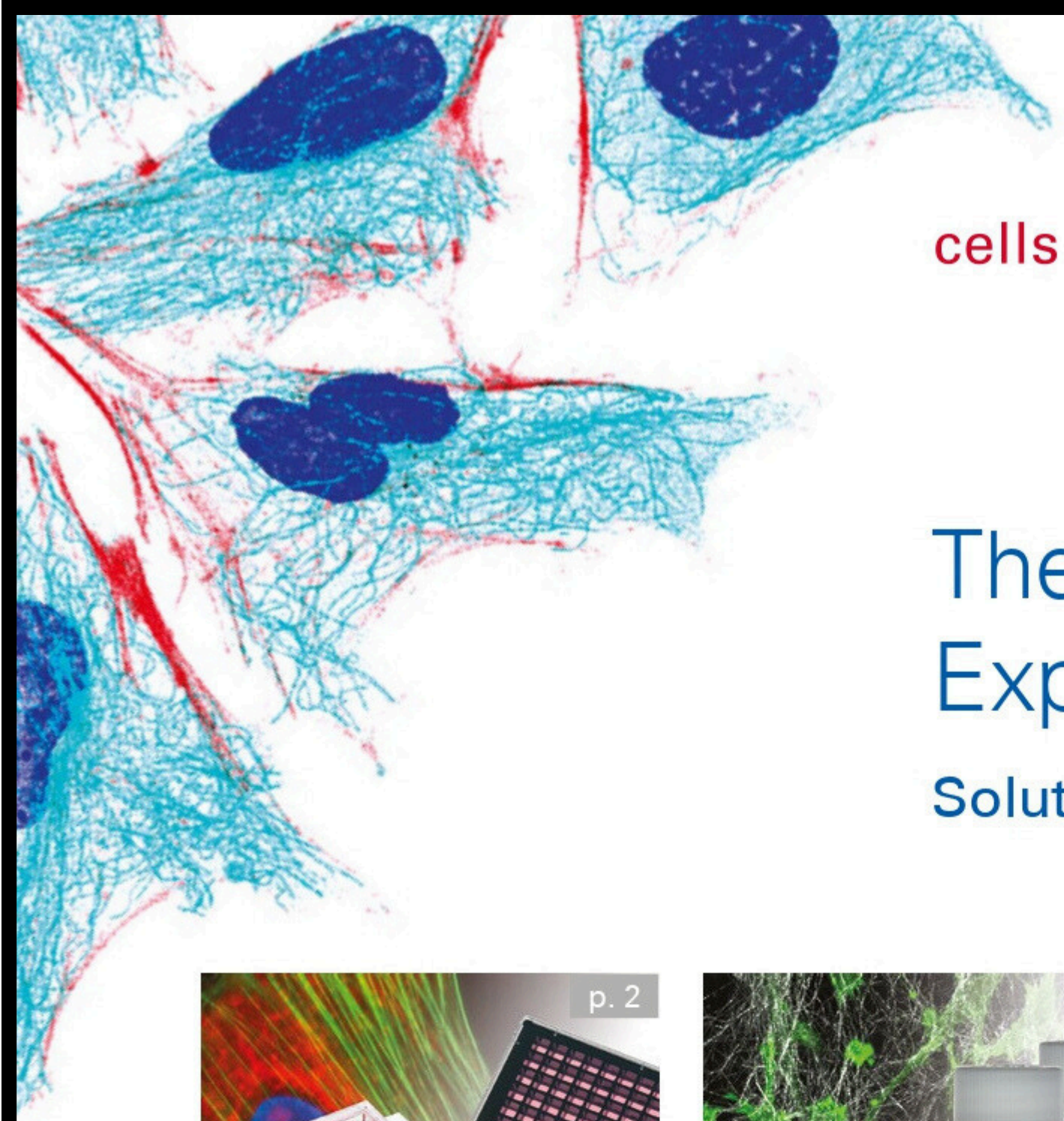


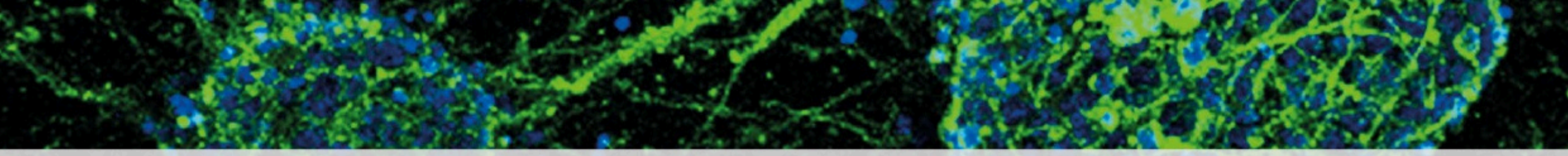
cells in focus ibidi®

The Product and Experiment Guide

Solutions for Your Research

Distributed by:

CliniSciences Group



Find the Ideal Imaging Chamber for Your Application

IMMUNOFLUORESCENCE

p. 15

3 Well | 8 Well | 12 Well Chamber, removable

Removable silicone chambers on a microscope glass slide for cell culture and immunofluorescence, suitable for upright and inverted microscopy and long-term storage

µ-Slide VI 0.5 Glass Bottom | µ-Slide VI 0.4

Slides with 6 parallel channels providing ideal optical conditions for immunofluorescence, available with different coatings; with an ibidi Polymer Coverslip or a glass bottom

MIGRATION & WOUND HEALING

p. 12

Culture-Insert 2 Well | 3 Well | 4 Well

Silicone inserts with a defined cell-free gap for wound healing, migration, 2D invasion assays, and co-cultivation of cells; available as individual inserts in a µ-Dish or as 25 pieces in a transport dish for self-insertion

Culture-Insert 2 Well 24

The complete solution for high-throughput wound healing and migration experiments

ANGIOGENESIS

p. 14

µ-Slide 15 Well 3D | µ-Plate 96 Well 3D

A slide with ibidi Polymer Coverslip or a glass bottom for tube formation assays, 3D cell culture, and immunofluorescence; also available with 96 wells for high-throughput applications

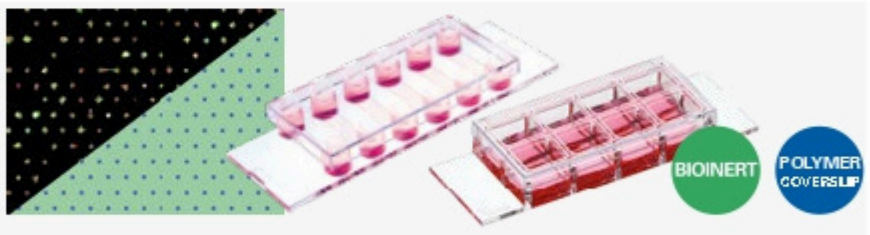
CHEMOTAXIS

p. 13

µ-Slide Chemotaxis

A slide with a specialized geometry for chemotaxis assays with fast or slow migrating cells in 2D or 3D; stable gradients for more than 48 hours

SINGLE-CELL ASSAYS

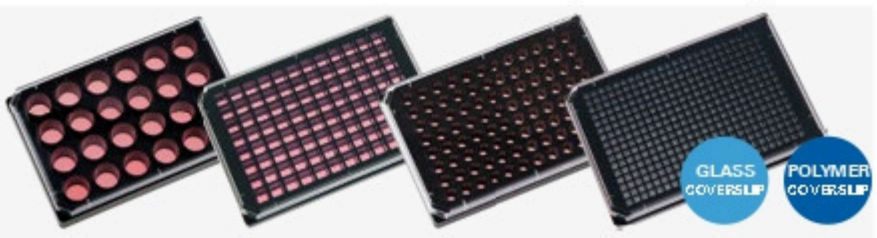


µ-Slides With Single-Cell µ-Pattern

One cell per spot: Ready-to-use micropatterned slides with ideal spacing for single cell assays (e.g., CAR-T cell activity assay)

> *ibidi made it much simpler for me to prepare cells for **confocal** and **live cell microscopy**. Cells that attached poorly to glass **grew better** on ibidi µ-Slides and µ-Dishes.*
>
> *Esther G.L. Koh, PhD*
> *National University of Singapore*

HIGH-THROUGHPUT



µ-Plate 24 Well | 96 Well Square/Round | 384 Well

Plates with a flat, clear ibidi Polymer Coverslip or a glass bottom for brilliant images in high-throughput cell microscopy; plate dimensions meet ANSI/SLAS (SBS) standards

STICKY SLIDES

sticky-Slide
8 Well high | 18 Well | I Luer | Chemotaxis | VI 0.4

Bottomless slides with a self-adhesive underside that allow the mounting of a variety of bottom materials

Header image by J. Marques de Sousa, University of Aveiro, Portugal

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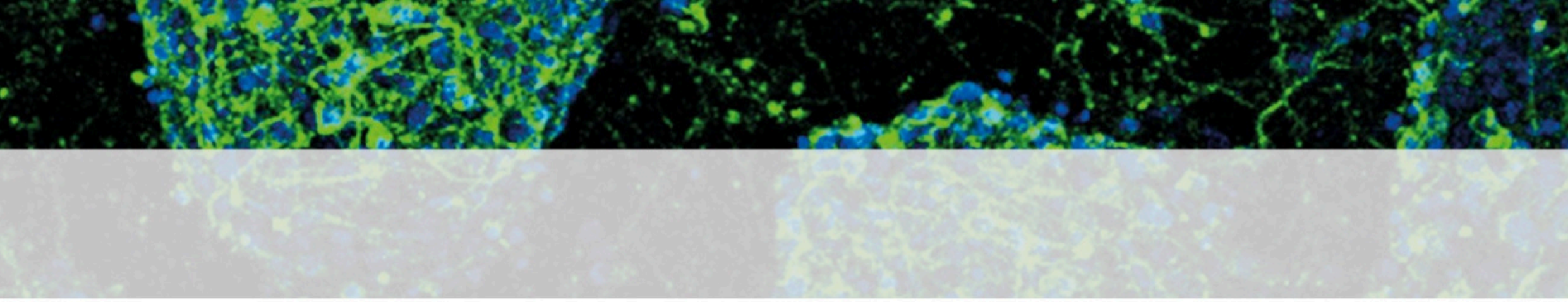
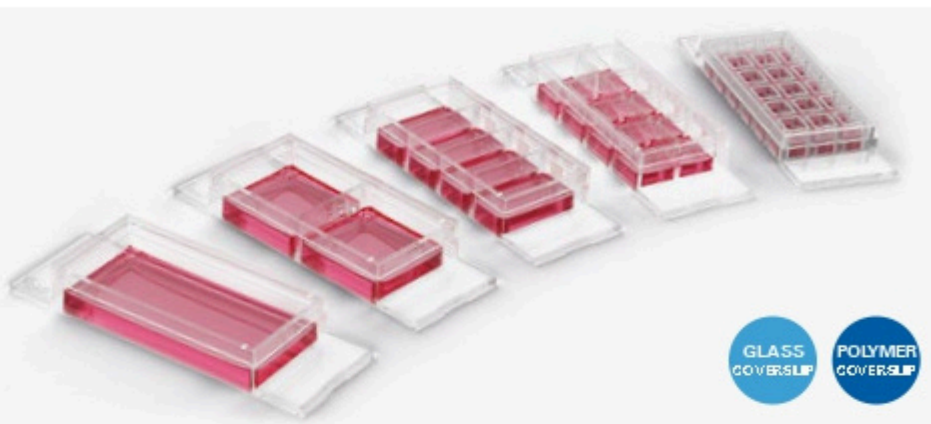


IMAGING CHAMBERS FOR EVERY LAB



µ-Slide 1 Well | 2 Well | 4 Well | 8 Well high | 18 Well

Chambered coverslips that combine optimal conditions for cell culture, immunofluorescence, live cell imaging, and high-resolution microscopy; available with an ibidi Polymer Coverslip or a glass bottom

µ-Dish Family

A variety of petri dishes for cell culture and high-end microscopy; available with an ibidi Polymer Coverslip or a glass bottom; gridded dishes for cell location and counting also available

SPHEROIDS | ORGANOIDS 3D CELL CULTURE

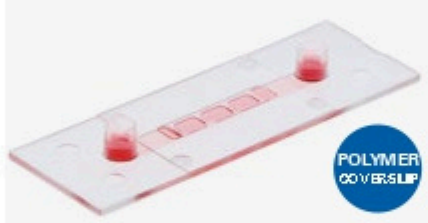
p. 8

Bioinert ULA µ-Slides and µ-Dishes

Labware with a completely non-adherent surface for culturing spheroids, organoids, and suspension cells

µ-Slides With Multi-Cell µ-Pattern

Multiple cells on one spot: Ready-to-use micropatterned slides with ideal spacing for spheroids and organoids



µ-Slide I Luer 3D

A slide with one channel and three wells for culturing cells on a 3D gel under flow, co-culture, and transmigration studies

µ-Slide Spheroid Perfusion

A perfusable channel slide with 3 x 7 wells for long-term spheroid cultivation

µ-Slide III 3D Perfusion

A flow slide for optimal nutrient supply during long-term cell, organoid, or tissue culture

Collagen Type I

High-quality collagen, bovine or rat tail origin, for 3D gels, scaffolds, and coatings

FLOW ASSAYS

p. 10

µ-Slide I Luer

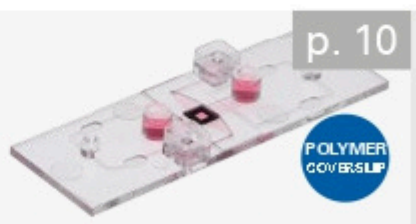
Flow channel slides with an ibidi Polymer Coverslip or a glass bottom, available with different heights and coatings

µ-Slide y-shaped

A flow channel slide for bifurcation studies and simulation of branching blood vessels

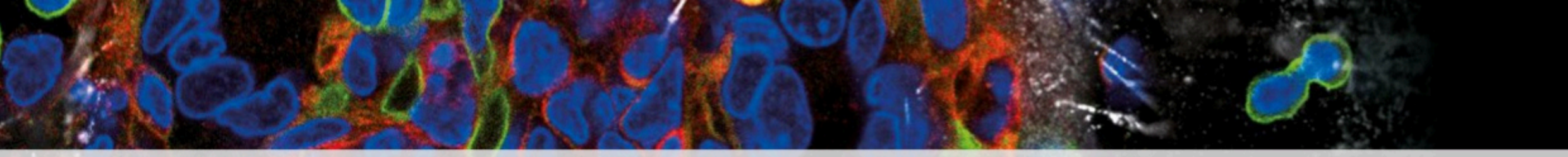
µ-Slide VI 0.5 | µ-Slide VI 0.4

Slides with 6 channels for parallel flow assays and high-end imaging, with ibidi Polymer Coverslip or glass bottom



µ-Slide ibiPore SiN

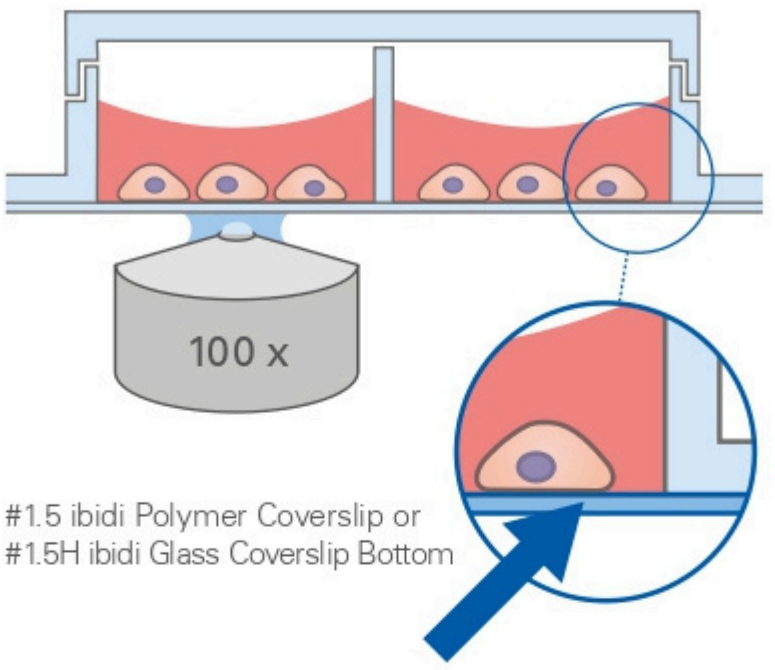
A slide with a porous SiN membrane for transport and transmigration studies under static and flow conditions



The ibidi Imaging Chambers

A Bottom and Surface Guide

The Principle of Imaging Chambers: The Coverslip Bottom



The outstanding characteristic of the ibidi µ-Slides, µ-Dishes, and µ-Plates is their thin coverslip bottom, which has ideal features for high-end microscopy applications. In comparison, the bottom of standard cell culture plastics has a thickness of about 1 mm—which is more than 5 times the thickness of the coverslip and, therefore, not ideal for imaging.

ibidi Polymer Coverslip

POLYMER COVERSLIP

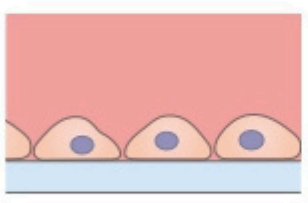
The ibidi Polymer Coverslip Bottom is suitable for various imaging techniques up to the highest resolution. With a standard #1.5 coverslip thickness of 180 µm (+10/–5 µm), it meets all optical requirements for microscopes. The ibidi Polymer Coverslip is compatible with a variety of immersion oils, which are specified at ibidi.com/oil.

ibidi Glass Coverslip

GLASS COVERSLIP

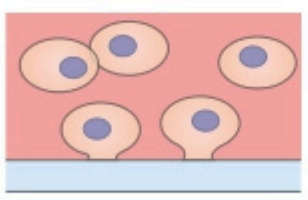
The ibidi Glass Coverslip Bottom was developed specifically for TIRF, super-resolution microscopy, and single molecule microscopy. However, it is also ideally suitable for standard imaging techniques. The D 263 M Schott borosilicate glass has a #1.5H thickness of 170 µm (+/–5 µm) and unrestricted immersion oil compatibility.

Surfaces and Coatings for the ibidi Polymer Coverslip



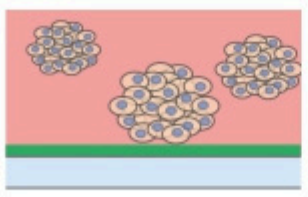
ibiTreat (Tissue Culture-Treated)

Excellent adhesion of adherent cells, hydrophilic surface with no need for any additional coating; optimal for everyday cell culture



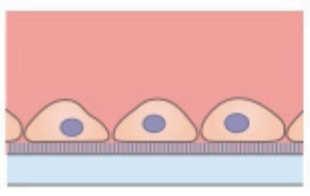
Hydrophobic, Uncoated Surface

Weak adhesion of adherent cells, suitable for the application of specific coatings



Bioinert Surface

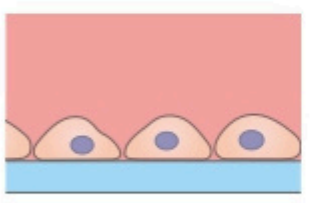
No adhesion of adherent cells or any biomolecule, stable long-term passivation; ideal for spheroid and organoid culture



Coated Surface

Culture of adherent cells on a Collagen I, Collagen IV, or Poly-L-Lysine surface; available for selected µ-Slides

Surfaces and Coatings for the ibidi Glass Coverslip



Glass Surface

Adhesion of adherent cells (coating might be required), ideal for special microscopy applications

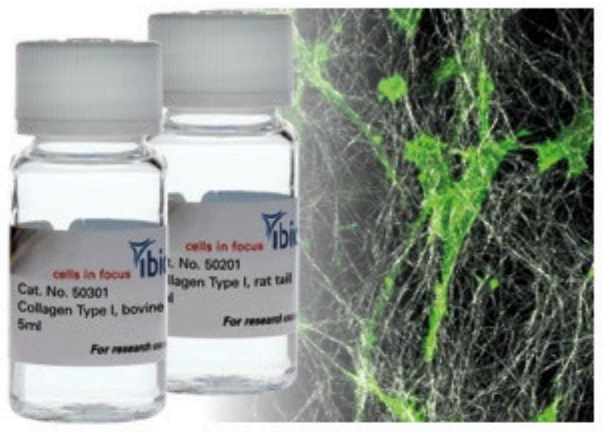
Header image by B. Rüger, Medical University of Vienna, Vienna, Austria

ibidi Reagents

Highest Quality for Live Cell Analysis

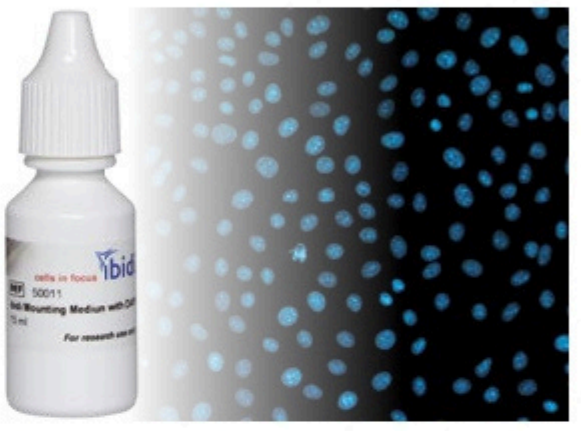
Collagen Type I for 3D Cell Culture

- Highest quality grade non-pepsinized, native collagen solution from bovine or rat tail origin, available in 5 or 10 mg/ml
- Provides biological extracellular matrix (ECM) structures
- For use in various cell culture applications (e.g., 3D gels, scaffolds, and coating)



ibidi Mounting Medium for Immunofluorescence

- Ready-to-use for immunofluorescence assays using widefield fluorescence and confocal microscopy
- DAPI counterstaining and mounting combined in one single step; also available without DAPI
- Compatible with all ibidi labware

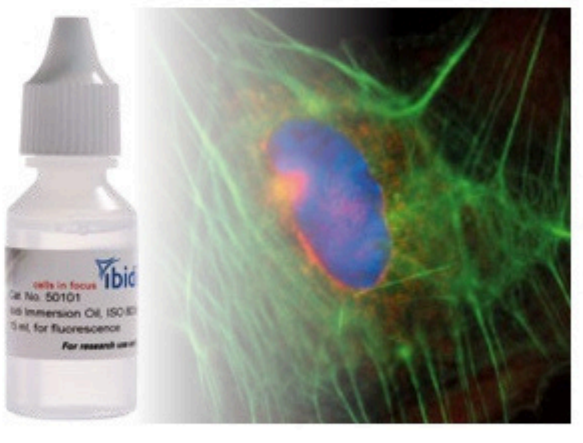


ibidi Freezing Medium Classic

- A cell freezing medium with extremely high recovery rates
- No preliminary or sequential freezing required
- Serum-free—contains bovine serum albumin

ibidi Immersion Oil for Microscopy

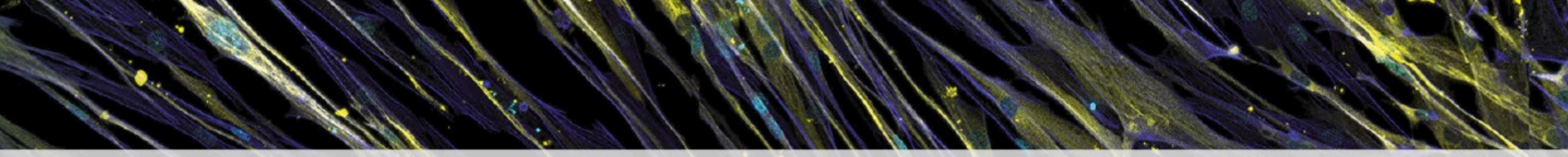
- For high-resolution microscopy using oil immersion objective lenses
- Ultra-low autofluorescence for excellent imaging quality in fluorescence microscopy
- Compatible with all ibidi products and all microscope brands



The Collagen Type I, Rat Tail from ibidi is a very high-quality product. We have been using it for years, and it always provides ***reliable and stable results****.*

We have utilized the collagen for culturing ***many cell lines*** *and* ***primary cells*** *including stem cells, tumor cells, and cartilage cells.*

Prof. Liu Chun, Sun Yan-Sen University, Guangzhou, China



Live Cell Imaging Under Physiologic Conditions

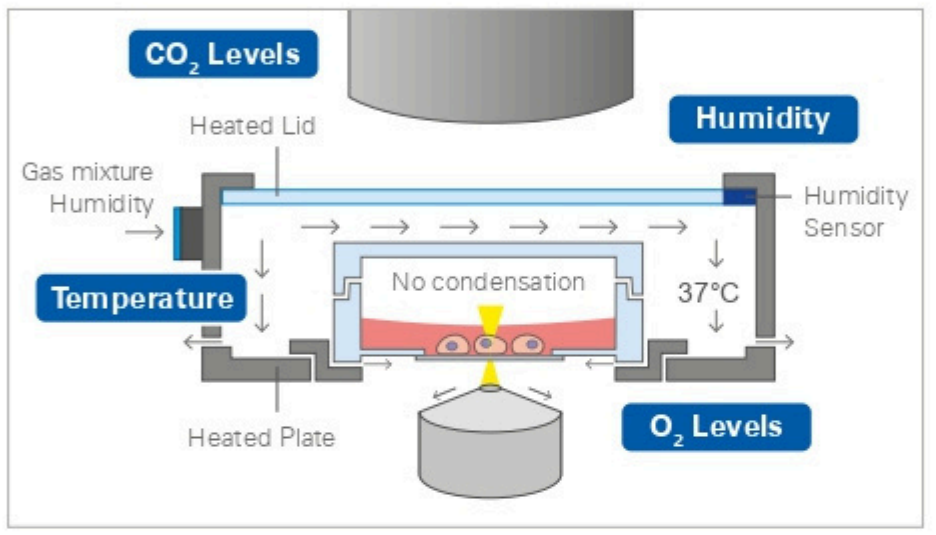
ibidi Stage Top Incubators

Establish *in Vivo*-Like Conditions on Every Inverted Microscope

Cells react sensitively to changes in their environment. For reproducible, biologically relevant results, it is crucial to maintain stable conditions on the microscope during live cell imaging. The ibidi Stage Top Incubators precisely control essential parameters such as temperature, humidity, and CO_2 / O_2 levels.

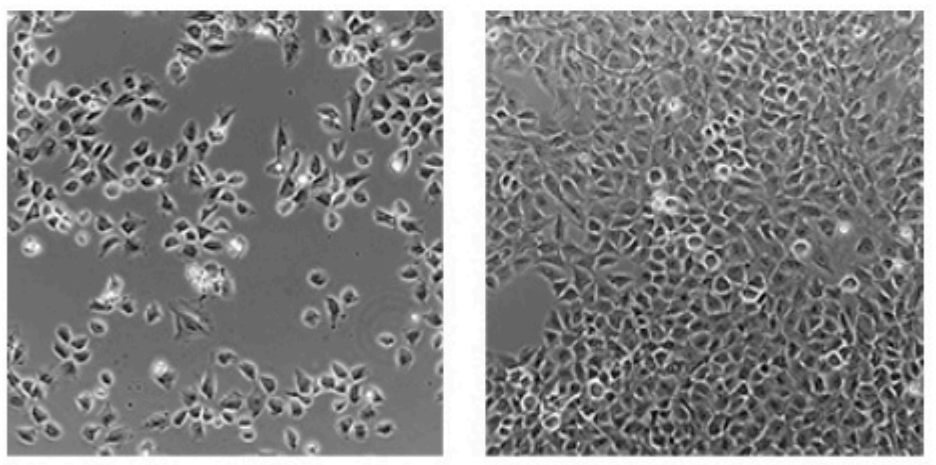
Benefits

- **Easy installation and use:**
  Quick mounting on inverted microscopes
- **No evaporation during long-term assays:**
  Very high and stable humidity inside the incubation chamber using active, feedback-controlled humidity regulation, preventing evaporation and condensation
- **Optimal for high-resolution microscopy:**
  Maximal xyz-stability on the microscope stage; can be extended with the ibidi Objective Heater during oil immersion, suitable for super-resolution and TIRF



Applications

- Migration, chemotaxis, and angiogenesis assays
- Hypoxia and physioxia assays
- Studying cell and membrane dynamics / TIRF
- Flow assays (combined with ibidi Pump System)



The patented ibidi Humidity Control ensures a constant and very high relative humidity inside the incubation chamber, thereby optimizing cell growth by preventing evaporation. Left: 70% RH, right: 90% RH.

> *We are **very pleased** with the **performance** of the ibidi Stage Top Incubator – Silver Line in our long-term experiments.*
>
> *Its handling is **notably straightforward,** and the **XY-stability is impressive**.*
>
> *Anna Pastucha, PhD & Marion Raich,*
> *Technical University of Munich, Germany*

Optional: Objective Heater

Perform long-term oil immersion or water immersion imaging without cooling of the sample.

Header image by L. Griveau, E. Christin, Université Claude Bernard Lyon 1, France

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CliniSciences Group

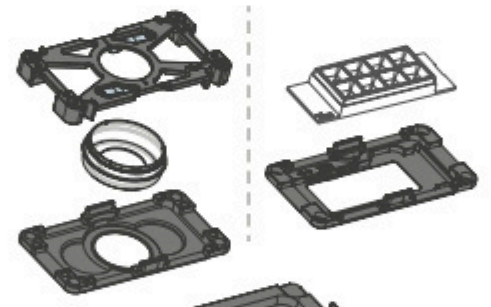
ibidi Stage Top Incubator Slide/Dish – Silver Line

Heated Lid

Dish Holder (top)

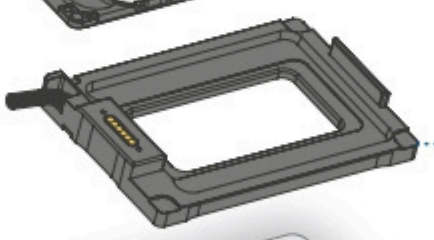
ibidi µ-Dish 35 mm, 35 mm dish*

Dish Holder (bottom)

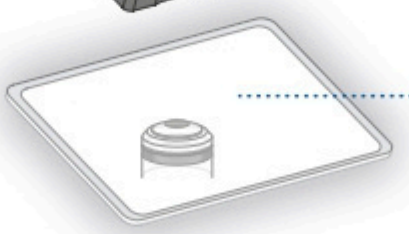


ibidi µ-Slide, other formats*

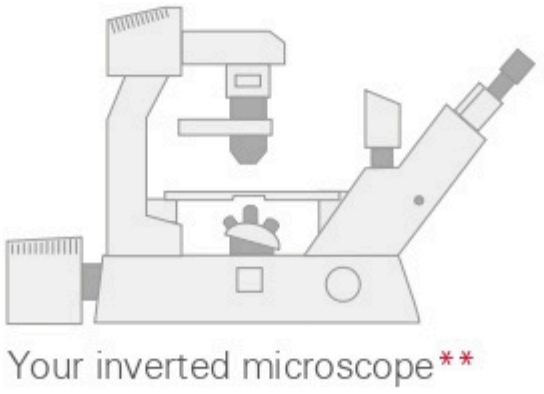
Slide Holder



Heated Plate



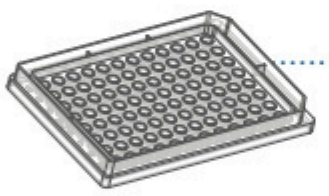
Existing stage or frame for multiwell plates on your microscope**



Your inverted microscope**

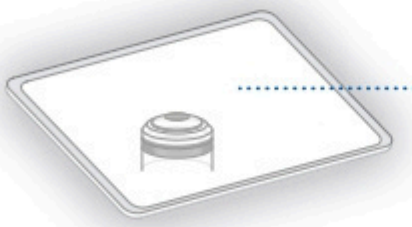
ibidi Stage Top Incubator Multiwell Plate – Silver Line

Heated Lid



ibidi µ-Plate, multiwell plate with a ANSI/SLAS (SBS) standard format (85.5 x 127.5 mm²)

Heated Plate with Heated Glass Bottom

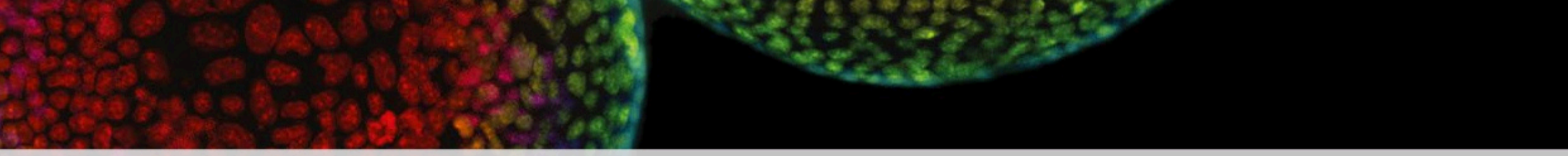


Existing stage or frame with K-frame fitting (160 x 110 mm²) on your microscope**

* *See compatibility list in the Instructions*

** *Your inverted microscope is not part of the ibidi Stage Top Incubator. Please contact us for information on suitable microscopes.*

For standard live cell imaging applications, we also provide the ibidi Stage Top Incubator – Blue Line.



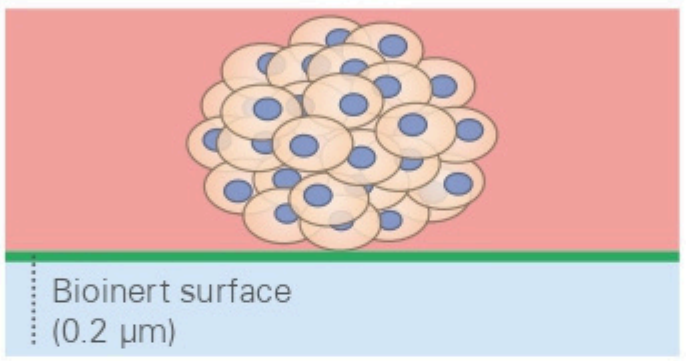
3D Cell Culture

Solutions for Spheroids, Organoids, and Single Cells

The ibidi Surfaces for 3D Cell Culture

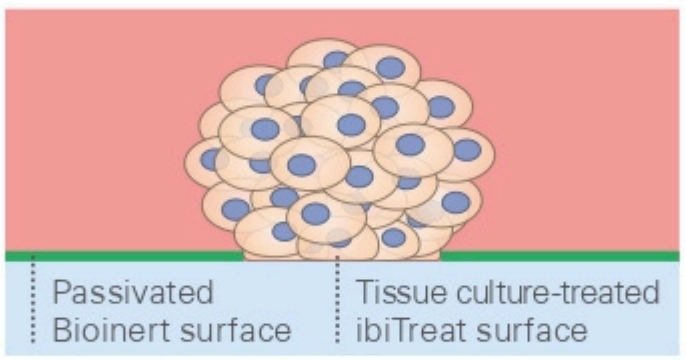
Bioinert Surface: No Cell Adhesion

Bioinert is a completely non-adherent surface covalently bound to the ibidi Polymer Coverslip. In contrast to standard ultra-low attachment (ULA) coatings, Bioinert provides a stable passivation in cell-based assays for several days or even weeks.



µ-Patterning: Defined Cell Adhesion

Miniaturized adhesive patterns (e.g., lines, squares, or dots) are integrated at defined spots with the non-adhesive Bioinert surface of the ibidi Polymer Coverslip, allowing for precisely controlled cell adhesion for 2D/3D applications.

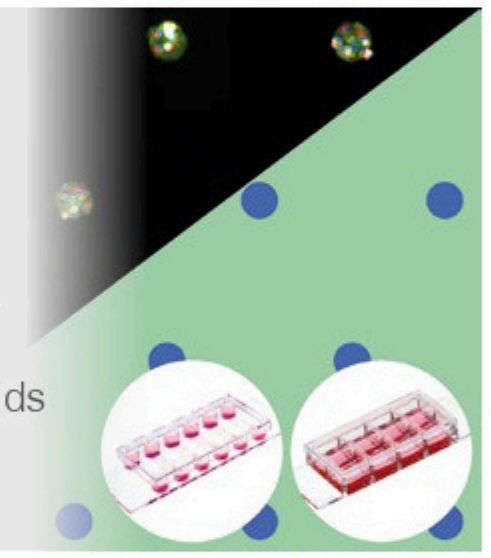


µ-Slides and µ-Dishes

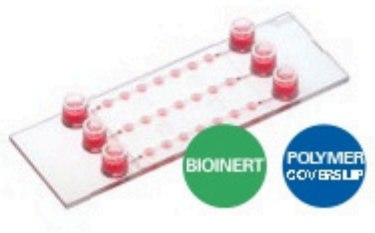
Labware with a completely non-adherent surface for culture and high-end microscopy of spheroids, organoids, and suspension cells

µ-Slides With Multi-Cell µ-Pattern

Multiple cells on one spot: Ready-to-use micropatterned slides with ideal spacing for spheroids and organoids



Choose the Optimal Slide for Your Application



µ-Slide Spheroid Perfusion

µ-Slide III 3D Perfusion

µ-Slide I Luer 3D

µ-Slide 15 Well 3D | µ-Plate 96 Well 3D

	µ-Slide Spheroid Perfusion	µ-Slide III 3D Perfusion	µ-Slide I Luer 3D	µ-Slide 15 Well 3D | µ-Plate 96 Well 3D
3D cell aggregates	✓ free floating in well	✓ inside gel	✓ inside gel	✓ inside gel
Gel matrices for 3D	–	✓	✓	✓
Perfusion of samples	✓	✓	✓ with defined shear stress	–

Header image by F. Spira, E. Keidel, Molecular Devices GmbH, Puch/Hallein, Austria

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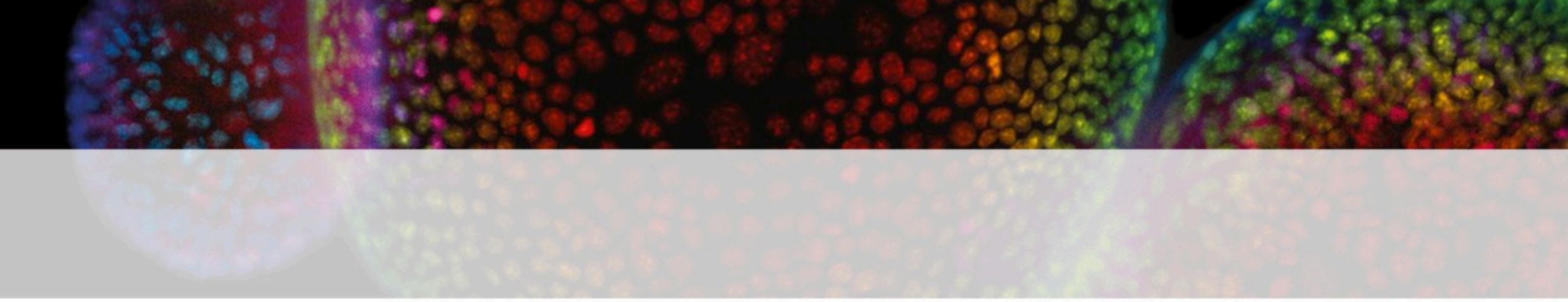
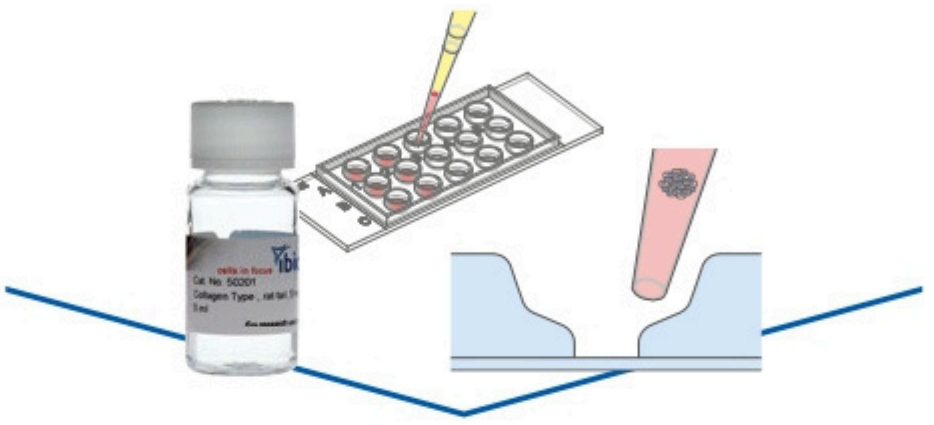


ibidi Solutions for Your 3D Cell Culture Assay

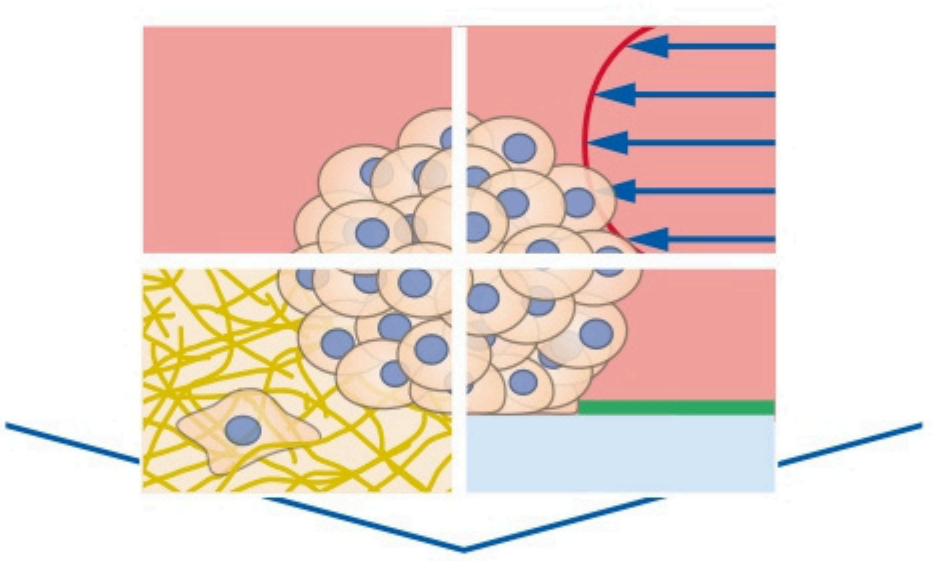
Sample Preparation

Choose from a broad portfolio of 3D culture slides for optimal spheroid or organoid growth.



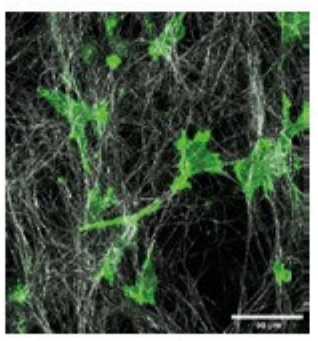
3D Cell Cultivation

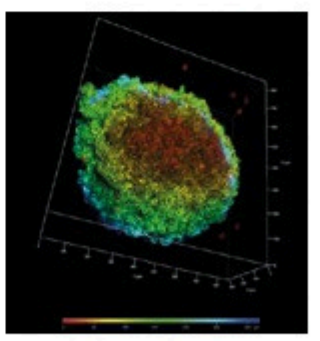
Perform your 3D assay of choice using tailored ibidi solutions.



Imaging and Analysis

Easily analyze your assays using live cell imaging, immunofluorescence stainings, and more methods.





ibidi Collagen Type I

Simulates the extracellular matrix (ECM); for gels, scaffolds, and coatings in 3D cell culture

ibidi Pump System

For defined flow and spheroid/organoid perfusion with optimal nutrition during long-term experiments (see p. 10)

ibidi Stage Top Incubators

The ibidi solution for creating and maintaining a physiological environment under the microscope (see p. 6)

Flow Assays

Simulate Physiologic Systems Under Various Dynamic Conditions

The ibidi Pump System

Culturing cells under flow can be very important for cells that exist in biofluidic systems (e.g., endothelial or epithelial cells). The ibidi Pump System simulates defined continuous and pulsatile laminar flow, and oscillatory flow to create a more physiological environment.

Benefits

- **Long-term cell cultivation under flow:** Sterile and defined conditions for up to several weeks
- **Automation:** Software-based flow programming including shear stress and shear rate calculation
- **Simulation of all physiological flow patterns:** Wide shear stress range (0.1–200 dyn/cm²)
- **Compatibility:** Works with a wide range of slides (e.g., µ-Slides with Luer adapters, customized slides)
- **Flexibility:** To be used with all cell culture incubators, all inverted microscopes, and ibidi Stage Top Incubators

Applications

- Extended cell culture under flow with defined shear stress values
- Rolling and adhesion assays
- Transmigration and invasion studies
- Perfusion of cells, spheroids, and organoids in 2D and 3D for optimal long-term nutrition

*We've been working with the **ibidi Pump System** for over 5 years now and have recommended it to numerous colleagues.*

*In fact, the ibidi Pump System makes the endothelial cell under flow **the default** of our lab!*

Nynke van den Akker, PhD
Maastricht University, The Netherlands

Selected ibidi Channel Slides for Flow Assays

µ-Slide I Luer Family

With one channel for standard flow assays; different channel heights and coatings available

µ-Slide III 3D Perfusion

For optimal nutrition in long-term 3D culture of cells, tissues, small organisms, organoids, or spheroids

µ-Slide VI Family

With six channels for parallel flow assays; different coatings available

µ-Slide Spheroid Perfusion

Channel slide with 3 x 7 wells for long-term culture of spheroids or organoids

µ-Slide I Luer 3D

With one channel and three wells for culturing cells in/on a 3D gel matrix

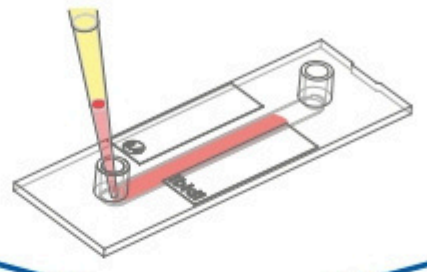
µ-Slide VI$^{0.4}$ With µ-Pattern

Micropatterned slides for single or multi-cell assays

ibidi Solutions for Your Flow Assay

Sample Preparation

Setup your flow assay of choice and choose from our broad portfolio of channel slides.

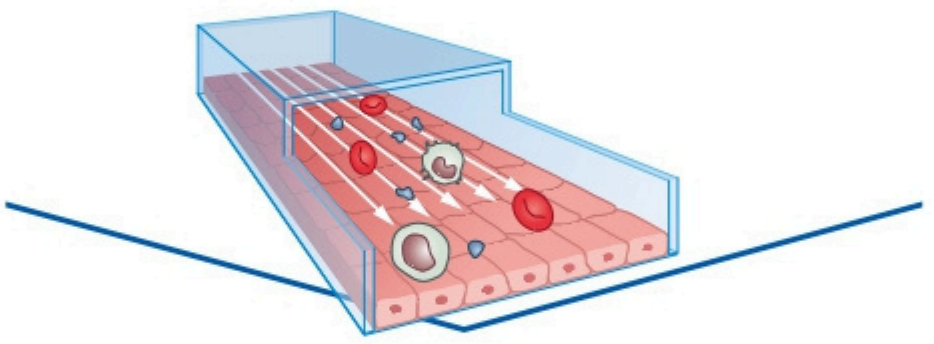


Channel Slides

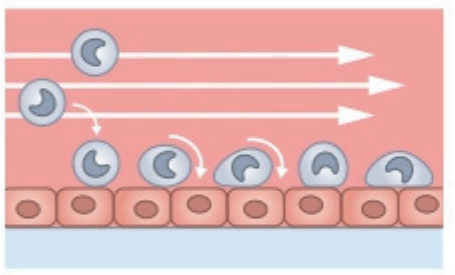
Available with a variety of heights and coatings for different shear stress ranges, for 2D and 3D conditions

Flow Conditioning

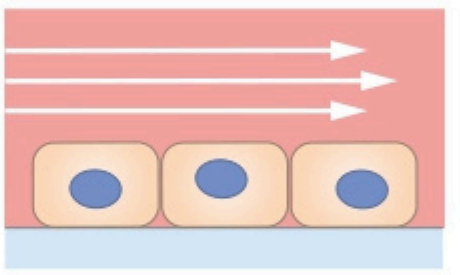
Apply unidirectional, oscillatory, or pulsatile flow using the ibidi Pump System.



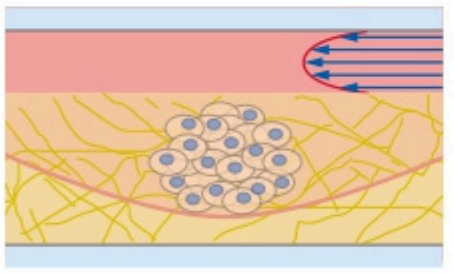
Application Examples



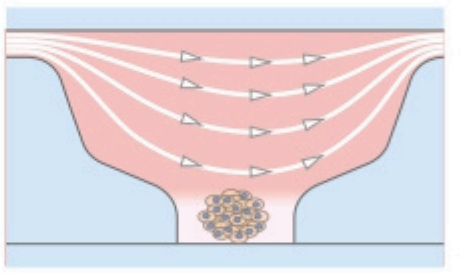
Rolling and adhesion



Cells under shear stress



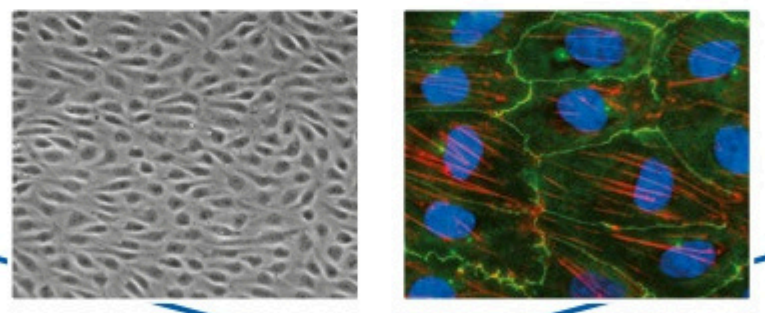
Organoid perfusion



Spheroid perfusion

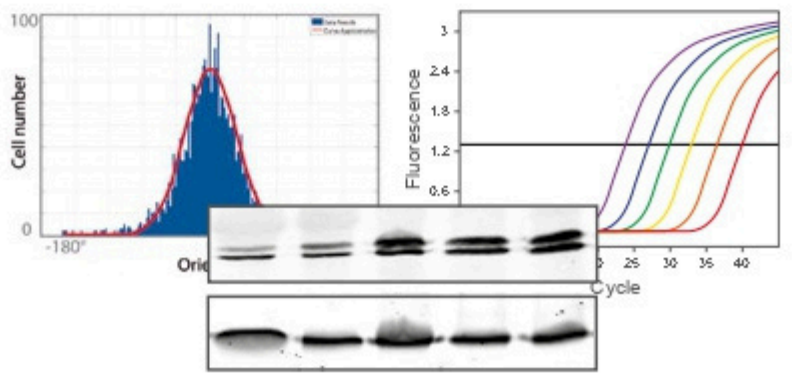
Staining and Microscopy

Image and stain cells directly in the channel slide.



Downstream Analysis

Easily analyze your cells with methods such as Western Blot, qPCR, FACS, or immunostaining.



Migration and Wound Healing Assays

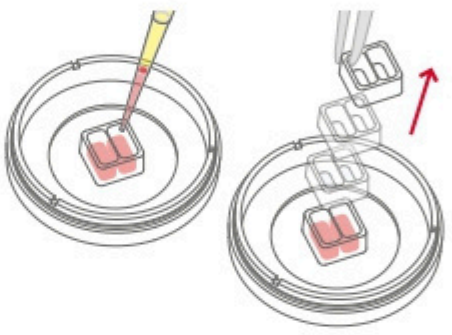
Keep Your Experiments Easy and Reproducible

- Perform your assay of choice: Wound healing, migration, 2D invasion assays, or co-cultivation of cells
- Benefit from extremely high reproducibility due to the defined size of the Culture-Inserts' cell-free gap
- Save time with a quick and easy experimental setup and automated image analysis

ibidi Solutions for Your Wound Healing or Migration Assay

Sample Preparation

Setup your assay of choice in an easy and highly reproducible manner.

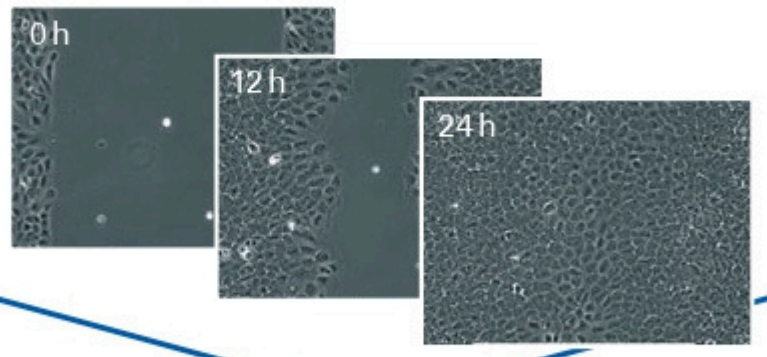


Culture-Insert
2 Well | 3 Well | 4 Well

Silicone insert with a defined cell-free gap

Live Cell Imaging

Measure migration and wound closure under physiological conditions in real time.

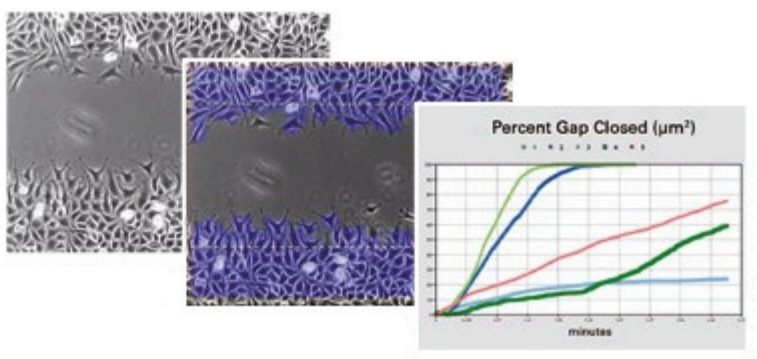


ibidi Stage Top Incubator

The ibidi solution for creating and maintaining a physiological environment under the microscope (see p. 6)

Data Analysis

Analyze your experiment with freeware (e.g., ImageJ) or machine learning-based solutions.



Header image by D. Sung, University of Pennsylvania School of Medicine, Philadelphia, USA

Chemotaxis Assays

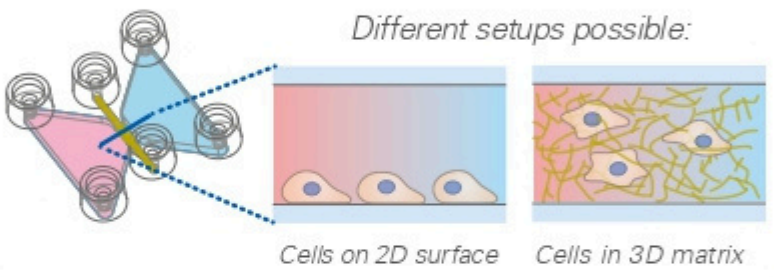
Precisely Analyze Directed Cell Migration Behavior in 2D or 3D

- Investigate the behavior of slow migrating cells (e.g., cancer cells) and fast migrating cells (e.g., immune cells) in a 2D or 3D environment
- Keep a linear and stable chemotactic gradient for over 48 hours
- Reduce your costs by using minimal amounts of medium and supplements

ibidi Solutions for Your Chemotaxis Assay

Sample Preparation

Create a precisely defined, stable chemotactic gradient in a reproducible environment.

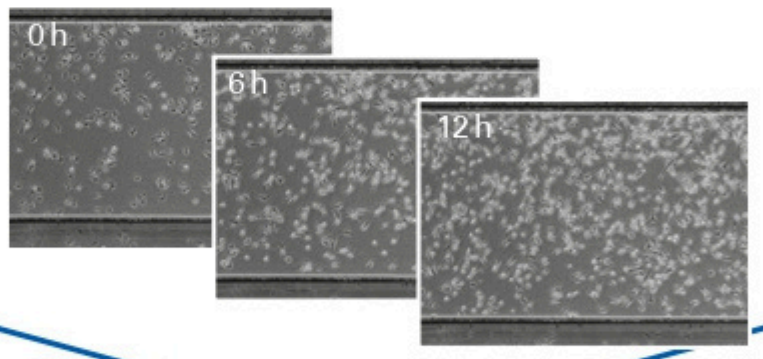


µ-Slide Chemotaxis

Specialized for 2D or 3D chemotaxis assays, with gradient-optimized geometry and brilliant optical features

Live Cell Imaging

Measure chemotaxis under physiological conditions in real time.



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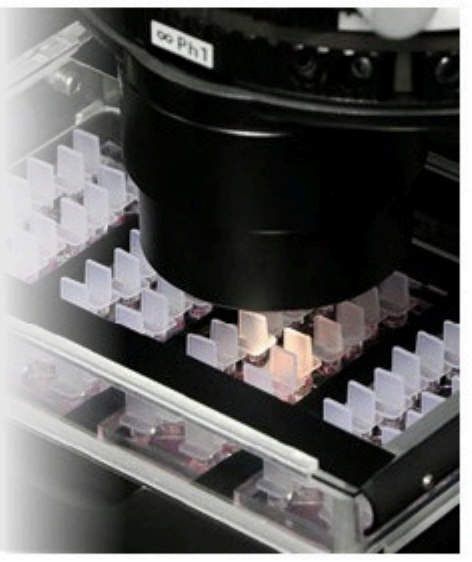

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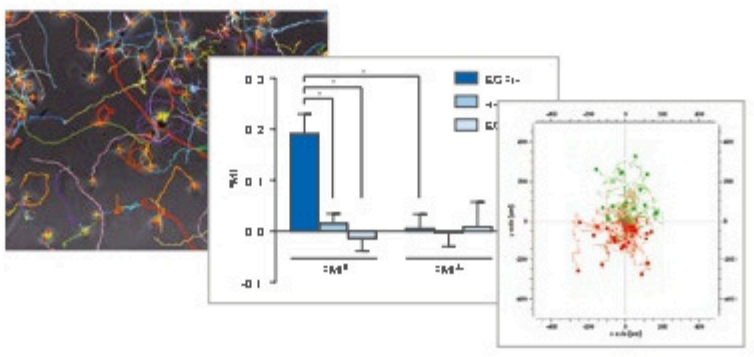
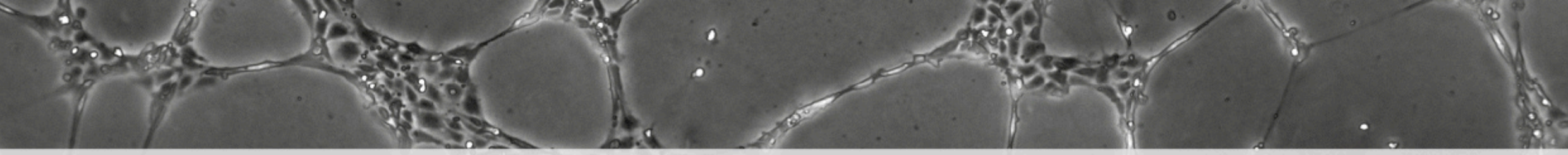


Header image by J. Rey-Barroso, Pysiopathology Center of Toulouse-Purpan, Toulouse, France



Angiogenesis Assays

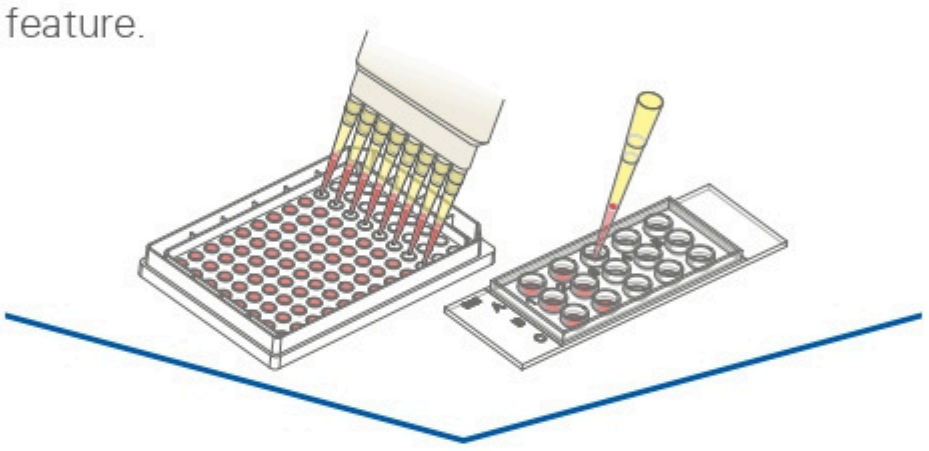
Perform Tube Formation, Sprouting Assays, and 3D Cell Culture

- Investigate the behavior of endothelial cells using tube formation assays, sprouting assays, 3D cell culture, and immunofluorescence analysis
- Benefit from brilliant microscopic visualization without gel meniscus formation—all cells in one optical plane
- Reduce your costs by minimizing the amounts of Matrigel, medium, and supplements needed

ibidi Solutions for Your Tube Formation Assay

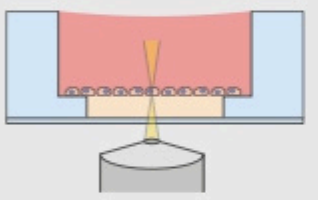
Sample Preparation

Seed your cells on minimal amounts of Matrigel and take advantage of the "well-in-a-well" feature.



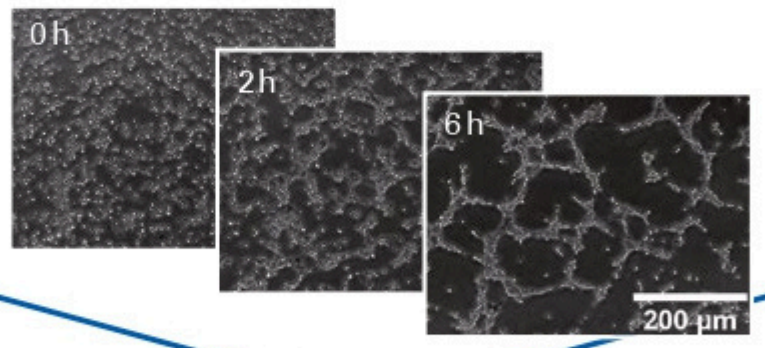
µ-Slide 15 Well 3D

With "well-in-a-well" technology requiring only 10 µl Matrigel per well, no gel meniscus



Live Cell Imaging

Get brilliant microscopic images in real time under physiological conditions—without gel meniscus.



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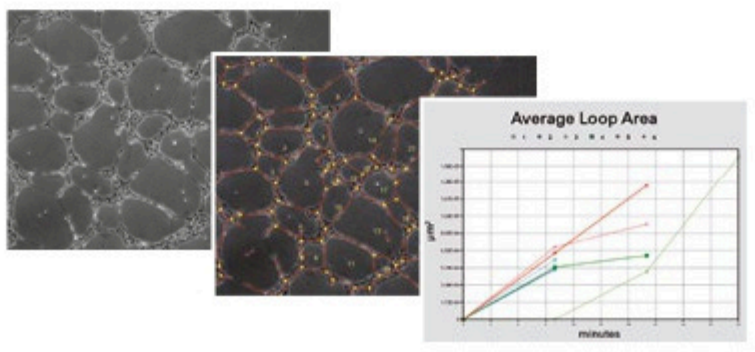
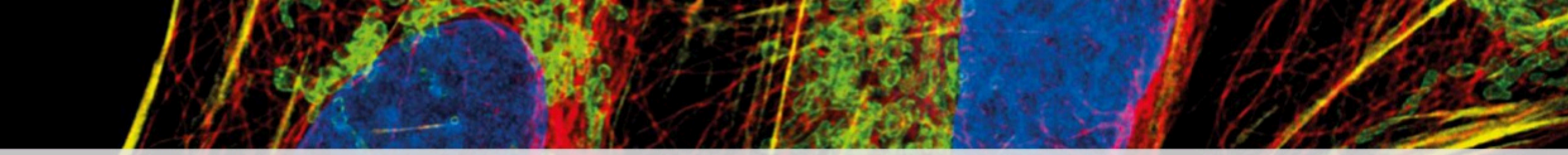




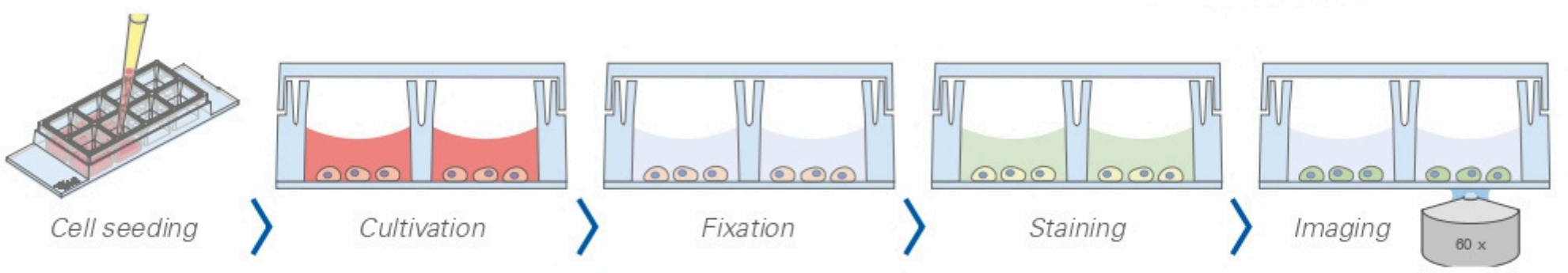
Immunofluorescence Assays

Tailored for Your Assay: Choose From 3 Unique Solutions

- Simplify your protocol with the ibidi all-in-one chambers
- Perform high-resolution imaging (e.g., widefield fluorescence, confocal, or undisturbed phase contrast microscopy)

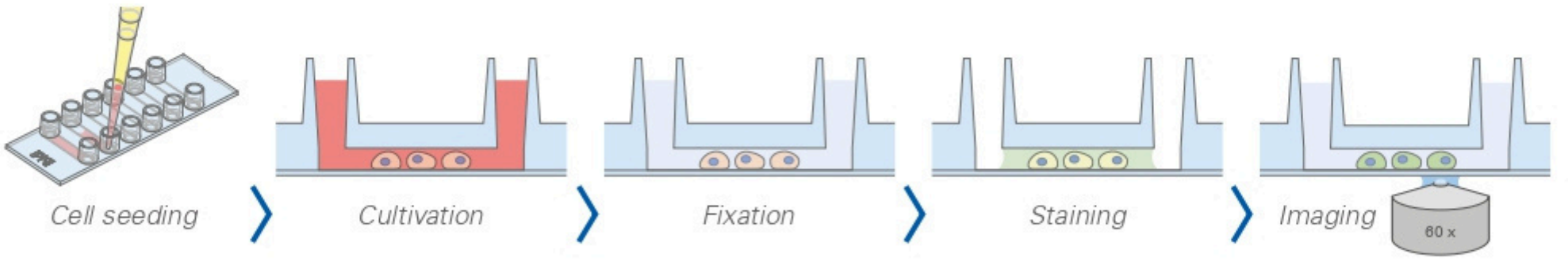
Chambered Coverslips

- 1 to 18 non-removable wells on a coverslip bottom
- Separated wells to minimize cross-contamination
- Different coatings available



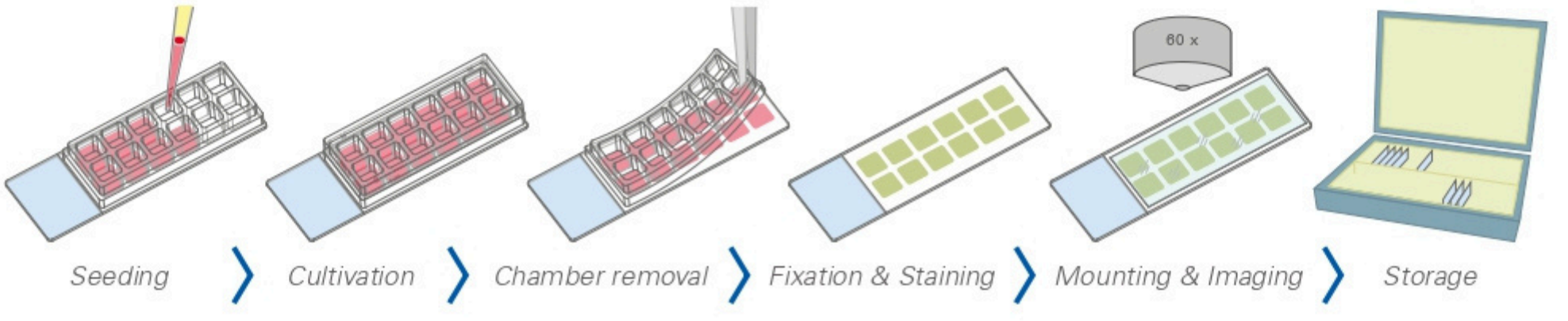
Channel Slides

- Six parallel channels on a coverslip bottom
- Homogeneous cell and antibody distribution and low medium volume
- Different channel heights and coatings available

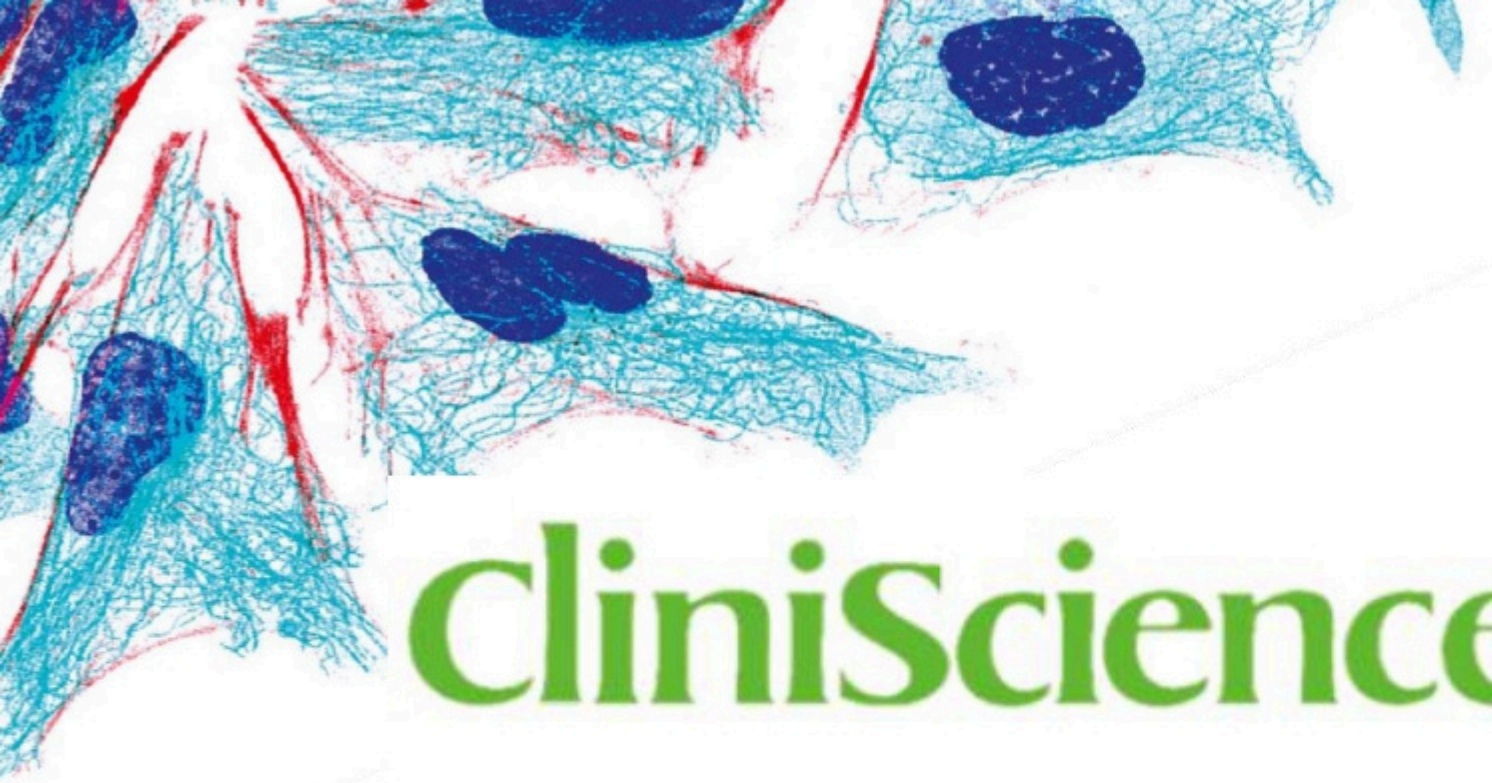


Removable Chamber Slides

- Removable silicone chambers on a standard glass slide
- Ideal for long-term storage and upright microscopy
- Suitable for high-throughput screening



Header image by H. Boonyaputthikul, Histocenter Co., Ltd., Bangkok, Thailand



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