Your Partner in Cell Research

OLS
OMNI Life Science

Cell Culture
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Your Partner in Cell Research

Cell Culture

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Cell Analysis

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Smart Solutions in Cell Research

OLS Life Science School
Increase your expertise

- Specialized workflow training
- Individual training
- Customized troubleshooting
- Supporting assay development
- Research consultation

The knowledge database of OLS's Life Science School offers continuing teaching and research material on latest trends of cell culture applications and solutions to address analytical challenges.

The contents are designed to support diverse audiences ranging from novice to experienced groups – become a member of this dynamic community and explore cutting-edge technologies. We work closely with several professional partners (Agilent Technologies, CELL Microsystems, Namocell, HiMedia, Proteintech, Slingshot Biosciences, Idea Bio-Medical, Innome) that form an integral part of our learning center.

Training programs cover particular topics such as immuno-oncology, stem cell research, drug discovery and many more. The courses will be dealt with in the following formats: open/on-site (site in Bremen) and at your desired location with a workflow option. This will include active participation of your employees and colleagues in the development of processes and standards; this increases compliance.

Webinars

Our team is excited to showcase a variety of life science applications of your choice to enhance your skillset on the latest technologies and learn from industry professionals. Subscribe to stay informed about our upcoming webinars. Alternatively, explore our virtual on-demand events at your convenience.

Featured On-Demand Webinars:

- Novel methods for the development of stem cell-derived 2D & 3D models
- Investigate immune cell killing in real-time
- A new era in Flow Cytometry- artificial cell controls
- Simplify your 3D cell culture
- Microvesicle detection and multicolour cytometry on the 32 parameter NovoCyte® Penteon™ benchtop flow cytometer
- High content imaging and its benefits in the preclinical stages
- Time-Lapse microscopy of spheroids with zenCELL owl microscope
- Integrated biobanking solutions
- Cell counting made easy and reproducible- advantages of CASY Cell Counter and Analyzer

Lab Course Highlights

Expand Your Knowledge in 3D Cell Culture

An in-depth introduction organoids and spheroids: Study the influence of the three-dimensional arrangement on cell functions, cell-cell interactions, interactions with the extracellular matrix (ECM) - this course is an efficient and quick start for a successful and reproducible 3D cell culture.

Theoretical and Hands-on Topics :

- Introduction to 3D cell culture: cells in the tissue, extracellular matrix, co-culture systems
- Types of 3D cell culture: spheroids, organoids, scaffolds
- Applications in drug discovery & development
- Recent advances in stem cell expansion: microcarriers, bioreactor-based approaches, encapsulation
- Trouble-shooting skills & case studies

Hands-on Experience in Flow Cytometry Essentials

Overview to the workflow of flow cytometry: Covers the principles of flow cytometry, operation of flow instrumentation, sample preparation, acquisition and analysis of data to analyze the biological and physical characteristics of a population of cells or particles suspended in a fluid stream.

Theoretical and Hands-on Topics

- The basic principles of flow cytometry methods
- Instrumentation: fluidics, optics, electronics
  Small particle analysis: microvesicle analysis &
- microbiological research
  Hands-on practice with sample preparation and
- multicolor staining, phenotyping
  Design of analysis templates and gating strategies
- Data acquisition and analysis: cytometer settings,
- compensation

Cell Counting

Wide range of cells

Precision

Quality control

Our Brand

OLS®
OMNI Life Science


Cell Culture
Counting
Cell Analysis
OLS
OMNI Life Science
Imaging
Flow Cytometry

CASY Cell Counter and Analyzer

Cell number, -volume and -aggregation in seconds

- Accurate and reproducible
- Simple and fast
- Cell number and volume
- Aggregates to small bacteria

Accurate determination of cell concentration, cell volume and viability for so many cell types, including cell lines, primary cells, PBMC, yeast and other more. No sample preparation needed.

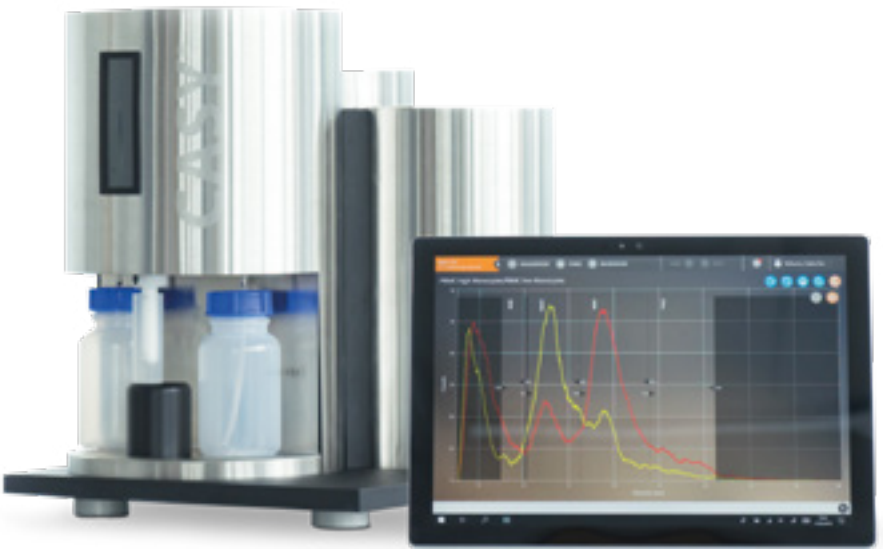
Even challenging samples like iPSC, with a high level of aggregation, do not require a special treatment prior measurement. The unique combination of Pulse Field Analysis and Electronic Current Exclusion (ECE) determines the volume of all aggregates and provides the total cell number without the need for prior singulation.

Counting with CASY Cell Counter & Analyzer supports the quality control of your cells with every measurement.

Contact us to understand how.

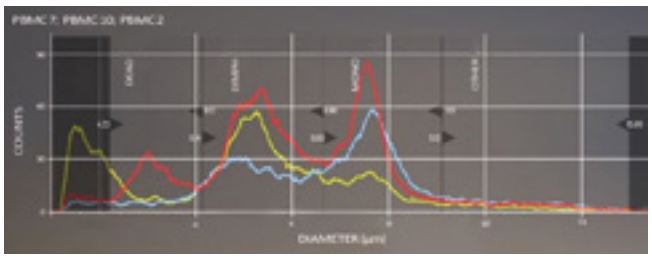
> ***"The CASY counter has been a key piece of equipment for the Oxford COVID-19 vaccine trial. We needed a reliable way to count cells from hundreds of blood samples on a daily basis. The CASY counter is a fast and accurate way of counting PBMCs. It is easy to use as it requires no sample preparation or staining, just add your sample to the CASYton buffer solution and it is ready to go! It is the gold standard of cell counting and we felt confident using it in our clinical trial due to its high reproducibility and accuracy."***

Helen Sanders
Lead Research Assistant- COVID-19 Vaccine Trials, Jenner Institute



Improved quality by counting with the CASY Cell Counter and Analyzer

CASY Cell Counter & Analyzer – always the best choice, whatever you want to analyze. From large stem cell aggregates to small yeast or even bacteria. It provides unmatched precision and reproducibility. It can be equipped with up to 3 different capillaries, each optimized for a certain group of applications.



CASY Cell Counter and Analyzer for better knowledge of your PBMCs

- Know your PMBCs
- Track T-cell activation
- iPSC – flexible handling, full control
- Primary Cells – not a challenge
- Insect cell / Baculovirus – stop before they burst
- Erythrocytes and Platelets
- Saccharomyces cerevisiae
- Algae – watch them bud
- Culturing bacteria and desperate?
- Fungi spores – ever wondered if you have haploid and diploid spores?
- How to improve counting pollen?
- *Trypanosoma* or *Leishmania*

Cell Culture

Incubator and bioreactor

Media, sera, supplements

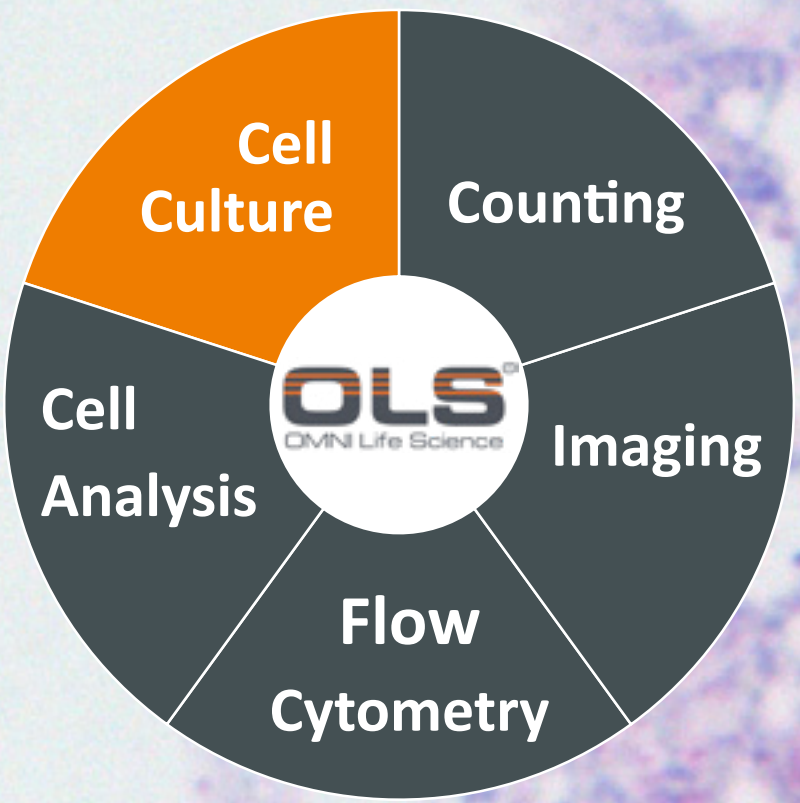
Cytokine and growth factors

Our Brands

OLS OMNI Life Science

HIMEDIA FOR LIFE IS PRECIOUS

proteintech®


Cell Culture
Counting
Cell Analysis
OLS
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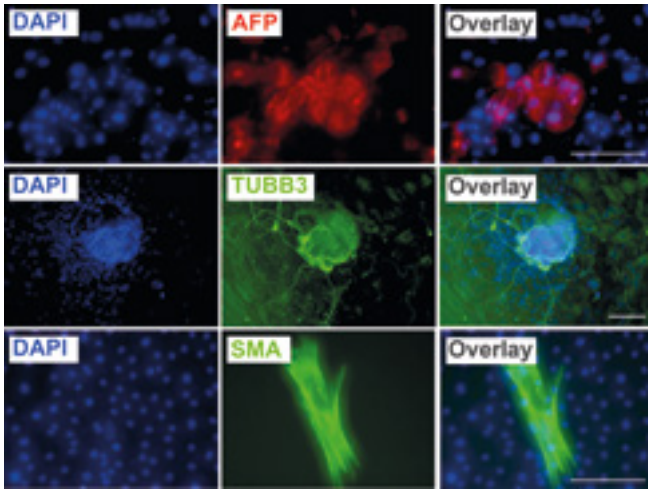
Imaging
Flow Cytometry

CERO 3D Incubator and Bioreactor

Simplify your 3D cell culture

- Intuitive
- Standardized
- Flexible
- Modular

The CERO 3D Incubator & Bioreactor is a new, revolutionary instrument creating an optimal cell culture environment. It offers a special 3D cell culture technology that monitors and controls temperature, pH and carbon dioxide levels. Indeed, this is an ever-evolving a state-of-the-art dynamic culture system that accelerates your processes , reduces costs and hands-on time and allows multiplexing. It provides optimal nutrition, gas diffusion thus increasing size and lifespan of your cultures.



iPSC differntiation into all three germ layers
„A reproducible and versatile system for the dynamic expansion of human pluripotent stem cells in suspension; Biotechnol. J. 2015, 10, 1589–1599"

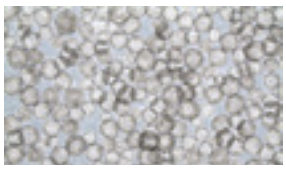
"Cultivating hepatocyte spheroids in CERO improves expansion, differentiation, maturation, and heptic virus infection considerably compared to monolayer culture. Our research takes advantage of healthy cells even from long-term cultures in CERO. Moreover, we are now able to perform 3D long-term culture of human tissue specimen in CERO – a paradigm shift."

Prof. Dr. Heikenwälder
Chronic Inflammation and Cancer,
German Cancer Research Center (DKFZ),
Heidelberg, Germany.

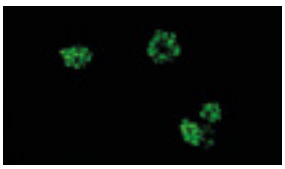
CERO 3D Incubator and Bioreactor ensures up to 100.000 organoids in one CEROtube in optimal cell culture conditions

Stem cells and organoids: The CERO 3D Incubator & Bioreactor offers a comprehensive solution for stem cell expansion projects in biobanks, drug discovery, toxicity testing and regenerative medicine. By leveraging scale-up and automation platforms, it simplifies the process while reducing costs significantly. This makes it an ideal choice for those looking to make their research more efficient without sacrificing quality or results.

- Organoids
- Spheroids
- Suspension Cells
- Punch Biopsies

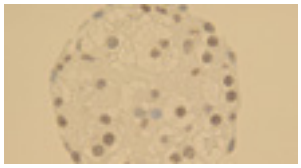


Automated iPS Spheroid culture workflow. Bright field as uniform spheroids

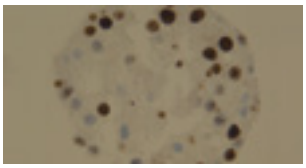


OCT4 positive iPSC derived EB´s (green).

Hepatitis Virus Research Model - Spheroids: The advent of long-term three dimensional cell culture holds a great promise in disease modeling and drug discovery. The cells kept in a 3D environment have the ability to mimic tissue-like structures more efficiently thanin traditional 2D monolayer cultures. However, many scientist are struggling with many technical limitations when working with spheroids in long-term cultures.



Spheroids from HepG2 cells cultivated in CERO 3D for >80 days. Cells are negative for apoptosis marker Casp.cl.3



Spheroids from HepG2 cells cultivated in CERO 3D for >80 days. Cells are still proliferating (Ki.67-brown nuclei)

Streamline the cancer research: Cancer spheroids are complex three-dimensional cell aggregates that can improve preclinical cancer drug development. However, generating them requires standardized and reproducible cell culture conditions. The CERO 3D incubator and bioreactor provides a solution for long-term monitoring of spheroid growth and behavior, enabling the generation of accurate and reliable preclinical cancer models.

- Maximized viability
- Long-term culture > 80 days
- Improved maturation
- Long-term proliferation
- High homogeneity
- Reliable and consistent results

CEROplate

Simple process for 3D aggregates

- Uniform spheroid
- High-throughput applications
- Organoid formation

The CEROplate, ultra-low attachment simplifies the process for growing 3D aggregates. It features clear wells with U-bottom to make sample monitoring simple. The unique well geometry of the microplate aids in the formation of an unattached, round-shaped, single spheroid or organoid in the center of each well. This allows you to assay and analyze your 3D aggregates in the same plate without transfer. The CEROplates are compatible with existing readers, imaging systems, liquid handling and automated workstations.

Media, Sera, Supplements, Consumables

We are there to assist you at every step

- Broad range of media and reagents
- Customized stocking
- Easy and constant delivery

Our portfolio offers a broad range of classical media, balanced salt solutions, reagents, sera, plasticware, biochemicals and many more – anything required for cell culture. We meet the evolving needs of biologists by consistently upgrading and increasing our product profile.

Broad range of classical media, sera and supplement

Classical Media

Broad range of ready-to-use media

- Classical media
- HiGlutaXL Medium
- LoSera Medium
- Insect media
- CryoXL Cell Freezing Media

The entire portfolio of classical media is best fitting for cell biology, molecular biology, microbiology and plant tissue culture. All media are also available in powder form to meet environmental needs.

Supply your cells with optimized cell culture media.

Sera

Choose the right sera - different origin and grade

- Range of origins
- Consistency in cell growth
- Customized reservations

Research Grade Fetal Bovine Sera: An economical alternative for your research. This sera helps to meet your research needs and budget requirements, offering the best value for basic cell culture, specialty research, and specific assays.

Fetal Bovine Sera: Certified serum for commercial applications. Suitable for many cell culture applications, this serum is comprehensively tested for performance and quality assurance. This premium FBS grade features sterility test, comprehensive biological testing and includes an extensive array of biochemical profile.

All lots of sera undergo comprehensive quality control testing. Minibot™ - Individually packed 50ml bottles. Cut the time of thawing, aliquoting, labelling and reduce the risk of contamination.

Sera of any feasible grade and origin to meet all your requirements.

Reagents

A comprehensive overview of essential needs in a laboratory

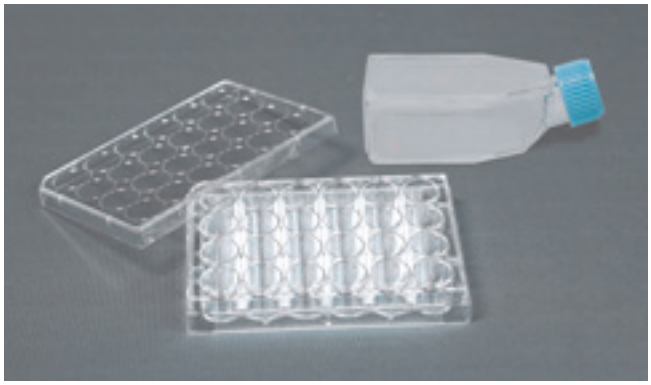
- Cell dissociation reagents as Trypsin, Accutase or animal-free EnVzyme
- Mycoplasma detection and elimination kits
- Antibiotics
- Buffers

Cell Culture Plasticware

A complete portfolio of everything required in your workflow

- Serological pipettes
- Centrifuge tubes
- Cryovials
- Multiwell-plates
- Culture flasks and dishes
- HiFactory chambers
- Roller bottles

Most culture vessels are available with surface-treatment for adherent cells and non-treated for suspension cells.



Serum-free Media for Bioproduction and Virus Production

Streamline production with serum-free, all-in-one media

- CHOin
- HEKin1 for HEK293 cells
- BHKin1 foot-and-mouth disease vaccine production
- CELLin1 for MDCK, MDBK, PK-15, Vero & MRC-5
- STEMin1 mesenchymal stem cells

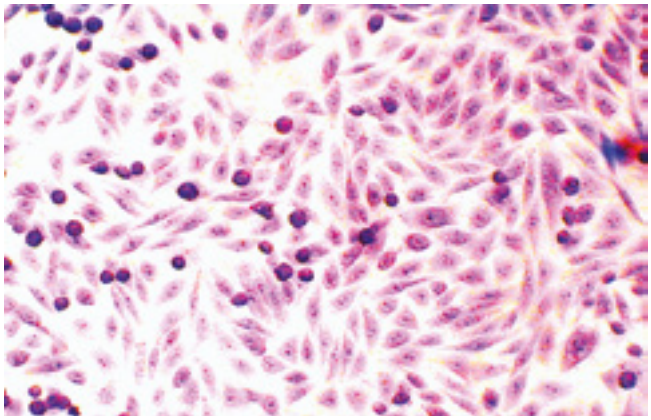
These media are serum-free and animal component-free and optimized for the growth and expansion of the respective cells under serum-free conditions. They are developed for support of high-density cultures.

CHOin1 Bioproduction Platform

Serum-free media for specific cell types and applications

- CHOin1 serum-free medium
- CHOin1 feed supplement
- Serum-free supplements

Comprehensive range of clone-specific serum-free, protein-free media, feed supplements and bioproduction service. This bioproduction platform entails the development of clone-specific media & feed, the analysis of medium usage and the optimization of medium. We also assist in the process development from clone to protein.



Optimize the growth of your CHO cells to maximize bioproduction efficiency

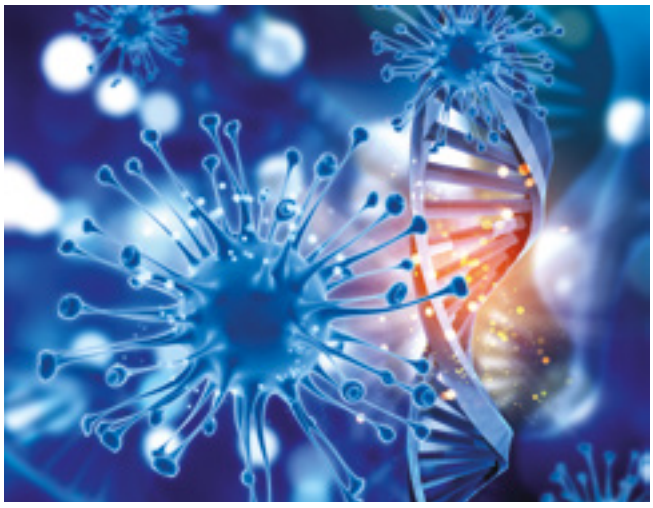
HEKin1 Serum-free Media

Save time with simplified purification

- High reproducibility
- Scalable for flasks and bioreactors
- High cell density

HEKin1 is a serum-free and animal component-free media optimized for the growth and expansion of HEK293 cells under serum-free conditions.

A complete media that will support growth of HEK293 cells without further supplementation. It has been tested for its ability to support high-density cultures of HEK293 cells. It is easily scalable for use in shake flasks & bioreactors. All media are manufactured in GMP and ISO9001 certified facility.



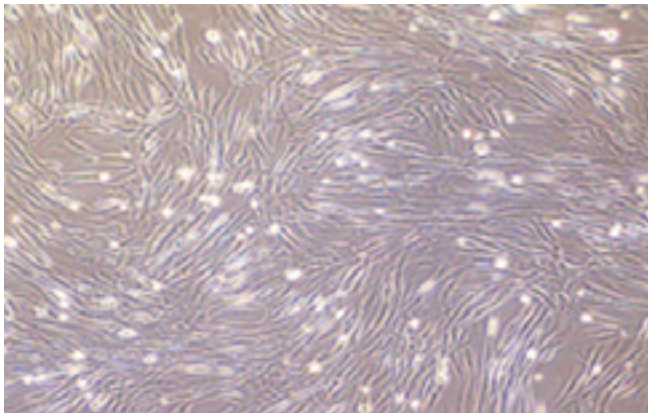
Improved cell density boosts the HEK-based vaccine production for Coronavirus and other viruses

STEMin1 System for Human Mesenchymal Stem Cells

A complete, defined, serum-free, xeno-free system

- STEMin1 medium
- STEMin1 attachment solution
- STEMin1 recombinant dissociation solution
- STEMin1 neutralizer
- FREEZin1 cryopreservation

Maintain trilineage differentiation potential through long-term passaging. This system enhances the reproducibility of your stem cell cultivation and enables the stem cells to retain any markers. Superior cell expansion capacity allows for faster growth while assuring great purity. Manufactured in GMP, ISO 13485- and ISO 9001-certified facility.



All-encompassing workflow for the cultivation, expansion and cryopreservation of MSCs

CELLin1 Virus Production Medium

Chemically defined, animal component-free, serum-free

- Regulatory concerns minimized
- Scalability in 2D and 3D
- Customization

This advanced all-in-one medium enables the up-scaled cultivation of MDCK, MDBK, PK-15, Vero and MRC-5 cells for the increased production of viral vaccines.

CryoXL Cell Freezing Media

Best for cell lines, primary, stem cells and serum-free cells

- Ready to use
- Improved recovery
- High viability

CryoXL cryopreservation media are ready-to-use freezing media optimized for effective cryopreservation of your cells

- Improved cell recovery for regular and sensitive cell lines
- Animal origin free and serum-free formulation
- Developed to reduce regulatory hassles
- Optimized to maintain differentiation potential
- Developed for sensitive hybridoma cells preservation without affecting biochemical functions
- Optimized for MSCs cultured in STEMin1™
- Maintains trilineage differentiation potential

Reliable viability demands an effective preservation and a gentle recovery of your cells during thawing

Cell Dissociation Reagents

Cell & tissue dissociation products

- Animal origin and animal origin-free
- High viability
- Retained surface markers

Cell dissociation and detachment products are required to perform passage of a confluent monolayer cell culture or to isolate the cells from a tissue sample. Dissociation enzymes break up the extracellular matrix and bring out single cells with highest viability.

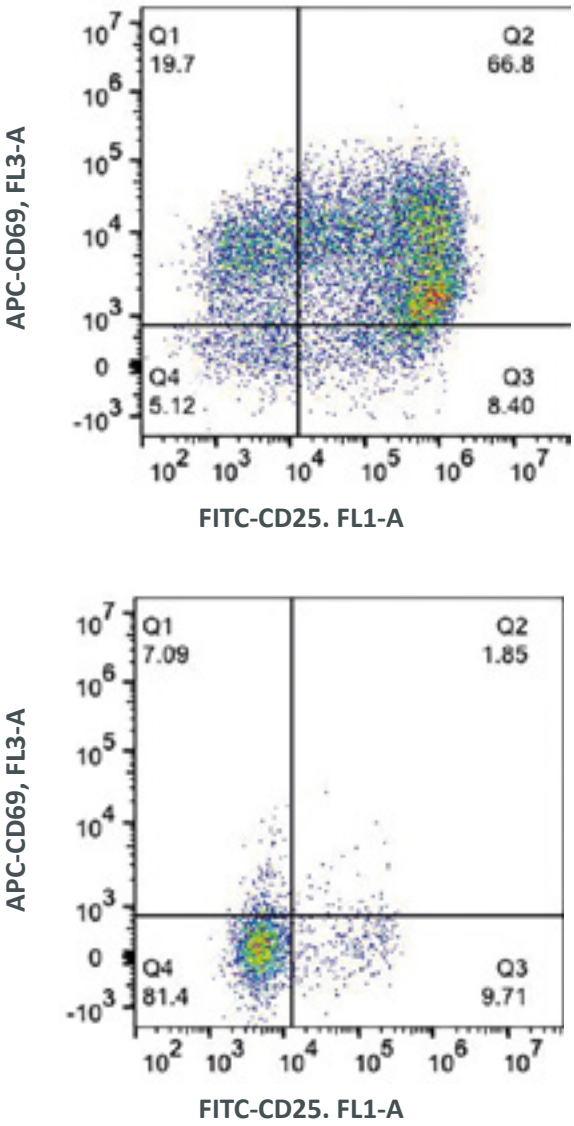
- EnVzyme- vegetable origin
- Milder than trypsin and gentle on cells
- RecombIN- alternative for bovine or porcine trypsin
- TSE-BSE risk eliminated

Human CD3/CD28 T Cell Activation Beads Kit

Gentle and effective T-cell activation in vitro

- Highest activity compared to other methods
- Magnetic beads are easy to remove after activation
- Simple protocol – no lengthy preparation involved

This kit contains biotinylated anti-human CD3 and CD28 antibodies, as well as cell culture grade Streptavidin magnetic beads. After Streptavidin magnetic beads are loaded with biotinylated CD3/CD28, they mimic antigen presenting cells and can activate resting T lymphocytes from human PBMCs or purified T lymphocytes. After 2-3 days of activation, magnetic beads can easily be removed by magnet. Further T lymphocytes expansion will require human cytokines for in vitro culture.



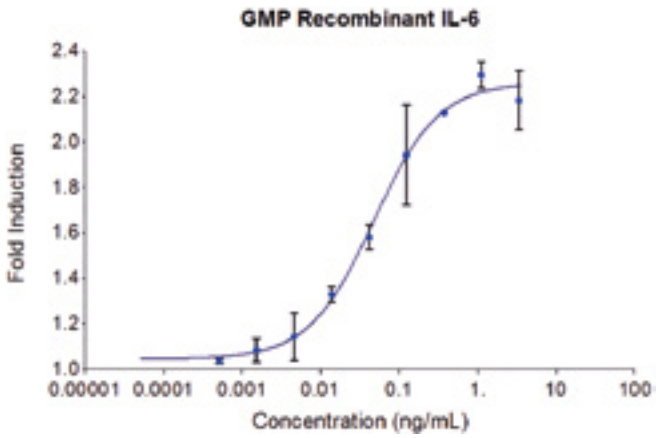
2.5x10^6 human PBMCs in 0.5mL cell culture media are activated by Human CD3/CD28 T Cell Activation Beads Kit for 3 days at a 1:1 bead to cell ratio. Unstimulated cells (left panel) and stimulated cells (right panel) are stained with fluorescence flow antibodies APC-CD69 and FITC-CD25. Total viable lymphocytes are gated. The activation effect of the Human CD3/CD28 T Cell Activation Beads Kit was tested on human PBMCs from three different donors.

HumanKine Research Grade Cytokines and Growth Factors

Pure, potent and stable cells

- Animal component free, endotoxin free, xenoFree
- High batch to batch consistency
- Authentic human proteins
- cGMP grade available

HumanKine® cytokines and growth factors are authentic human proteins, expressed in HEK293 cells, owning native human conformation & post-translational modifications to optimize biological activity. HumanKine® recombinant proteins offer high bioactivity, stability and lot-to-lot consistency and are used for cell culture, cell media, wound healing, and cell therapy research. They are endotoxin-free, Xeno-free, Tag-free and Carrier-free. HumanKine® cGMP (current Good Manufacturing Practice) recombinant proteins are manufactured and validated in accordance with ISO 13485 quality management system and are compliant with cGMP.



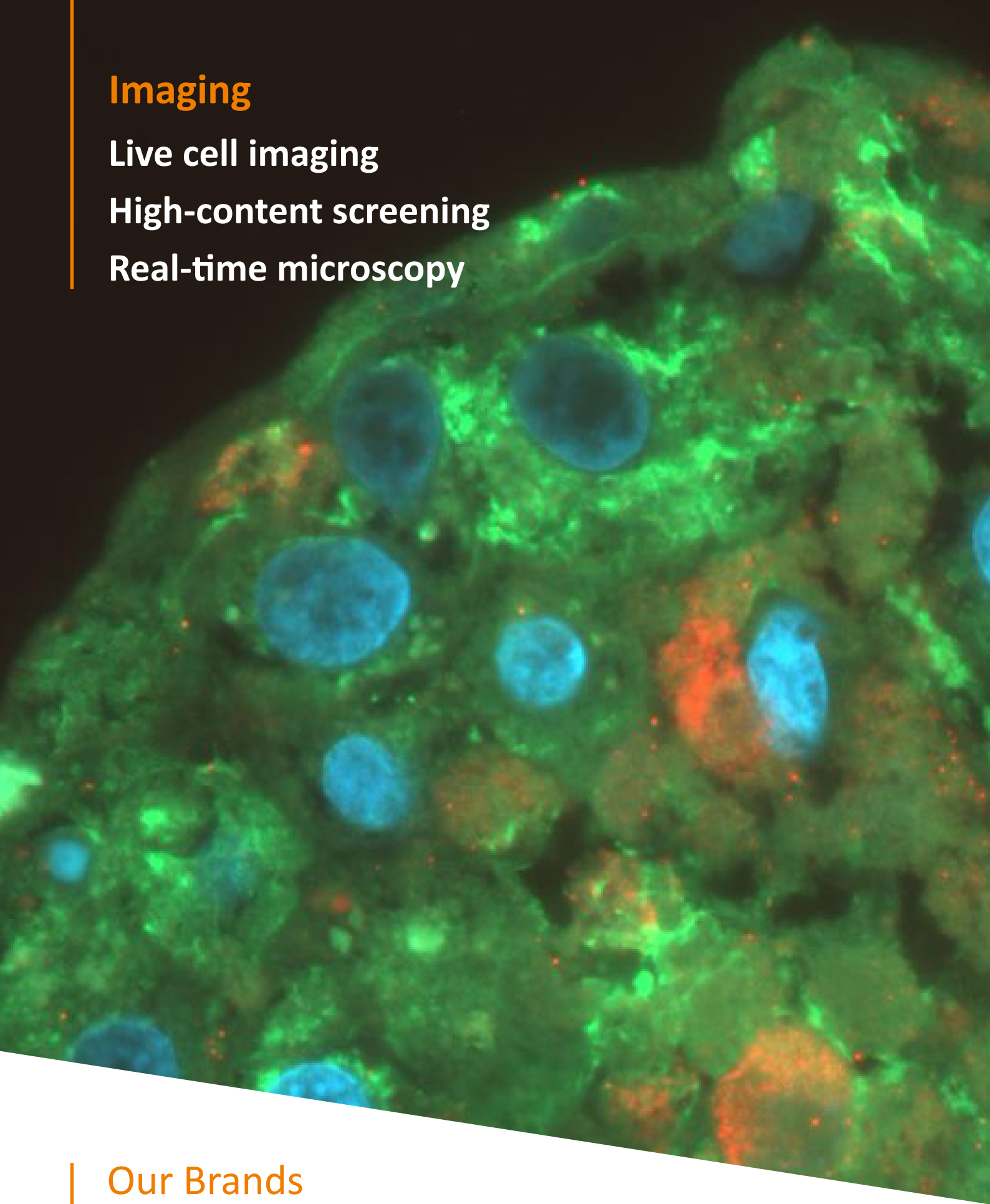
GMP Recombinant human IL-6 (HZ-1019-GMP) stimulates dose-dependent proliferation of the 3G12B10 hybridoma cell line. Cell number was quantitatively assessed by PrestoBlue® Cell Viability Reagent. 3G12B10 cells were treated with increasing concentrations of GMP recombinant IL-6 for 96 hours. The EC50 was determined using a 4-parameter non-linear regression model. Activity determination was conducted in triplicate on a validated bioassay. The EC50 range is 0.03-0.24 ng/mL.

Imaging

Live cell imaging

High-content screening

Real-time microscopy



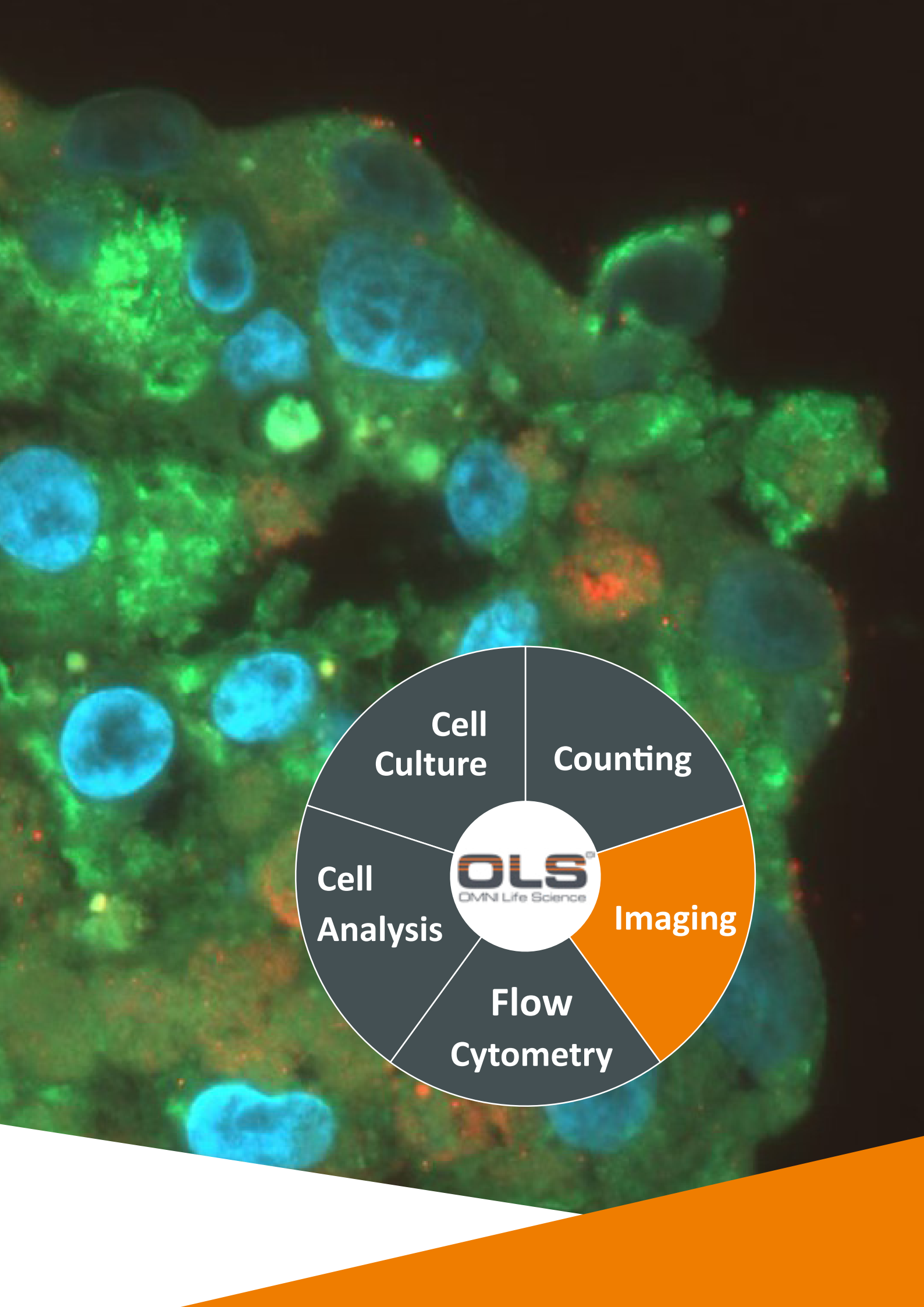
Our Brands

IDEA Bio-Medical Ltd. Seeing Better

zenCELL owl

proteintech®

a4cell


Cell Culture
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WiScan Hermes High-Content Imaging System

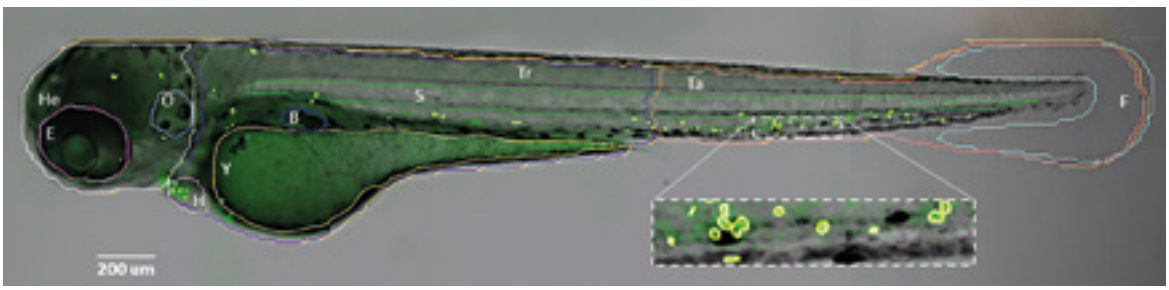
Ideal solution for high-content and high-throughput screening

- High-throughput
- High quality images
- High speed
- Flexible and versatile

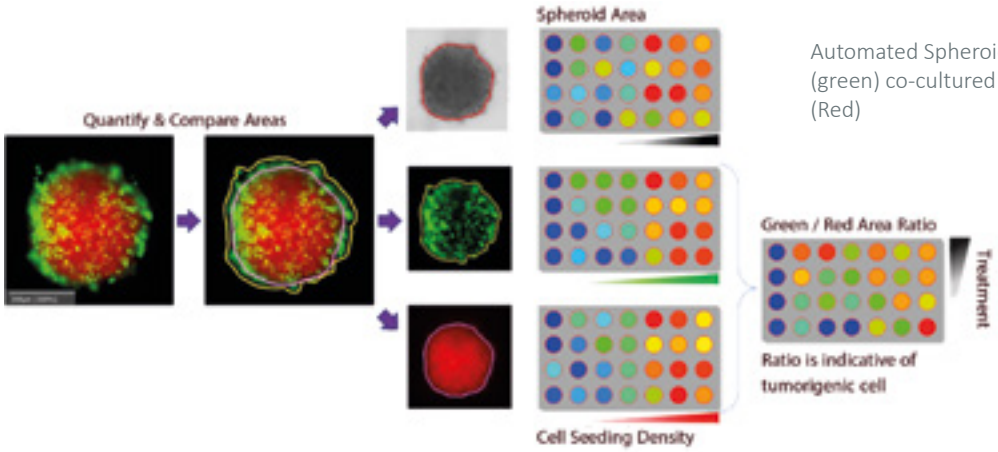
Dedicated to high-content imaging and analysis for image-based assays in cell biology studies and drug discovery processes, the High-Content Imaging System brings publication quality images at high-throughput speeds to the research lab. Its built-in applications are extremely easy to use, and are operated at the push-of-a-button. Hermes is a sophisticated and flexible system, offering fluorescence colors, bright field option, laser based photo bleaching and a large range of air objectives and oil objectives. The system is ideal for a large variety of applications, including phenotypic screening, zebrafish models, spheroids and 3D models, rare-event detection, cytometry, cell count (cytotoxicity, proliferation), protein expression, cell morphology, cell cycle, protein translocation, intracellular vesicles quantification, Golgi intracellular distribution, Mitochondria characterization, cytoskeleton structure, nuclear and sub-nuclear structures characterization, bacteriology and Iimmunology.

WiScan Hermes System-easily generate publication-quality images

- Zebrafish automatically quantifies area, fluorescence intensity, and count of whole fish and internal organelle properties, including eye, yolk, spine, tail, brain, internal granules and more.
- Unbeatable throughput: image & analyze 96 larvae within minutes
- Image & analyze: label-free or fluorescently tagged fish and internal organelles
- Keep images in focus from head to tail with images acquired in single plane, Z stack and projections
- Multiple levels of magnification available from 2X up to 60X with high NA



Fish organs & regions automatic segmentation



Automated Spheroid analysis workflow. Tumorgenic cells (green) co-cultured with normal tissue-specific fibroblasts (Red)

Spheroids and 3D imaging

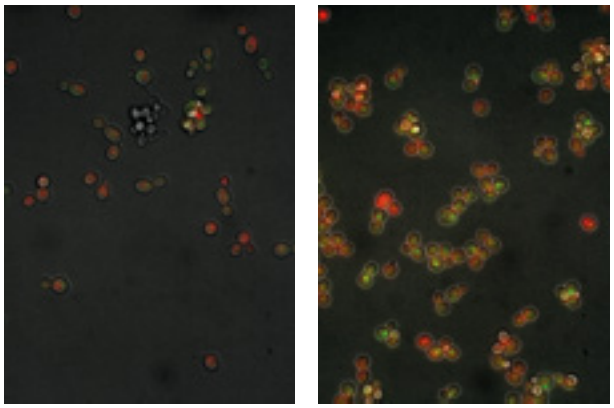
- Capture properly focused images of spheroids in an ideal growth environment in U-shape bottom plates
- Easily spot spheroids using unique methodology of rapid scanning for spheroid localization
- Simple and labour reducing automated analysis of spheroid relevant features
- Monitor spheroid growth over over the entire plate using plate view
- Classify spheroids of specific, desired features using sub-population tool
- Apply live/dead spheroid assay to monitor viability of 3D tumour spheroids
- Visualize spheroid morphology over a range of depths using flexible multi-plane definitions

Detection of Rare Events in Live Cells

- Sophisticated detection and readouts techniques for real-time analysis
- Scanning time is kept to a minimum
- No additional data mining or image analysis is required to identify cells of interest in high resolution images
- No wasted data storage of unimportant cells
- Allows researchers to obtain meaningful data regarding the kinetics of their biological system without investing any extra resources or cost
- Real-time monitoring so that the relevant signal is never overlooked
- Better statistical precision than cross-well comparisons of standard end-point imaging studies by applying quantitative, real-time analysis in each of the wells

Fast, automated imaging with oil immersion objectives, shorter exposure, brighter image, higher resolution

- Super-resolution radial fluctuations (SRRF) live-cell imaging
- Fluorescence in-situ hybridization (FISH)
- Microbiology, virology & yeast studies
- Spot / foci / granule visualization
- Mitochondria, Endoplasmic Reticulum, Cytoskeleton and focal adhesion imaging
- Unique hardware automatically adds immersion oil to objectives
- No user intervention; No oil spilling
- Autonomous, rapid image acquisition for:
  - Full-plate scanning
  - Time-lapse imaging of live cells
- Optimized autofocus, X, Y, Z motion and long-duration oil capsules for easy maintenance



Brightfield and fluoresence overlay- Oil Objective (60x, 1.4NA) - Exposure (ms): Green 50, Red 200- Air Objectiv (60x, 0.9NA) Exposure (ms): Green 120, Red 500 - Green/Red same contrast levels; acquisition: Same illumination & camera gain

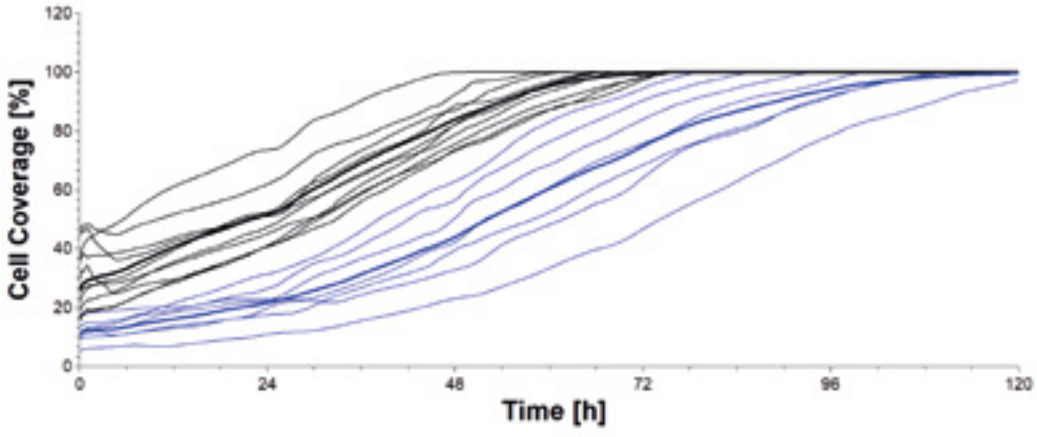
zenCELL owl
Microscope for incubators

- Compact
- 24 channels
- Remote monitoring
- 24/7 data

The zenCELL owl is your 24 channels microscope for the incubator with automated remote monitoring of cell cultures. The compact and lightweight device ensures space-saving and uncomplicated use in the incubator. Data capturing, display and analysis is performed 24/7 in real time. Cell cultures can be comfortably monitored from your PC. The zenCELL owl is perfectly suited for routine and basic applications to save working time and create a greater amount of information about your cell cultures.

Simultaneous analysis of 24 cell cultures enables users to examine different test conditions at the same time and to compare them directly. This allows for a statistical evaluation of research data.

Applications:
- Cell culture monitoring
- Scratch assays
- Cytotoxicity assay
- Spheroids



Cell coverage of cultures with different cell count. Black: high cell count, blue: low cell count.
Thick lines represent mean value of each condition.

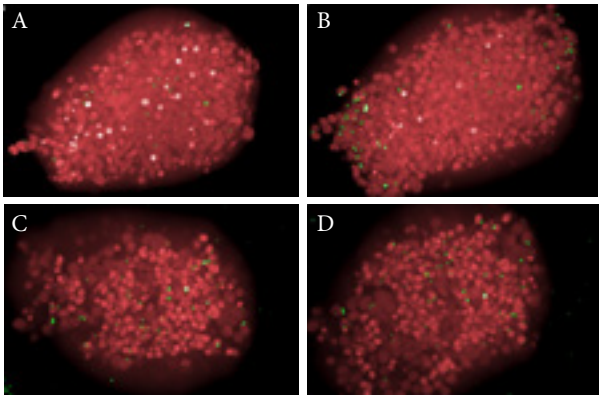
SPAchip Technology

Advanced technology in living single cells

- Real-time monitoring
- Easy-to-use
- Cost-effective
- Precise and accurate

With the aim of reducing the use of animal models, there is a growing trend towards using alternative methods for toxicological and pharmacological testing. Introducing SPAchip® technology - a revolutionary solution for monitoring cellular pathways in real-time! Our intracellular silicon microchips are designed to be easily internalized in living cells without inducing physiological changes or affecting cell viability.

SPAchip® technology is based on intracellular silicon microchips printed with multiple fluorescent probes to analyse and monitor cellular pathways at real time. The cell-based assays based on SPAchip® are compatible with High Content Screening platforms and imaging analysers. The cutting-edge technology enables researchers to effectively monitor and analyze cell behavior during disease progression. With our scientific approach, we strive to empower researchers with the insights they need to make significant strides in the field of cellular biology.



HEK293 (human embryonic kidney cell line) spheroid formation Timelapse of HEK293 cell line (from Human Embryonic Kidney) spheroid formation with internalization of CytoCHECK SPAchip® pH Single-Detection Kit Green. DRAQ5™ in red stained live nuclei. SPAchip® technology allows pH measurement at the different time points of spheroid formation. HEK293 cells were incubated with CytoCHECK SPAchip® pH Single-Detection to allow spheroid formation at 24 A), 28 B), 48 C), and 52 hours D).

Products to advance your research:

- **CYTOCHECK SPACHIP® PH GREEN SINGLE-DETECTION KIT:** Measures intracellular pH levels by changes in fluorescence intensity. Maximizes the performance of most imaging analyzers.
- **CYTOCHECK SPACHIP® PH RED SINGLE-DETECTION KIT:** Measurement of intracellular pH levels by changes in fluorescence intensity, which allows a more comprehensive study of the living single-cell physiology. Its signal in red makes it feasible for applications with high green autofluorescence such as organoids cultures.
- **CYTOTRACK SPACHIP® PH DUAL-DETECTION KIT:** The product combines these two pH detection technologies so that each of them is internalized in one cell line for co-culturing applications. While tracking the two different cell subtypes and their interaction, measurements of intracellular pH levels by changes in fluorescence intensity are feasible at real time.
- **CYTOCHECK SPACHIP® CALCIUM SINGLE-DETECTION KIT:** Allows measurement of intracellular calcium levels by changes in fluorescence intensity, which allows a more comprehensive study of the living single-cell physiology and maximizes the performance of most of imaging analyzers.

Cell Analysis

Live cell analysis

Tissue dissociation

Immunoassays

Our Brands

OLS OMNI Life Science

proteintech

CELL Microsystems


Cell Culture
Counting
Cell Analysis
OLS
OMNI Life Science
Imaging
Flow Cytometry

CellRaft AIR System

One platform for automatically image, identify and isolate

- Improved cell viability
- High vitality of single cells
- Powerful analysis software

Generate phenotypically verified single cell-derived colonies in as little as 72 hours, with just 15 minutes of hands-on time, and 10 to 50x the number of clones compared to traditional methods. Cells share and enrich a common culture media while remaining separated. This contiguous media approach is much more favorable and dramatically increases cell viability.

Eliminate the need for trypsin, fluidics, or limiting dilution while getting more clonal colonies.

The CellRaft AIR System is an integrated platform that uses proprietary CellRaft technology and CellRaft Arrays to maintain cells in an unperturbed state, leading to improved viability of cells, highly proliferative colonies, and superior clonal outgrowth that provides a dramatic increase in the number of clones available for downstream applications.

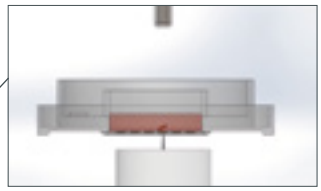
- Obtain 10- 50X more viable monoclonal colonies or organoids.
- Grow single cells in a flask-like environment, without physically separating them, eliminating perturbation to cell physiology and ensuring viability and vitality of single cells as they develop into clones.
- Identify cells of interest using powerful, label-free brightfield analysis software with user-defined parameters.
- Automatically and gently isolate CellRafts containing cells or colonies of interest for downstream endpoint analysis or clonal expansion.

Applications:

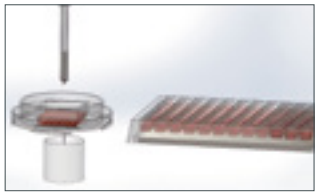
- Organoids
- Cell line development
- Stem cells
- iPSC
- CRISPR
- Genomics

Rapid Imaging, software-guided identification and automated isolation by the CellRaft AIR system- an integrated platform

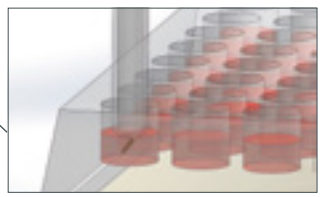
The desired microwell with cells is dislodged from the array



The wand picks up the microwell using a magnet



The wand places the microwell with the cells in the 96-well plate



TIGR Tissue Grinder & Dissociator

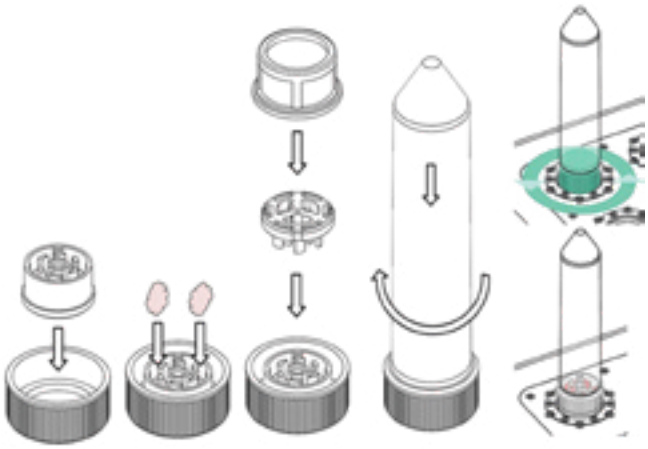
Tissue dissociation in less than 5 min

- Enzyme free
- High-throughput with 4 slots
- Integrated cell stainer
- Single pack tubes

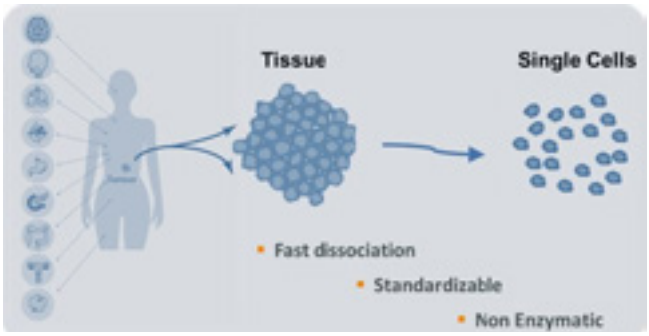
The TIGR Tissue Grinder & Dissociator provides a unique and effective concept to generate single cells. Enzyme-free and purely mechanical, it avoids cleavage of membrane proteins. The dissociation needs less than 5 min regardless. 4 slots, which can be operated in parallel, allow high-throughput tissue dissociation. The specially designed tubes, are available in sterile single packs reducing the risk of contaminations.

Up to 400mg tissue per tube are dissociated by a combination of cutting and grinding steps. The single cells are finally obtained by centrifugation through an integrated cell strainers with 40, 70 or 100 µm.

TIGR Tissue Grinder & Dissociator offers a fast and simple workflow from tissue to single cells



TIGR Tissue Grinder & Dissociator principle:
The grinding unit interlocks with rows of teeth that can be moved against each other. Free rotation of the grinding teeth draws the tissue sample into the free space applying adequate amounts of shearing and milling force to gently isolate single cell from the tissue. The space between the grinding teeth and their fin-shaped geometry allows efficient extraction of viable single cells.



TIGR Tissue Grinder and Dissociator to be used in a variety of applications.

Applications:

- 3D Cell Culture
- Tissue Models – Spheroids, Organoids, Tumoroids
- Single Cell Counting
- Isolation of Primary Cells
- Cancer Cell Line Development
- Flow Cytometry

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