

Incucyte®

Reagents, Consumables
and Software

Simplifying Progress

SARTORIUS

Incucyte® Reagents, Consumables and Software

Sartorius offers a range of reagents, consumables and software specifically designed around your application needs to enable long-term, kinetic live-cell imaging and analysis. Obtain specific and robust measurements

of cell health, movement and function with optimized, turnkey solutions allowing you to connect phenotype and function with pathological processes. Getting biologically relevant information has never been easier!

Find Your Solution to Meet Your Application Needs:

Cell Health

Proliferation

Viability

Cell Cycle

Apoptosis

Cytotoxicity

Mitochondrial Membrane Potential

ATP Metabolism

Cell Function

Immune Cell Killing

Antibody Internalization

Live-Cell Immunocytochemistry

Phagocytosis

NETosis

Angiogenesis

Neuronal Activity

Cell Movement & Morphology

Chemotaxis Migration & Invasion

Scratch Wound Migration & Invasion

Immune Cell Activation & Proliferation

Neurite Outgrowth

Assays for 3D Models

Spheroid Growth

Spheroid Invasion

Spheroid Immune Cell Killing

Key Advantages

- Derive meaningful data with sensitive, non-perturbing reagents for long term, live-cell studies.
- Unlock your productivity with lab-tested protocols and purpose-built, intuitive software.
- Generate data rich information within every sample with fluorescent reagent combinations.
- Support visualization and automation of cell movement studies with Incucyte® Consumables.



Find out more

For more information, please visit
www.sartorius.com/incucyte

Incucyte® Reagents At-a-Glance

Application	Reagent	Consumable	Software Module	Compatible Instrument			
Cell Health				SX5	S3	S3 for Neuro	SX1
Proliferation:							
▪ Label-free, Confluence	■	□	□	■	■	■	■
▪ Label-free, Cell Counting	□	□	■	■	■	■	■
▪ Fluorescent Labeling, Cell Counting	■	□	■	■	■	■	■
Viability	■	□	■	■	■	■	■
Cell Cycle	■	□	■	■	■		■
Apoptosis	■	□	□	■	■	■	■
Cytotoxicity	■	□	□	■	■		■
Mitochondrial Membrane Potential	■	□	■	■		■	
ATP Metabolism	■	□	■	■			
Cell Function				SX5	S3	S3 for Neuro	SX1
Immune Cell Killing	■	□	■	■	■	■	■
Antibody Internalization	■	□	■	■	■	■	■
Live-Cell Immunocytochemistry	■	□	■	■	■		■
Phagocytosis	■	□	□	■	■	■	■
NETosis	■	□	□	■	■		■
Angiogenesis	■	□	■	■	■		■
Neuronal Activity	■	□	■	■		■	
Cell Movement and Morphology				SX5	S3	S3 for Neuro	SX1
Chemotaxis Migration and Invasion	■	■	■	■	■	■	■
Scratch Wound Migration and Invasion	■	■	■	■	■	■	■
Immune Cell Activation and Proliferation	■	□	■	■	■	■	■
Neurite Outgrowth	■	□	■	■	■	■	■
Assays for 3D Models				SX5	S3	S3 for Neuro	SX1
Spheroid Growth (Single and Multi-Spheroid)	■	□	■	■	■	■	■
Spheroid Invasion (Single Spheroid)	■	□	■	■	■	■	■
Spheroid Immune Cell Killing	■	□	■	■	■	■	■

■ Required ■ Optional □ Not required ■ Compatible

Proliferation, Cell Counting, Viability and Cell Cycle

Incucyte's live-cell labeling reagents and purpose-built software enables long-term (>48 hr) analysis of cell proliferation, viability and cell cycle state.

- Minimize experimental artifacts using non-perturbing, live-cell reagents—preservative free, sterile, or concentrated formulations to protect cell health.

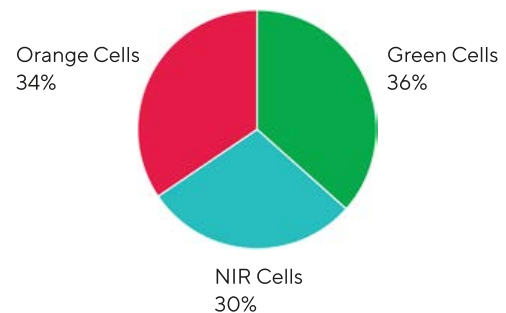
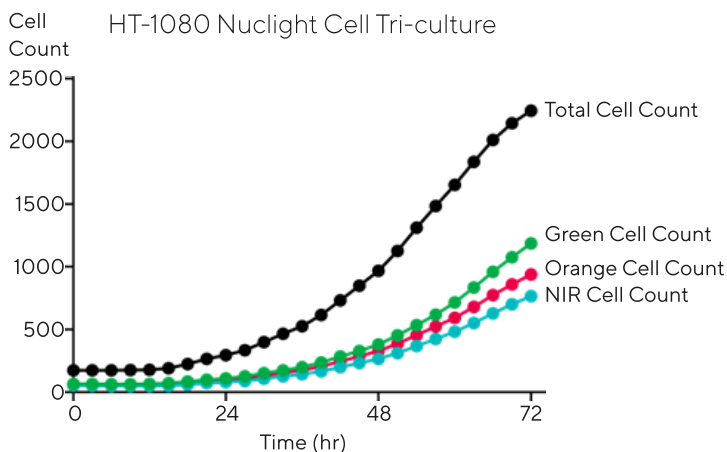
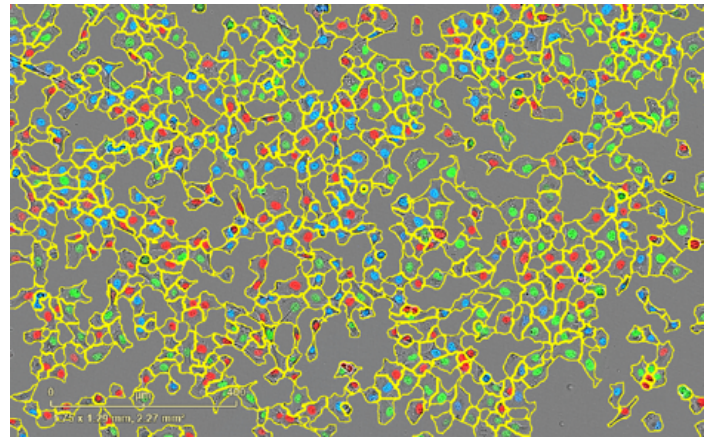
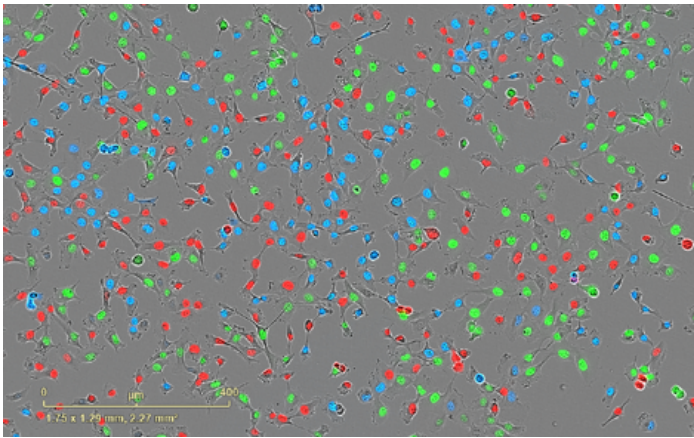
- Quantify cell proliferation kinetically using label or label-free strategies in adherent or non-adherent cell cultures.
- Investigate a range of cell models (mono-, co- or tri-culture) to answer relevant scientific questions.
- Maximize each sample with multiplexed readouts of proliferation, cell cycle or cell health that are easily validated by eye.

Application Spotlight:

Incucyte® Live-Cell Proliferation Assays

Perform long term, kinetic measurements of proliferation, with or without labels. Incucyte® Nuclight Reagents homogenously label a variety of cell types for non-

perturbing, continuous analysis of the same population of cells. The Incucyte® Cell-by-Cell Analysis Software Module enables label-free cell identification and counting.

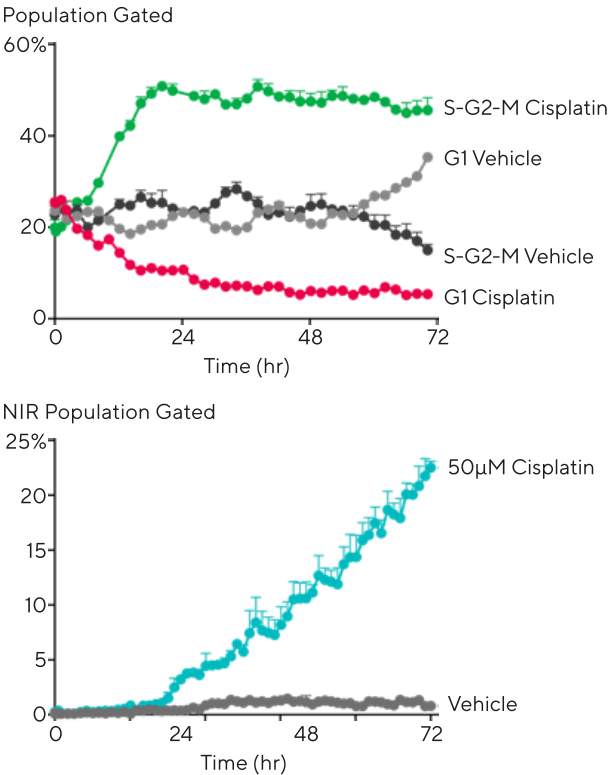
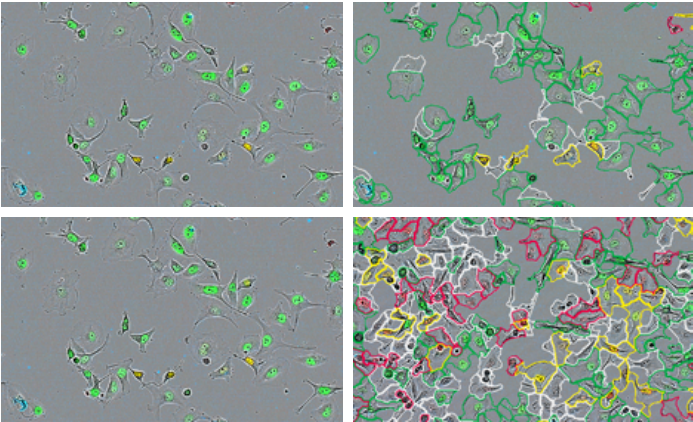


HT-1080 fibrosarcoma cells stably expressing Nuclight Green, Orange, or NIR were monitored for 72 hours. Representative images taken at 48 hours, with and without the label-free Cell-by-Cell Analysis mask, automatically identify the entire population of cells and quantify percentages of green, orange, or NIR expressing cells.

Application Spotlight:

Incucyte® Cell Cycle Assay

Continuously quantify treatment effects on cell cycle progression of the same population of cells over multiple cell divisions using Incucyte® Cell Cycle Lentivirus Reagents. Gain deeper insight by multiplexing with Incucyte® Annexin V NIR Dye on the Incucyte® SX5.



Ordering Information

	Product	Description	Cat. No.	Instrument Compatibility
Software	Perform label-free cell counts and subsequent cell-by-cell classification based on shape, size or fluorescence intensity to quantify dynamic changes in cell subsets within heterogeneous living cell cultures.			
	Incucyte® Cell-by-Cell Analysis Software Module	1 module	9600-0031	SX5, S3, S3 for Neuroscience, SX1
Nuclear Dye Labeling Reagents	Cell permeable DNA stains that specifically label nuclei in cells and is ideally suited for mix-and-read, live-cell quantification of cell proliferation and viability.			
	Incucyte® Nuclight Rapid Red Dye	One vial: 50 µL	4717	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Nuclight Rapid NIR Dye	One vial: 50 µL	4804	SX5, S3 for Neuroscience
*Nuclear Lentivirus Labeling Reagents	Lentivirus reagents provide homogenous expression of a nuclear-restricted fluorescent protein without altering cell function for live-cell quantification of cell proliferation and viability.			
	Incucyte® Nuclight Green Lentivirus (puro)	0.2 mL	4624	SX5, S3, SX1
		0.6 mL	4475	SX5, S3, SX1
	Incucyte® Nuclight Red Lentivirus (puro)	0.2 mL	4625	SX5 (configured with green/red optical module), S3, SX1
		0.6 mL	4476	
	Incucyte® Nuclight Green Lentivirus (bleo)	0.2 mL	4626	SX5, S3, SX1
		0.6 mL	4477	SX5, S3, SX1
	Incucyte® Nuclight Red Lentivirus (bleo)	0.2 mL	4627	SX5 (configured with green/red optical module), S3, SX1
		0.6 mL	4478	
Cell Cycle Lentivirus Reagents	Incucyte® Nuclight Orange Lentivirus (puro)	0.2 mL	4771	SX5, S3 for Neuroscience
	Incucyte® Nuclight NIR Lentivirus (puro)	0.2 mL	4805	SX5, S3 for Neuroscience
	Fluorescent ubiquitination-based cell cycle indicators (FUCCI), providing a homogeneous expression of paired fluorescent proteins to distinguish between cells in the interphase or the mitotic phase.			
	Incucyte® Cell Cycle Green/Red Lentivirus (puro)	0.2 mL	4779	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Cell Cycle Green/Orange Lentivirus (puro)	0.2 mL	4809	SX5

*Pre-labeled Nuclight cell lines are also available for purchase. Please visit shop.essenbioscience.com for more information.

Apoptosis, Cytotoxicity, Mitochondrial Membrane Potential and ATP Metabolism

Incucyte's non-perturbing cell health reagents allow for kinetic readouts over multiple days for the evaluation of time-dependent and cell-specific responses to treatments.

- Preserve cell health using non-perturbing, live-cell reagents to track true, artifact-free biological responses.
- Reduce loss of precious or compromised cells with mix-

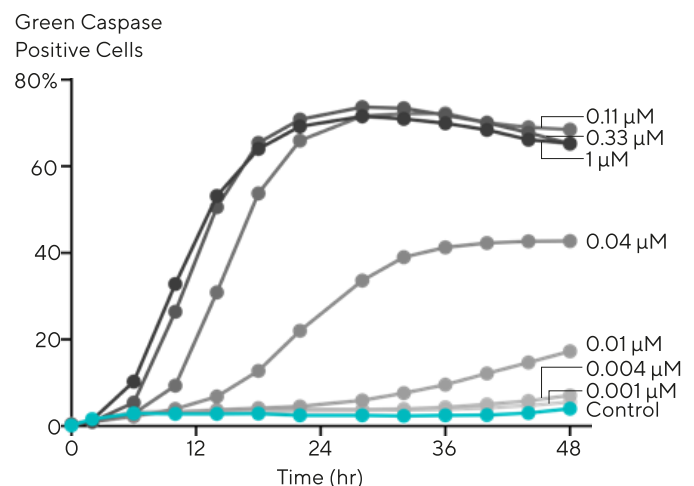
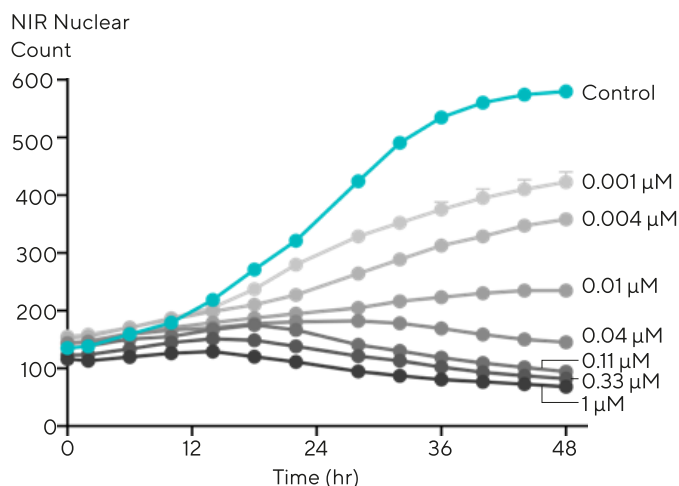
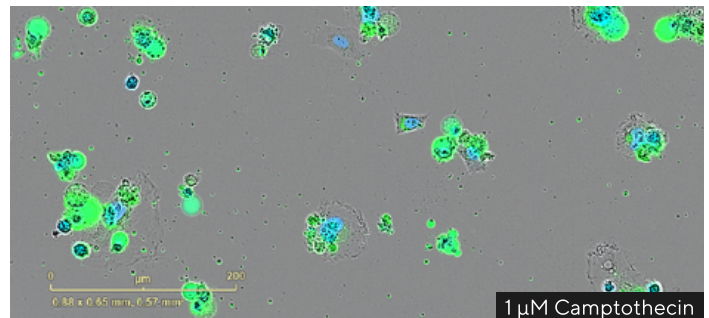
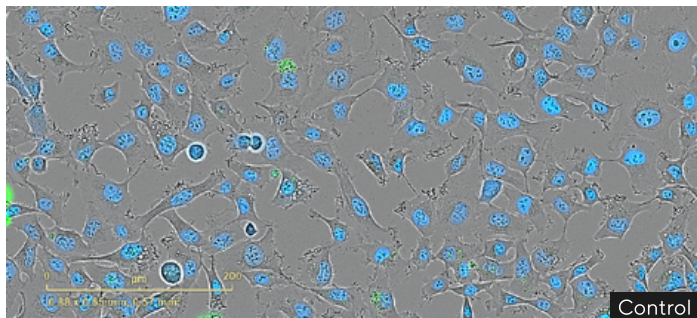
and-read or novel genetically encoded reagents and optimized protocols.

- Perform multi-parametric analysis using cell health reagent combinations within a single well to generate data rich information
- Validate results and confirm changes in cell morphology with HD phase images at every time point.

Application Spotlight: Incucyte® Apoptosis Assay

Evaluate cell death with two unique assays for apoptotic pathway analysis using specifically formulated reagents. Utilize Incucyte® Caspase-3/7 Reagents allow direct detection of caspase-3/7 activation or Incucyte® Annexin

V Reagents to measure exposed phosphatidylserine in apoptotic cells. Enhance your insight with multiplexed measurements of nuclear counts of cell death.



HT-1080 fibrosarcoma cells stably expressing NuLight NIR Lentivirus (pseudo-colored blue) were treated with decreasing concentrations of Camptothecin in the presence of Incucyte Caspase-3/7 Green Dye (pseudo-colored green). Representative images validate kinetic data of both cell viability and apoptotic death.

Ordering Information

	Product	Description	Cat. No.	Instrument Compatibility
Software	Perform label-free cell counts and subsequent cell-by-cell classification based on shape, size or fluorescence intensity to quantify dynamic changes in cell subsets within heterogeneous living cell cultures.			
	Incucyte® Cell-by-Cell Analysis Software Module	1 module	9600-0031	SX5, S3, S3 for Neuroscience, SX1
Caspase Activity Reagents	Inert, non-fluorescent (DEVD) substrates that freely cross the cell membrane where they can be cleaved by activated caspase-3/7 to release a DNA-binding fluorescent label.			
	Incucyte® Caspase-3/7 Green Dye	One vial: 20 µL (100-200 tests)	4440	SX5, S3, SX1
	Incucyte® Caspase-3/7 Red Dye	One vial: 20 µL (100-200 tests)	4704	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Caspase-3/7 Dye for Metabolism	One vial: 20 µL (100-200 tests)	4776	SX5 (configured with SX5 Metabolism Optical Module)
Apoptosis Plasma Membrane Integrity Reagents	Membrane impermeable, highly-selective phosphatidylserine (PS) cyanine fluorescent dyes label PS exposure on the extracellular surface of cells undergoing apoptosis.			
	Incucyte® Annexin V Green Dye	One vial: 100-200 tests	4642	SX5, S3, SX1
	Incucyte® Annexin V Red Dye	One vial: 100-200 tests	4641	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Annexin V Orange Dye	One vial: 100-200 tests	4759	SX5, S3 for Neuroscience
	Incucyte® Annexin V NIR Dye	One vial: 100-200 tests	4768	SX5, S3 for Neuroscience
Cytotoxicity Reagents	Highly sensitive cyanine-based dyes that do not enter living cells. When the cell membrane is compromised, it enters the cell, binds to DNA, and becomes fluorescent. Dye does not enter cells with intact cell membranes.			
	Incucyte® Cytotox Green Dye	Five vials: 5 µL (100 tests)	4632	SX5, S3, SX1
	Incucyte® Cytotox Red Dye	Five vials: 5 µL (100 tests)	4633	SX5 (configured with green/red optical module), S3, SX1
New! Mitochondria Membrane Potential (MMP)	Fluorescent dye which diffuses across the intermembrane space and accumulates in proportion to the mitochondrial membrane potential. Shifts in fluorescent intensity denote mitochondrial membrane potential state. Requires Incucyte® Cell-by-Cell Analysis Software Module for analysis.			
	New! Incucyte® MMP Orange Reagent Kit:	One kit	4775	SX5, S3 for Neuroscience
	▪ MMP Orange Reagent	One vial: 30 µL (200 tests)		
	▪ FCCP	One vial: 10 µL (16 tests)		
	▪ Oligomycin A	One vial: 10 µL (16 tests)		
New! ATP Metabolism	Direct, kinetic measurement of ATP to analyze changes of cancer cell metabolism in advanced cell models.			
Software	Enables analysis of ATP dynamics by capturing fluorescent images while qualitatively monitoring associated changes in cell morphology in each well of a 96- or 384-well plate.			
	New! Incucyte® ATP Analysis Software Module	1 module	9600-0033	SX5 (configured with SX5 Metabolism Optical Module)
Metabolism Reagent	Genetically-encoded fluorescent ATP indicator for direct measurements of cytosolic ATP in living cells.			
	New! Incucyte® CytoATP Lentivirus (puro)	One vial: 0.2mL	4772	SX5 (configured with SX5 Metabolism Optical Module)



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Immune Cell Activation, Killing, and NETosis

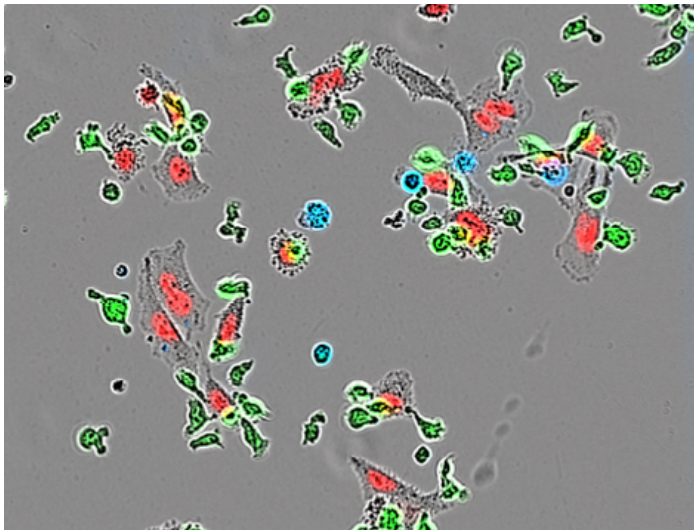
Incucyte® Immune Cell Assays are an integrated solution for real-time visualization and automated analysis of a range of immune cell functions from T-cell activation and killing to programmed neutrophil cell death.

- Derive meaningful data with sensitive, non-perturbing reagents and HD phase images.

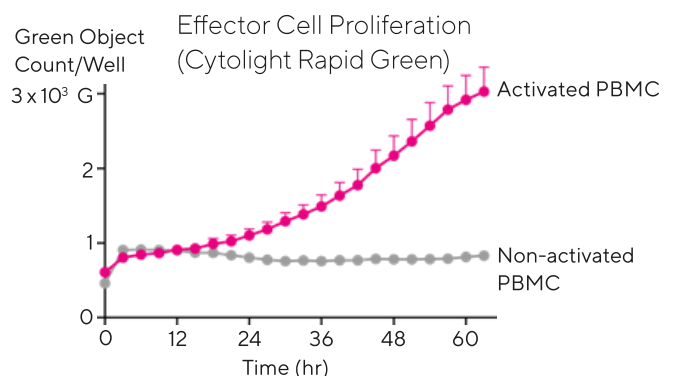
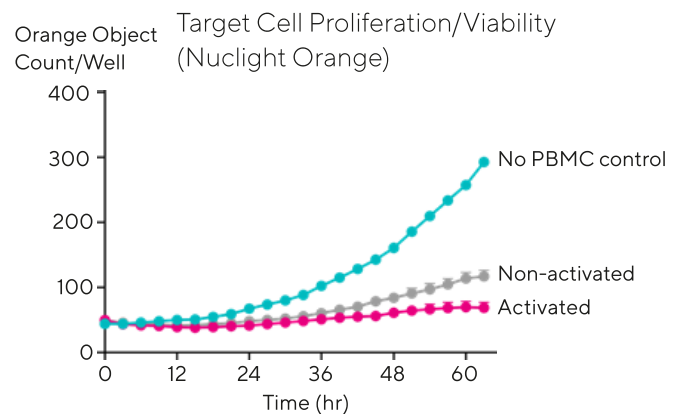
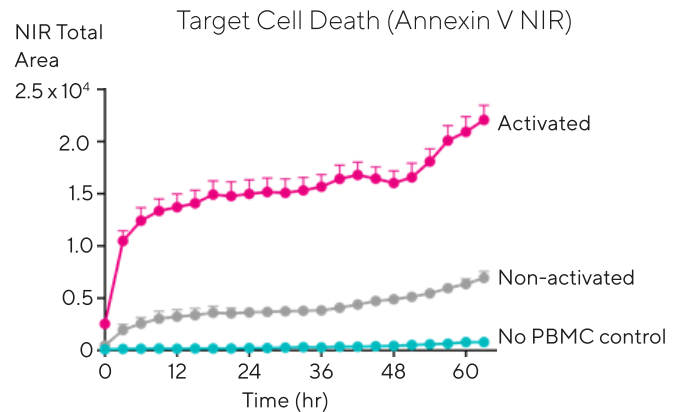
- Make multiplexed measurements of death, viability and proliferation in 2D or 3D in vitro assay models.
- Visualize and quantify dynamic cell interactions overtime in complex co-cultures.

Application Spotlight: Incucyte® Immune Cell Killing

Capture, visualize and automatically quantify dynamic biological changes and cellular interactions of immune cell-mediated killing of tumor cells. With Incucyte cell health and proliferation reagents you can make multiplexed measurements of tumor cell death (Annexin V NIR Dye), tumor cell proliferation/viability (Incucyte Nuclight Orange Lentivirus) and immune cell health (Incucyte Cytolight Rapid Green Dye) in the same population of cells overtime.



MDA-MB-231 adenocarcinoma cells transduced with Incucyte Nuclight Orange co-cultured with Incucyte Cytolight Rapid Green labeled activated or non-activated PBMCs in the presence of Incucyte Annexin V NIR. Quantification of NIR (pseudo-colored blue) fluorescence area indicates target cell death and object count of orange (pseudo-colored red) fluorescence, target cell proliferation/viability (pseudo-colored green). Effector cell proliferation was quantified based on green object count over the course of the experiment.



Ordering Information

	Product	Description	Cat. No.	Instrument Compatibility
Software	Perform label-free cell counts and subsequent cell-by-cell classification to evaluate changes in proliferation, morphology and cell surface protein expression for evaluation of immune cell activation and proliferation in mono-cultures or track subsets of cells in complex immune-cell killing models.			
	Incucyte® Cell-by-Cell Analysis Software	1 module	9600-0031	SX5, S3, S3 for Neuroscience, SX1
*Nuclear Lentivirus Labeling Reagents	Lentivirus reagents provide homogenous expression of a nuclear-restricted fluorescent protein without altering cell function for live-cell quantification of cell proliferation and viability.			
	Incucyte® Nuclight Green Lentivirus (puro)	0.2 mL	4624	SX5, S3, SX1
		0.6 mL	4475	SX5, S3, SX1
	Incucyte® Nuclight Red Lentivirus (puro)	0.2 mL	4625	SX5 (configured with green/red optical module), S3, SX1
		0.6 mL	4476	
	Incucyte® Nuclight Green Lentivirus (bleo)	0.2 mL	4626	SX5, S3, SX1
		0.6 mL	4477	SX5, S3, SX1
	Incucyte® Nuclight Red Lentivirus (bleo)	0.2 mL	4627	SX5 (configured with green/red optical module), S3, SX1
		0.6 mL	4478	
	Incucyte® Nuclight Orange Lentivirus (puro)	0.2 mL	4771	SX5, S3 for Neuroscience
	Incucyte® Nuclight NIR Lentivirus (puro)	0.2 mL	4805	SX5, S3 for Neuroscience
Cytoplasmic Dye Labeling Reagents	Live-cell cytoplasmic labeling dyes that freely pass through cell membranes and into cells, where they are transformed into a cell membrane-impermeant form, providing spatial context for cell-to-cell interactions. Use to label either target or effector cells.			
	Incucyte® Cytolight Rapid Green Dye	One vial: 100 – 1,000 tests	4705	SX5, S3, SX1
	Incucyte® Cytolight Rapid Red Dye	One vial: 100 – 1,000 tests	4706	SX5 (configured with green/red optical module), S3, SX1
Caspase Activity Reagents	Inert, non-fluorescent (DEVD) substrates that freely cross the cell membrane where they can be cleaved by activated caspase-3/7 to release a DNA-binding fluorescent label. Recommended for quantifying apoptosis in adherent target cells.			
	Incucyte® Caspase-3/7 Green Dye	One vial: 20 µL (100-200 tests)	4440	SX5, S3, SX1
	Incucyte® Caspase-3/7 Red Dye	One vial: 20 µL (100-200 tests)	4704	SX5 (configured with green/red optical module), S3, SX1
Apoptosis Plasma Membrane Integrity Reagents	Membrane impermeable, highly-selective phosphatidylserine (PS) cyanine fluorescent dyes label PS exposed on the extracellular surface of cells undergoing apoptosis. Recommended for quantifying apoptosis in non-adherent target cells.			
	Incucyte® Annexin V Green Dye	One vial: 100-200 tests	4642	SX5, S3, SX1
	Incucyte® Annexin V Red Dye	One vial: 100-200 tests	4641	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Annexin V Orange Dye	One vial: 100-200 tests	4759	SX5, S3 for Neuroscience
	Incucyte® Annexin V NIR Dye	One vial: 100-200 tests	4768	SX5, S3 for Neuroscience
Cytotoxicity Reagents	Highly sensitive cyanine-based dyes enter the cell when cell membrane is compromised, and becomes fluorescent upon binding to DNA. Dye does not enter cells with intact cell membranes. Allows for rapid visualization and quantification of NETosis as extracellular DNA is released and undergoes fluorescence enhancement.			
	Incucyte® Cytotox Green Dye	Five vials: 5 µL (100 tests)	4632	SX5, S3, SX1
	Incucyte® Cytotox Red Dye	Five vials: 5 µL (100 tests)	4633	SX5 (configured with green/red optical module), S3, SX1

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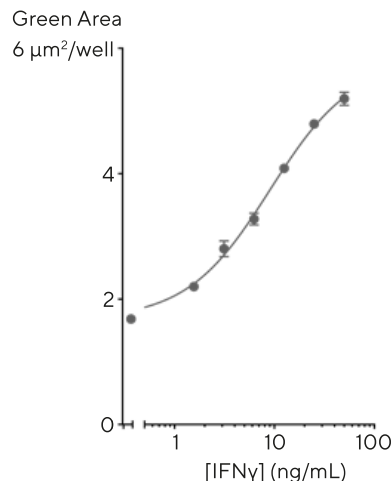
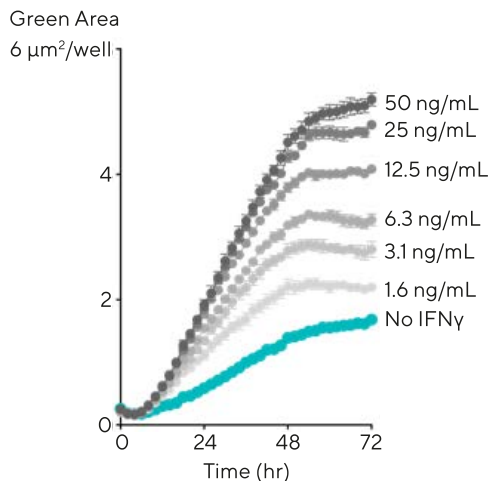
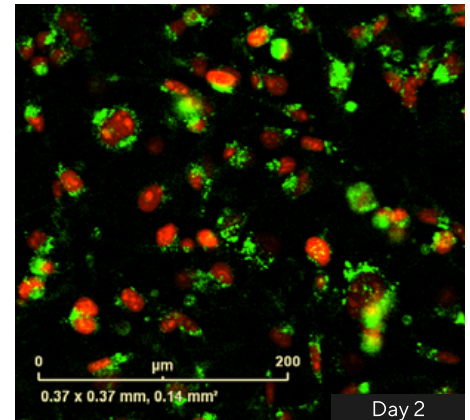
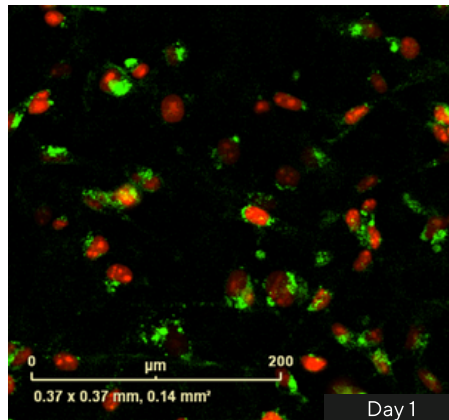
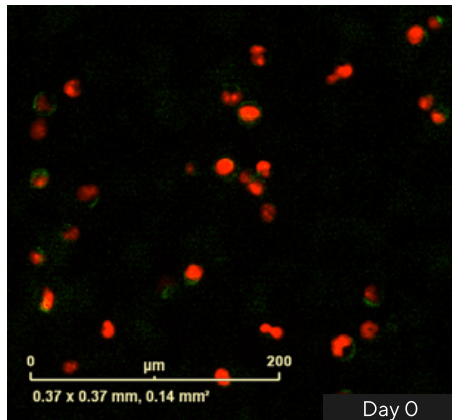
Antibody Internalization and Immunocytochemistry

Incucyte's antibody labeling reagents are novel fluorescently labeled Fabs that can be mixed with Fc-containing antibodies and applied directly to living cells for long-term monitoring of spatial and temporal protein dynamics.

- Increase productivity with rapid single-step labeling paired with mix-and-read protocols for efficient testing of antibody panels.
- Associate changes in surface protein expression or antibody internalization with cell function and morphology over time.
- Combine sensitive, kinetic fluorescent measurement of protein dynamics with images and movies for visual confirmation of biology in every well.

Application Spotlight: Monitoring Dynamic Cell Surface Protein Expression

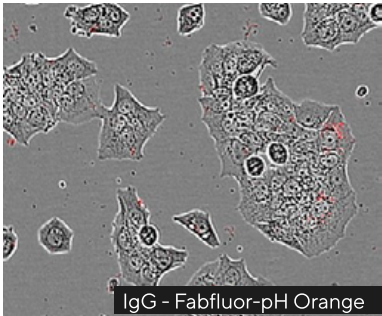
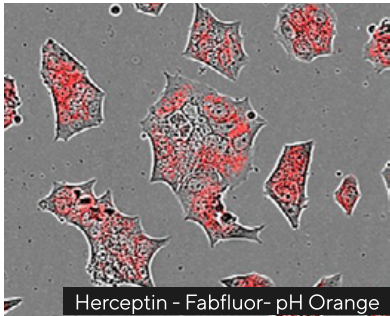
Quantify cell surface protein expression and distribution in live-cells to study long-term protein dynamics and their relationship to function and morphology using Incucyte® Fabfluor-488 Antibody Labeling Reagents.



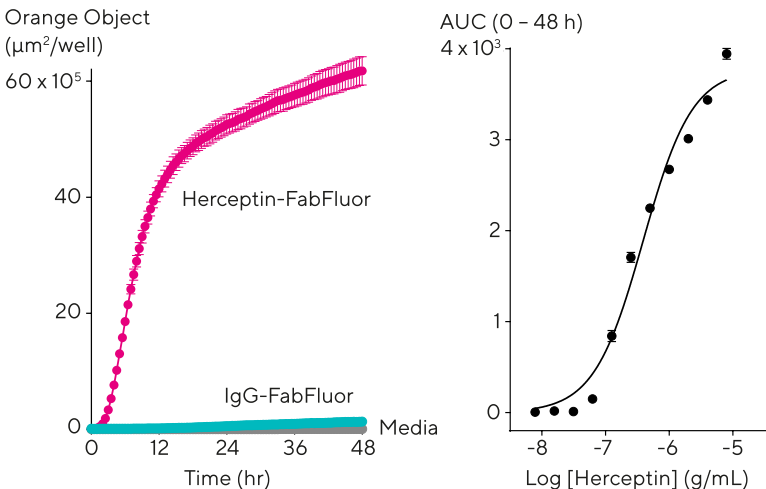
Incucyte Fabfluor-488 was conjugated to anti-PD-L1 Ab (BioLegend) and added to Nuclight Red MDA-MB-231 breast cancer cells in the absence and presence of IFN-γ (+ Incucyte® Opti-Green background suppressor). Quantification of the green fluorescent area shows that IFN-γ induces a time- and concentration- dependent increase in PD-L1 expression.

Application Spotlight: Antibody Internalization

Efficiently evaluate the full-time course of antibody internalization for real-time analysis of internalization rates under physiological conditions using Incucyte® Fabfluor-pH Antibody Labeling Reagents.



HD phase and orange fluorescence images (10X) show HER-2 positive BT-474 cells treated with Incucyte® Fabfluor-pH Orange labeled Herceptin display orange (pseudo-colored red), cytosolic fluorescence while cells treated with an isotype control display no cellular fluorescence. Time-course data shows a rapid increase in orange object area over time in cells treated with labeled Herceptin, but not with IgG1 isotype control.



Ordering Information

	Product	Description	Cat. No.	Instrument Compatibility
Software	Perform label-free cell counts and subsequent cell-by-cell classification based on shape, size or fluorescence intensity to quantify dynamic changes in cell subsets within heterogeneous living cell cultures.			
	Incucyte® Cell-by-Cell Analysis Software Module	1 module	9600-0031	SX5, S3, S3 for Neuroscience, SX1
Fabfluor-pH Antibody Labeling Reagents	Novel pH-sensitive Fc-targeting antibody fragment, fluorescently label your antibody of choice for real-time analysis of antibody internalization.			
	Incucyte® Human Fabfluor-pH Orange Antibody Labeling Dye	One vial: 50 µg	4812	SX5, S3 for Neuroscience
	Incucyte® Human Fabfluor-pH Red Antibody Labeling Dye	One vial: 50 µg	4722	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Mouse IgG1 Fabfluor-pH Red Antibody Labeling Dye	One vial: 50 µg	4723	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Mouse IgG2a Fabfluor-pH Red Antibody Labeling Dye	One vial: 50 µg	4750	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Mouse IgG2b Fabfluor-pH Red Antibody Labeling Dye	One vial: 50 µg	4751	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Rat Fabfluor-pH Red Antibody Labeling Dye	One vial: 50 µg	4737	SX5 (configured with green/red optical module), S3, SX1
Fabflour Live-Cell Immunocytochemistry Labeling reagents	Novel fluorescently tagged Fc-targeting Fab fragments label your antibody of choice for cell surface protein expression.			
	Incucyte® Mouse IgG2a Fabfluor-488 Antibody Labeling Dye	One vial: 50 ug	4743	SX5, S3, SX1
	Incucyte® Mouse IgG2b Fabfluor-488 Antibody Labeling Dye	One vial: 50 ug	4744	SX5, S3, SX1
	Incucyte® Mouse IgG1 Fabfluor-488 Antibody Labeling Dye	One vial: 50 ug	4745	SX5, S3, SX1

Phagocytosis

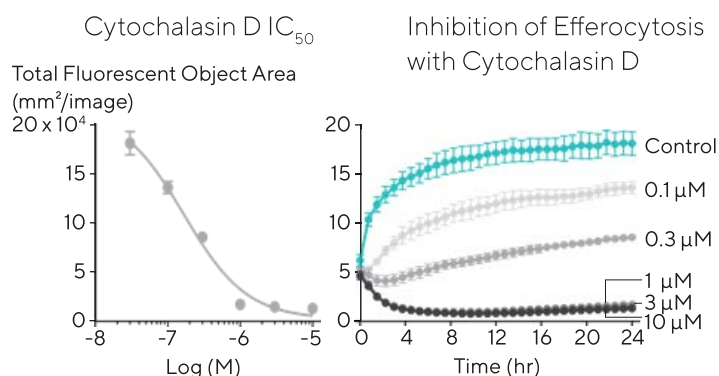
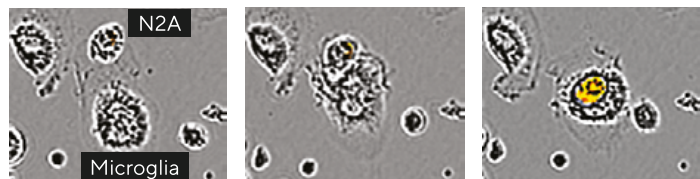
Incucyte® pHrodo® Reagents are formulated for long-term and sensitive analysis of phagocytosis and efferocytosis of the same population of cells overtime.

- Monitor and measure phagocytosis and efferocytosis using highly specific and sensitive labeling reagents, amenable to both adherent and non-adherent cell models.

- Study the model of your choice overtime with simple mix-and-read 96- or 384-well protocols.
- Confirm phagocytosis signals using HD phase-contrast and fluorescent images.

Application Spotlight: Efferocytosis Assay

Observe and measure efferocytosis over the entire assay time course using your choice of target cells labeled with Incucyte® pHrodo® Orange Cell Labeling Dye (pseudo-colored orange, acquired with the Incucyte® S3 for Neuroscience).



Time-lapse visualization of iPSC-derived microglia (Axol BioSciences) engulfing pHrodo Orange labeled apoptotic Neuro-2A cells. Images verify the entry of an apoptotic target cell into the cytoplasm of the microglia. Inhibition of this engulfment by Cytochalasin D was quantified based on orange fluorescence object area over the course of the experiment.

Ordering Information

	Product	Description	Cat. No.	Instrument Compatibility
pHrodo® Cell Labeling Kits	Fluorescent dyes label whole cells with a pH-sensitive fluorophore for real-time analysis of efferocytosis and antibody mediated cellular phagocytosis.			
	Incucyte® pHrodo Orange Cell Labeling Kit	One kit	4766	SX5, S3 for Neuroscience
	Incucyte® pHrodo Red Cell Labeling Kit	One kit	4649	SX5 (configured with green/red optical module), S3, SX1
pHrodo® Bioparticles	Sterile fluorogenic reagents ideally suited to a simple mix-and-read, real-time live cell quantification of phagocytosis.			
	Incucyte® pHrodo® Red E. coli Bioparticles®	One vial: 2 mg	4615	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® pHrodo® Green E. coli Bioparticles®	One vial: 2 mg	4616	SX5, S3, SX1
	Incucyte® pHrodo® Red Zymosan Bioparticles®	One vial: 1 mg	4617	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® pHrodo® Green Zymosan Bioparticles®	One vial: 1 mg	4618	SX5, S3, SX1
	Incucyte® pHrodo® Red S. aureus Bioparticles®	One vial: 2 mg	4751	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® pHrodo® Green S. aureus Bioparticles®	One vial: 2 mg	4737	SX5, S3, SX1

Angiogenesis

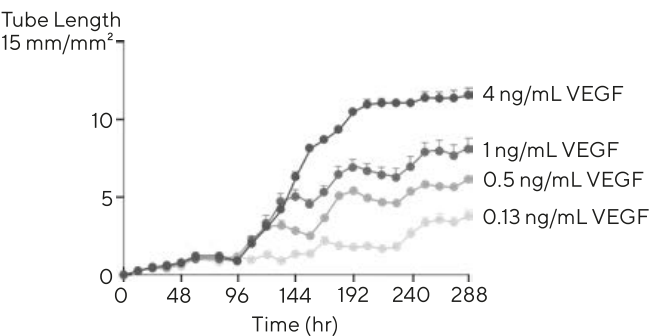
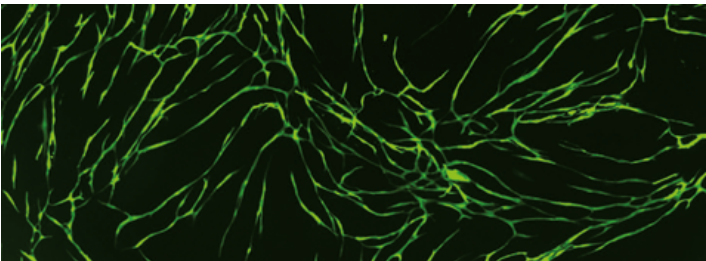
The Incucyte® Angiogenesis Primekit and associated software are a fully integrated solution to measure vascular tube formation in a relevant co-culture model over time.

- Study all phases of the angiogenic process with an optimized, ready-to-use 96-well cryopreserved kit.
- Increase insight with automated, kinetic data analysis and visualization of tube formation and disruption in real-time.
- Characterize the angiogenic effects of vascular growth factors on tube formation over the complete time course of the assay.

Application Spotlight: Angiogenesis Assay

Assess complex network development and disruption quantitatively and qualitatively with the Incucyte® Angiogenesis Primekit and Incucyte® Angiogenesis Analysis Software Module to study therapeutic interventions of vascular formation.

Concentration dependent vascular tube formation in Primekit Cytolight Green HUVEC and human dermal fibroblast co-culture model.
(Top) Example image of VEGF (4 ng/ml) induced vascular structures.
(Bottom) Concentration dependent vascular tube formation induced by Vasoactive Endothelial Growth Factor (VEGF) in Primekit Cytolight Green HUVEC and human dermal fibroblast co-culture model.



Ordering Information

	Product	Description	Cat. No.	Instrument Compatibility
Software	Assess complex network development and disruption quantitatively and qualitatively to study therapeutic interventions of vascular formation.			
	Incucyte® Angiogenesis Analysis Software Module	1 module	9600-0011	SX5, S3, SX1
Angiogenesis Reagents	Cryopreserved kit of lentivirally-infected HUVECs expressing GFP cultured with normal human dermal fibroblasts (NHDF) for the study of angiogenic networks.			
	Incucyte® Angiogenesis Primekit	One kit	4452	SX5, S3, SX1
	Incucyte® Angiogenesis Primekit VEGF/Suramin Kit	Two vials	4437	SX5, S3, SX1
	Incucyte® Angiogenesis Primekit bFGF/Suramin Kit	Two vials	4438	SX5, S3, SX1
	Incucyte® Angiogenesis Primekit Assay Media Kit	One bottle: 125 mL	4541	SX5, S3, SX1
	Incucyte® Cytolight Green HUVEC	One vial: 1.7 x 10 ⁶ cells	4453	SX5, S3, SX1
	Incucyte® Cytolight Green Lentivirus (no selection)	One vial: 0.6 mL	4513	SX5, S3, SX1

Neurite Dynamics and Neuronal Activity

Incucyte's novel, live-cell labeling reagents and purpose-built software quantify long-term changes in neurite dynamics and neuronal activity that enable continuous analysis of sensitive neuronal cell models.

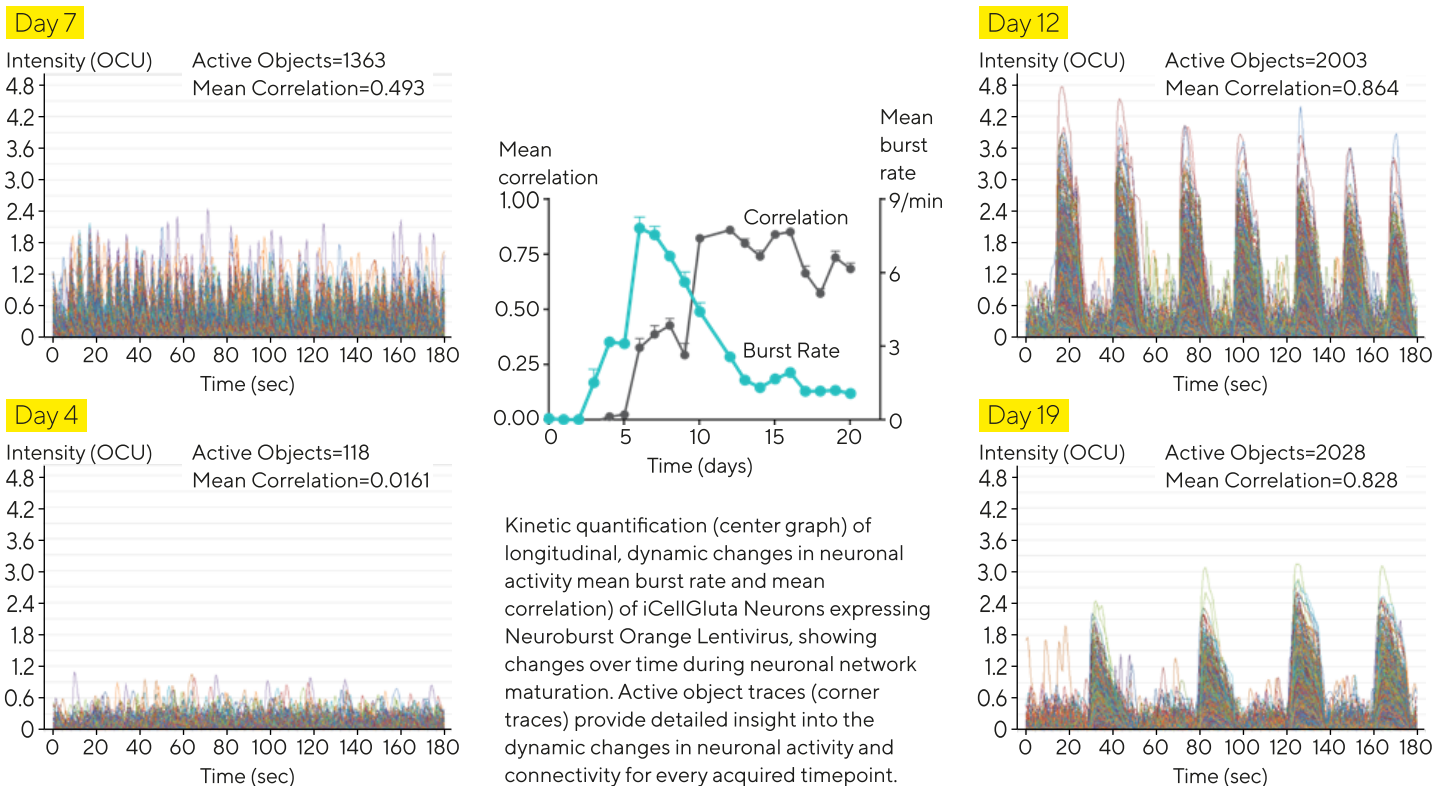
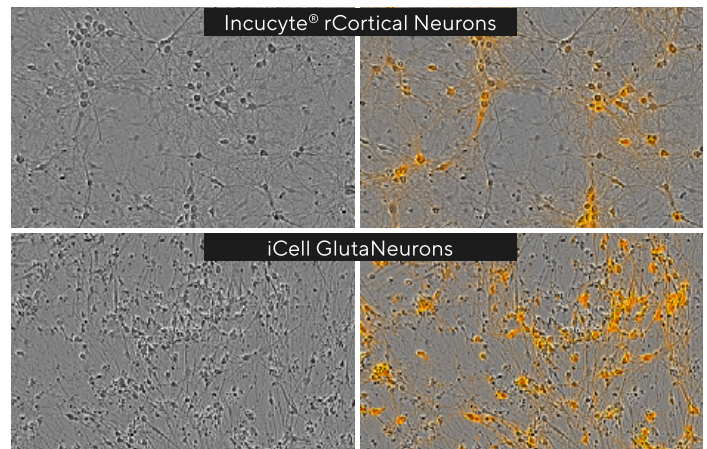
- Conduct long term studies of neuronal function with novel, non-perturbing fluorescent reagents.

- Capture transient events in your choice of cell model with non-invasive, repeated measurements of the same neuronal culture in physiologically relevant conditions.
- Analyze relevant morphological and functional metrics using intuitive, purpose-built Incucyte® software.

Application Spotlight: Neuronal Activity Assay

Access complex, neuronal activity and connectivity measurements from thousands of cells chronically to gain unprecedented functional insight into neuronal cell models using our novel Incucyte® Neuroburst Orange Lentivirus and Incucyte® Neuronal Activity Analysis Software Module.

Incucyte® rCortical Neurons and iCell GlutaNeurons (Cellular Dynamics International) express the Incucyte Neuroburst Orange Lentivirus, without perturbing the health and morphology of the cells.



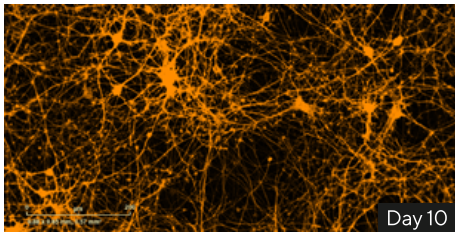
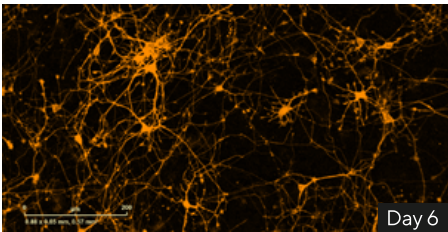
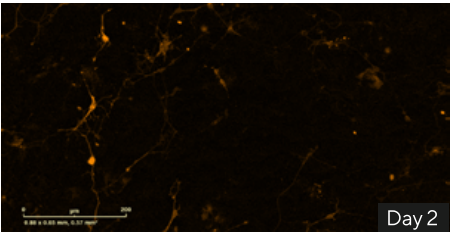
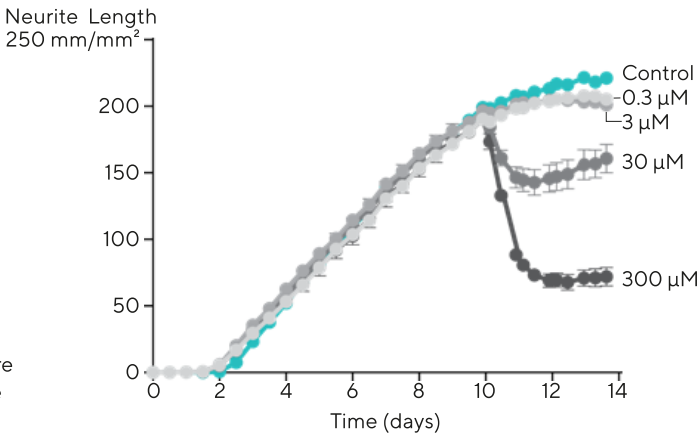
Application Spotlight:

Neurite Dynamics Assay

Generate kinetic, image-based and automated measurements using Incucyte® Neurotrack Analysis Software Module for continuous analysis of neurite outgrowth and stability – inside your incubator.

Incucyte® rCortical Neurons transduced with Incucyte® Neurolight Orange Lentivirus labeled cells cultured in the presence of Incucyte® rAstrocytes were treated with glutamate at day 10. Time course analysis of orange fluorescence neurite length reveals concentration-dependent treatment effects.

Neurite Length in Response to Glutamate



Ordering Information

	Product	Description	Cat. No.	Instrument Compatibility
Neuronal Activity	Record activity from over a thousand cells to study changes in neuronal network activity and connectivity.			
Software	Purpose-built acquisition and analysis software for the detection of calcium oscillations in 96-well plates.			
	Incucyte® Neuronal Activity Analysis Software Module	1 module	9600-0032	SX5, S3 for Neuroscience
Neuronal Activity Reagents	Fluorescently detect changes in activity using a novel genetically-encoded fluorescent calcium indicator.			
	Incucyte® Neuroburst Orange Lentivirus	One vial: 2 mL	4736	SX5, S3 for Neuroscience
	Incucyte® Neuroactive Orange Kit	One kit	4761	SX5, S3 for Neuroscience
Neurite Dynamics	Characterize neurite dynamics over time in mono- or culture models while assessing cell viability (refer to page 7, Annexin V Reagents)			
Software	Enables label-free or fluorescent analysis of neurite outgrowth, maturation and disruption in each well of a 96- or 384-well plates.			
	Incucyte® Neurotrack Analysis Software Module	1 module	9600-0010	SX5, S3, SX1
Neurite Labeling Reagents	Lentivirus reagents driven off a synapsin promoter provide homogenous expression of a fluorescent protein in target cells without altering cell function for live-cell quantification of neurite outgrowth.			
	Incucyte® Neurolight Orange Lentivirus	Two vials: 0.45 mL each	4808	SX5, S3 for Neuroscience
	Incucyte® Neurolight Red Lentivirus	Two vials: 0.45 mL each	4807	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Neuroprime Orange Kit	One kit	4760	SX5, S3 for Neuroscience
	Incucyte® Neuroprime Red Kit	One kit	4585	SX5 (configured with green/red optical module), S3, SX1
Neuronal Cells	Read-to-use cryopreserved cells from from the cortex of Sprague Dawley Rats at day 18 of gestation.			
	Incucyte® rCortical Neurons	One vial: 2 x 10 ⁶ cells	4753	Assay dependent
	Incucyte® rAstrocytes	One vial: 2 x 10 ⁶ cells	4586	Assay dependent

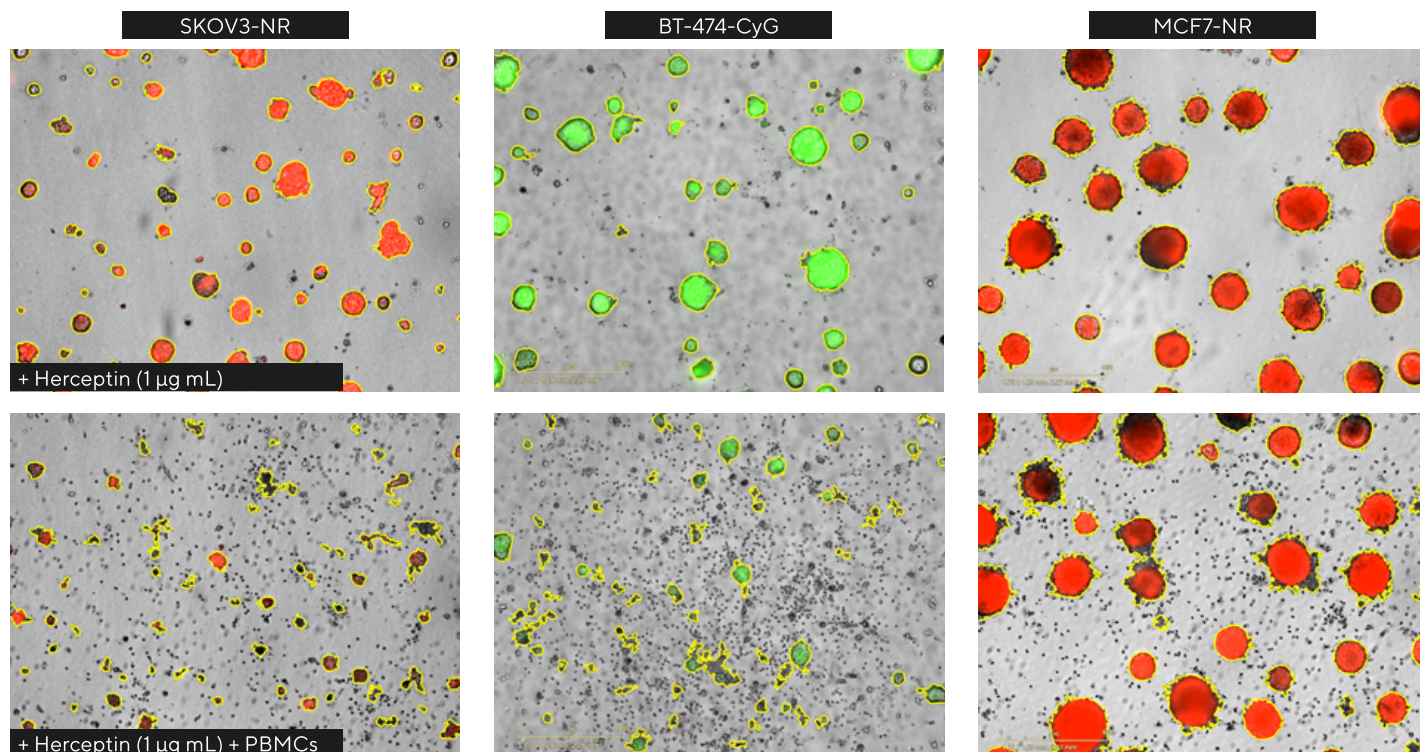
Spheroid Growth, Invasion, and Immune Cell Killing

The Incucyte® Spheroid Analysis Software Module is designed to acquire and analyze label or label-free spheroids to automatically monitor and quantify the formation, growth, shrinkage and invasive properties of advanced cell models in real time inside your tissue culture incubator.

- Flexible acquisition mode to enable studies of both single and multi-spheroid assays
- Enable long-term imaging with enhanced depth of focus Brightfield (DF® Brightfield) image acquisition
- Analyze relevant spheroid metrics using intuitive Incucyte® processing definitions

Application Spotlight: 3D Immune Cell Killing

Quantify and visualize immune cell-mediated killing of solid tumors in real time to using non-perturbing reagents and purpose-built, integrated Incucyte® Spheroid Analysis Software Module.



Tumor cells either stably expressing Incucyte Nuclight Red Lentivirus (SKOV3-NR, MCF7-NR) or Incucyte Cytolight Green Lentivirus (BT-474-CyG) were seeded on a bed of Matrigel® in flat bottom 96-well plates. Multi-spheroids were allowed to form (3 d) prior to addition of freshly isolated PBMCs (E:T, 5:1) and Herceptin. Incucyte Brightfield and fluorescence images (7 d; SKOV3-NR, MCF7-NR or 10 d; BT-474-CyG) compare the effect of Herceptin on spheroid proliferation in absence (top panel) and presence (bottom panel) of PBMCs (Brightfield outline mask shown in yellow).

Ordering Information

	Product	Description	Cat. No.	Instrument Compatibility
Spheroid Software	Analyze growth, viability and invasion of single spheroids in round-bottom multi-well formats or measure multiple spheroids in flat bottom plates to detect changes in growth and viability.			
	Incucyte® Spheroid Analysis Software Module	1 module	9600-0031	SX5, S3, S3 for Neuroscience, SX1
*Nuclear Lentivirus Labeling Reagents	Lentivirus reagents provide homogenous expression of a nuclear-restricted fluorescent protein without altering cell function for live-cell quantification of cell proliferation and viability.			
	Incucyte® Nuclight Green Lentivirus (puro)	0.2 mL	4624	SX5, S3, SX1
		0.6 mL	4475	SX5, S3, SX1
	Incucyte® Nuclight Red Lentivirus (puro)	0.2 mL	4625	SX5 (configured with green/red optical module), S3, SX1
		0.6 mL	4476	
	Incucyte® Nuclight Green Lentivirus (bleo)	0.2 mL	4626	SX5, S3, SX1
		0.6 mL	4477	SX5, S3, SX1
	Incucyte® Nuclight Red Lentivirus (bleo)	0.2 mL	4627	SX5 (configured with green/red optical module), S3, SX1
		0.6 mL	4478	
	Incucyte® Nuclight Orange Lentivirus (puro)	0.2 mL	4771	SX5, S3 for Neuroscience
Apoptosis Plasma Membrane Integrity Reagents	Membrane impermeable, highly-selective phosphatidylserine (PS) cyanine fluorescent dyes label PS exposed on the extracellular surface of cells undergoing apoptosis.			
	Incucyte® Annexin V Green Dye	One vial: 100 – 200 tests	4642	SX5, S3, SX1
	Incucyte® Annexin V Red Dye	One vial: 100 – 200 tests	4641	SX5 (configured with green/red optical module), S3, SX1
	Incucyte® Annexin V Orange Dye	One vial: 100 – 200 tests	4759	SX5, S3 for Neuroscience
	Incucyte® Annexin V NIR Dye	One vial: 100 – 200 tests	4768	SX5, S3 for Neuroscience
Cytoplasmic Dye Labeling Reagents	Live-cell cytoplasmic labeling dyes that freely pass through cell membranes and into cells, where they are transformed into a cell membrane-impermeant form, providing spatial context for cell-to-cell interactions.			
	Incucyte® Cytolight Rapid Green Dye	One vial: 100 – 1,000 tests	4705	SX5, S3, SX1
	Incucyte® Cytolight Rapid Red Dye	One vial: 100 – 1,000 tests	4706	SX5 (configured with green/red optical module), S3, SX1
Cytoplasmic Lentivirus Labeling Reagents	Lentivirus reagents provide homogenous expression of a fluorescent protein without altering cell function for live-cell quantification of spheroid growth and shrinkage.			
	Incucyte® Cytolight Green Lentivirus (puro)	0.6 mL	4481	SX5, S3, SX1
	Incucyte Cytolight Red Lentivirus (puro)	0.6 mL	4482	SX5 (configured with green/red optical module), S3, SX1

*Pre-labeled Nuclight cell lines are also available for purchase. Please visit shop.essenbioscience.com for more information.



Find out more
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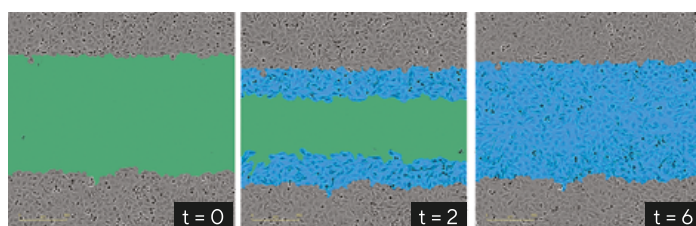
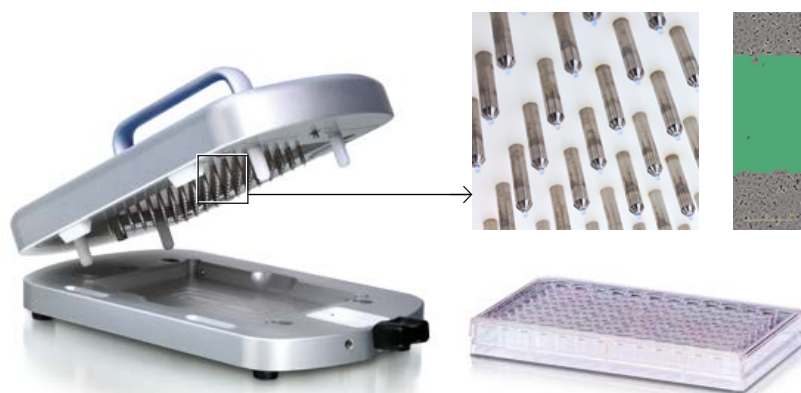
Invasion and Migration Assays

Incucyte® Scratch Wound and Chemotaxis Assays allow you to continuously monitor and analyze migration and invasion using purpose built consumables and automated software.

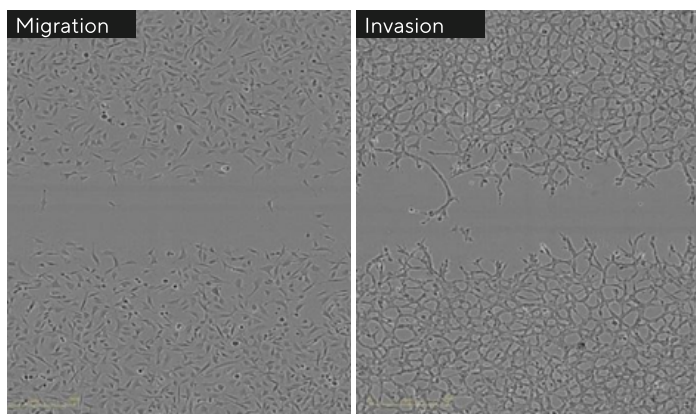
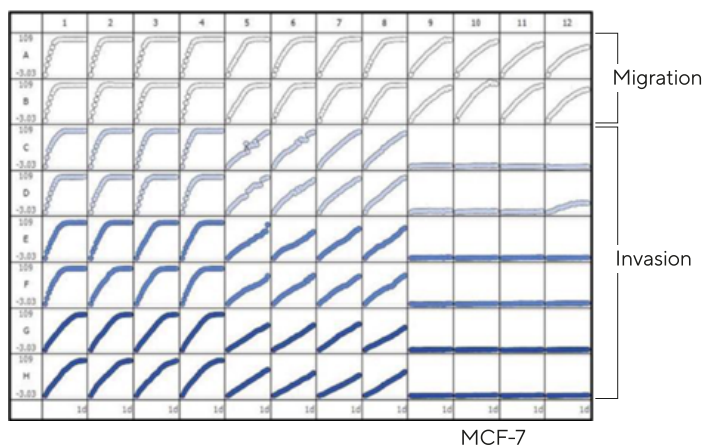
- Unlock your productivity with optimized protocols, peripherals and automated analysis
- Confirm cell movement and morphology with images and movies – all from inside your incubator
- Analyze relevant spheroid metrics using intuitive Incucyte® processing definitions

Application Spotlight: Scratch Wound Migration and Invasion Assay

Make label-free, quantitative measurements of migration and invasion, while visualizing morphological changes due treatment effects using the integrated Incucyte® Scratch Wound Analysis Software Module.



Incucyte® 96-well Woundmaker Tool creates 96 precise, uniform cell-free zones with the touch of a button in cell monolayers cultured in our Incucyte Imagelock plates. Wound closure is visualized and analyzed in real-time with the Incucyte® Scratch Wound Analysis Software Module.

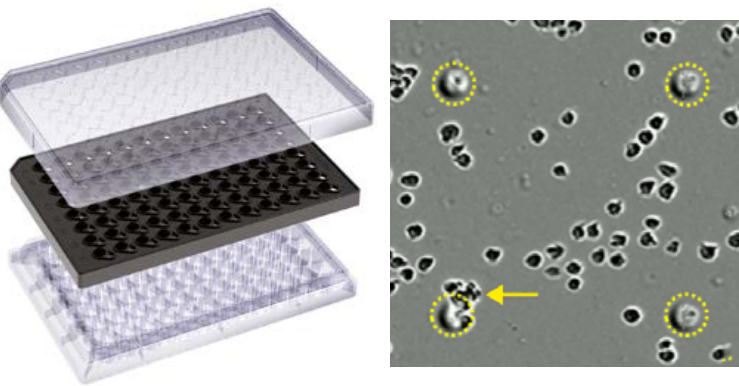


Microplate graph showing progression of differential cell migration and invasion of three different cell types using the Relative Wound Density metric. Representative images of HT-1080 fibrosarcoma cells highlights differences in morphology of cells during migration versus invasion.

Application Spotlight:

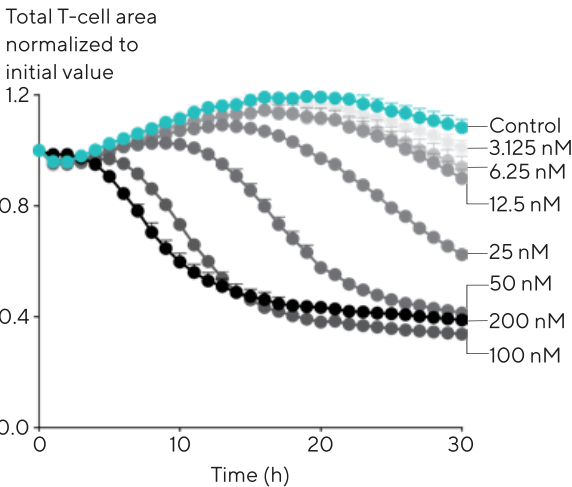
Incucyte® Chemotaxis Assay

Maximize your productivity and insight into dynamic cell movement with automated, label-free imaging and analysis using optically clear Incucyte® Clearview 96-Well Chemotaxis Plates and Incucyte® Chemotaxis Analysis Software Module.



Incucyte Clearview 96-well Chemotaxis Plates provide an optically clear surface for label-free imaging and analysis of chemotactic cell migration or invasion. Cells are added to the upper chamber and chemoattractant to the lower reservoir plate. Chemotactic transmembrane migration is automatically quantified as the cells migrate through laser etched pores (yellow circles) toward chemoattractant. Example data of concentration-dependent SDF-1α mediated chemotaxis of CD3/CD28 activated human T-cells.

Chemotaxis of Primary T-Cells to SDF-1α



Ordering Information

	Product	Description	Cat. No.	Instrument Compatibility
Scratch Wound Cell Migration and Invasion	Analyze 96-well Incucyte® Scratch Wound Assay images to analyze cell migration and invasion with or without labels.			
	Incucyte® Scratch Wound Analysis Software Module	1 module	9600-0012	SX5, S3, SX1
	Incucyte® 96-well Woundmaker Tool	1 wounder	4563	SX5, S3, SX1
	Incucyte® Cell Migration Bundle	1 Scratch Wound Analysis Software Module 1 96-well Woundmaker Tool	4493	SX5, S3, SX1
	Incucyte® Cell Migration/Invasion Bundle	1 Scratch Wound Analysis Software Module 1 96-well Woundmaker Tool 1 Biocision CoolBox Kit	4474	SX5, S3, SX1
	Incucyte® Imagelock 96-well Plate	Pack of 10 plates	4806	SX5, S3, SX1
		Pack of 50 plates	4379	SX5, S3, SX1
Chemotaxis Cell Migration and Invasion	Track and quantify label-free and fluorescently labeled chemotaxis cell migration and invasion in microplate format.			
	Incucyte® Chemotaxis Analysis Software Module	1 module	9600-0015	SX5, S3, SX1
	Incucyte® Clearview 96-Well Chemotaxis Plates	1 plate	4582	SX5, S3, SX1
		Pack of 10 plates	4648	SX5, S3, SX1

From our workhorse, the Incucyte® S3, to our economical Incucyte® SX1, to the newest member, the frontier-breaking Incucyte® SX5, we deliver real-time insights to simplify progress for labs of any size.

Analyze your cells for days, weeks or even months as they sit stationary in the stable environment of your tissue culture incubator. With Incucyte's user-friendly interface and robust instrument portfolio, any cell biologist can gain dynamic insights into the health, morphology, movement and function of their cell models.



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