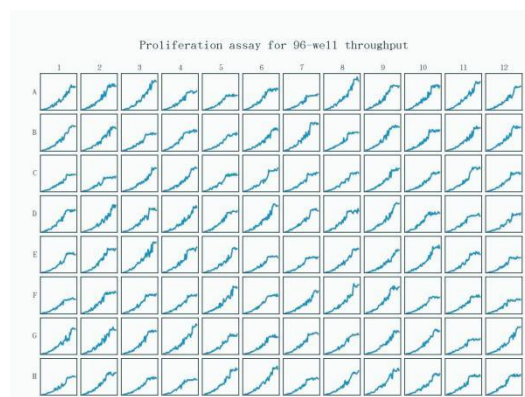
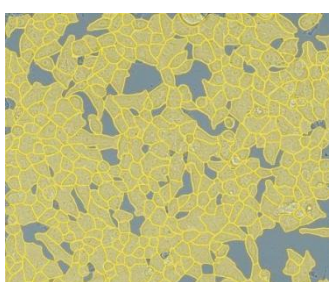
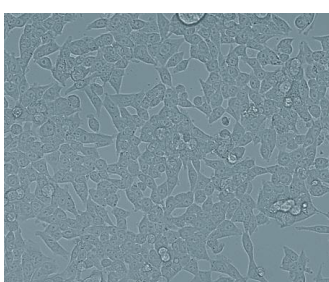
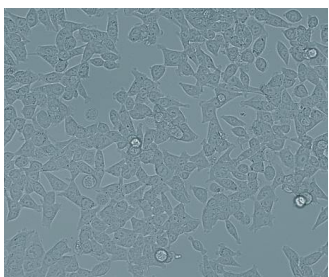
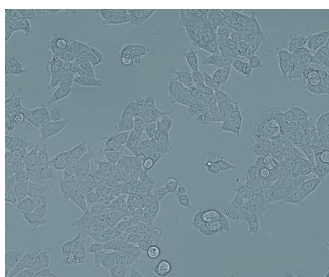
Among various tumor-immune research models, the most used in vitro model involves co-culturing two or more cell types in the same culture system to study their interactions. The advantage is able to simulate the in vivo environment, allowing observation of interactions between cells and between cells and the culture environment. By detecting the relationships among different cytokines, researchers can explore drug mechanisms of action and potential targets.



Co-culture analysis of HCT116 (red) and Jurkat T(green) cells, with curves displaying the quantitative analysis of immune cell cytotoxicity against tumor cells.

Cell proliferation analysis

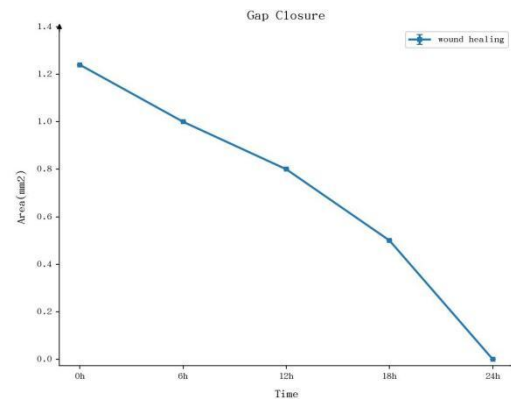
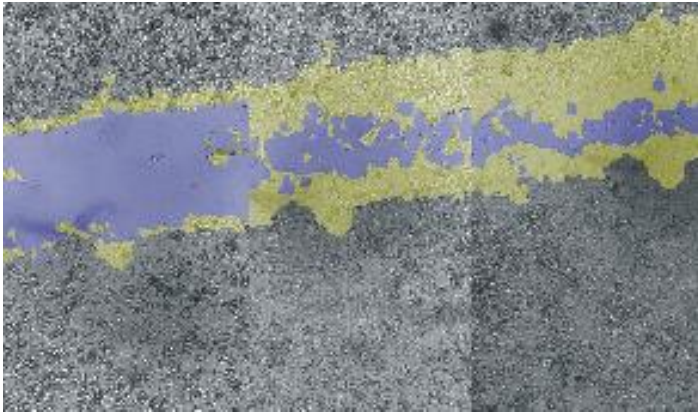
Cell proliferation is widely used to analyze the growth patterns of cultured cells and to assess the efficacy of drugs on cells in vitro. The EOS1 provides real-time detection of cell proliferation, evaluating both cell numbers and aggregation.



Treat HCT116 cells with different drug doses to quantify cell concentrations and plot proliferation curves, as well as perform normalization analysis on the data from different treatment groups.

Wound healing

In vitro wound healing analysis is widely used to simulate in vivo cell migration. This method quantifies the healing rate of the scratched area in a monolayer of adherent cells.



The EOS1 scratch assay analysis provides continuous images of gap healing and curves showing the changes in gap area over time.

Neuronal cell growth analysis

The growth, movement, and health of neurons are critical aspects of neurological research. Rapid identification of neurons and dendrites, along with automatic analysis of their morphological changes, presents a significant challenge. The EOS1 utilizes deep learning algorithms to automatically identify neuronal cell bodies, branches, dendrite length, and quantity.

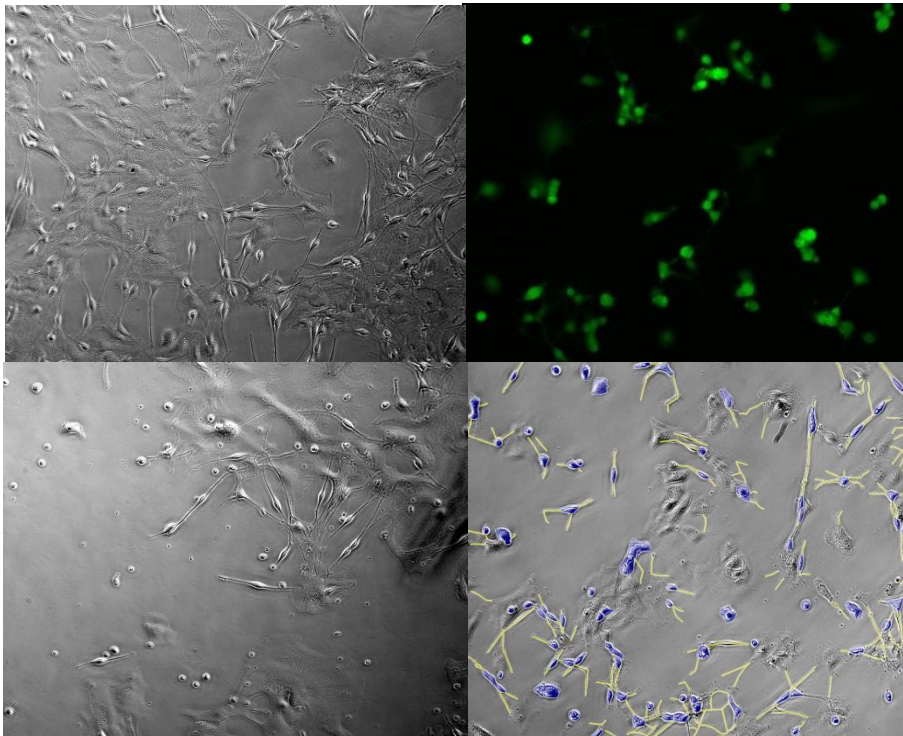
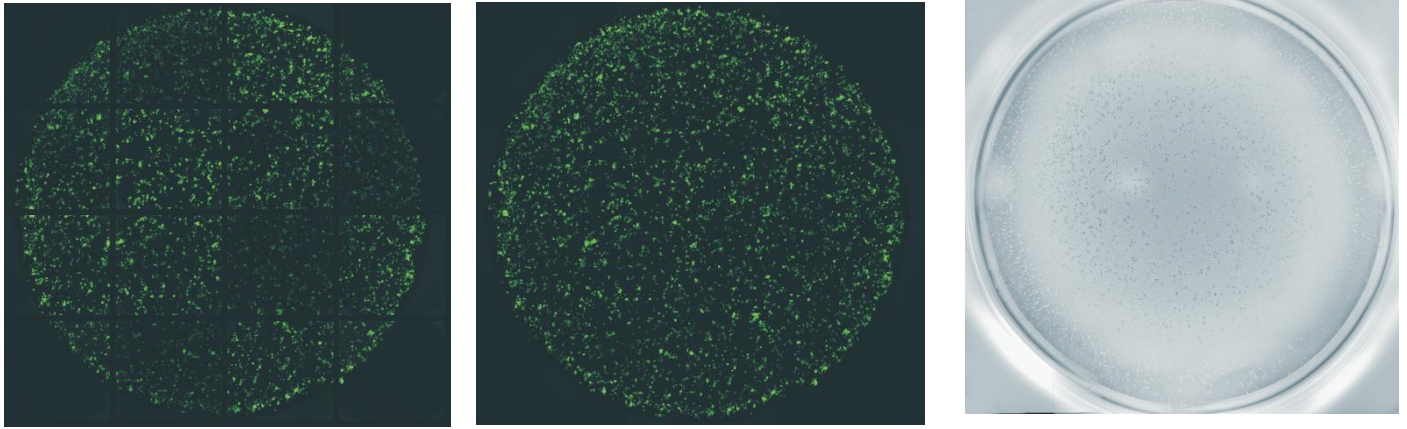


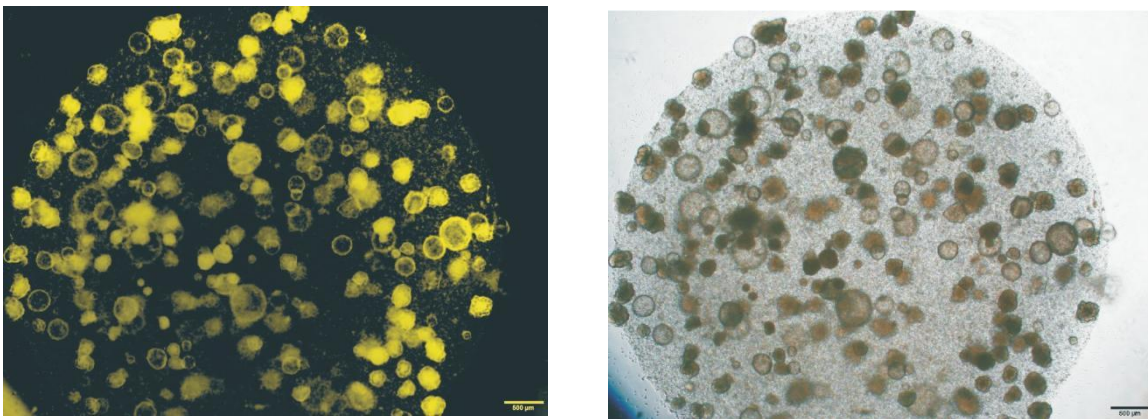
Image stitching

The EOS can capture multiple images and generate a complete, high-resolution whole well image, making it ideal for applications such as clone observation, organoid imaging, and tissue section analysis.



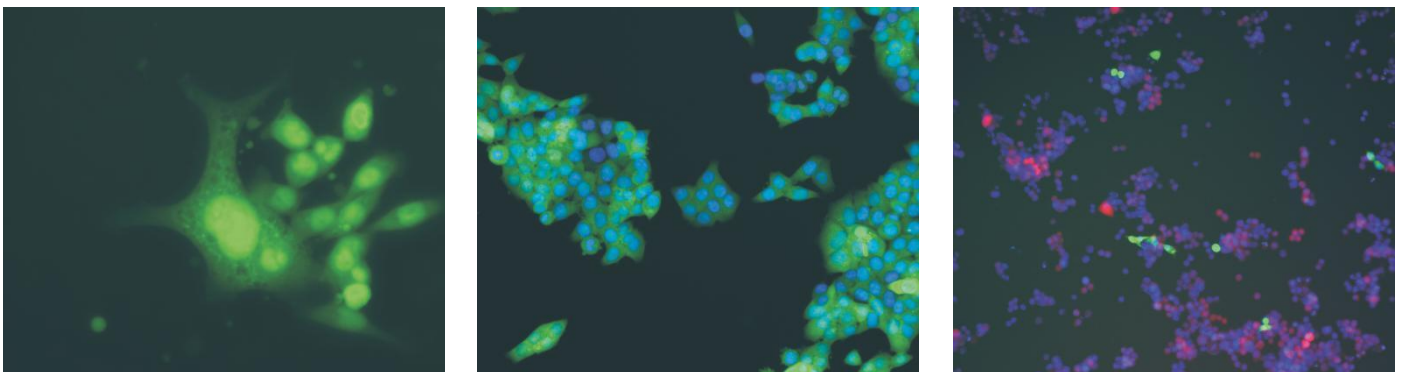
Organoid growth monitoring

Advanced algorithms integrate Z-stack and stitching to meet the observation and segmentation needs of organoids, tumor spheroids, and clones.



More

Insight into the internal world of target samples



Specificatio

Item	Eos1	Eos6
Imaing model	Bright field,Phase contrast,Fluorescence,Z-stack,Whole well imaging	
Objective	four position turret with 4X, 10X, 20X(standard) 10XPH,20PH and 40X (option)	
Fluorescence	RGB+NIR	
Excited LED	365nm,500nm,575nm, 645nm	
Emission light	455nm,520nm,595nm, 705nm	
Bright field LED	635nm	
Phase contrast	electronic changing device	
Automated XY travel	X 86mm,Y 115mm,	X 280mm,Y 270mm,
Automated Z travel	10mm	
Focus and exposure	automatic	
Cmos	5M(2448X2048)	
Vessel	one	six
Dimension(DXWXH)	360mmX410mmX355mm	490mmX450mmX355mm

Our company

Hiscore was founded in 2021,our HQ located in Beijing.we committed to develop robust cytobiology analysis instrument ,our team owned over fifty years experience in cell imaging analysis system.

Our company got ISO9001 Certification,our products conform to CE,FCC and TELEC Certification.

Hiscore Inc

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