



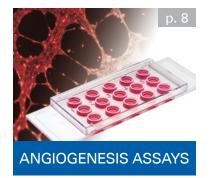
# The Product and Experiment Guide

Providing Solutions for Your Research





















## Find the Ideal Imaging Chamber for Your Application

IMMUNO-LUORESCENCI

#### 3 Well | 8 Well | 12 Well Chamber, removable

Removable silicone chambers for cell culture and immunofluorescence, suitable for upright and inverted microscopy and long-term storage



#### $\mu\text{-Slide VI}^{\,0.5}$ Glass Bottom | $\mu\text{-Slide VI}^{\,0.4}$

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

OUND HEALING









Culture-Insert 2 Well 24

The complete solution for high throughput wound healing and migration experiments

Si as a



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  $\mu$ -Dish or as 25 pieces in a transport dish for self-insertion





#### μ-Slide I Luer

Flow channel slides, available with different heights and coatings



#### μ-Slide VI <sup>0.5</sup> Glass Bottom | μ-Slide VI <sup>0.1</sup> | μ-Slide VI <sup>0.4</sup>

Slides with 6 channels for parallel flow assays with minimal amount of cells, medium, and supplements, available with different channel heights and coatings; with glass or ibidi Polymer Coverslip bottom



#### $\mu$ -Slide III <sup>3D</sup> Perfusion

A slide for optimal nutrient supply during long-term cultivation of cells or organoids in 3D matrices

CHEMOTAXIS



#### μ-Slide Chemotaxis

Specialized geometry for assays with fast or slow migrating cells in 2D culture or 3D gel matrices





#### μ-Plate 24 Well | 96 Well | 384 Well

Plates with a flat, clear bottom for brilliant images in high throughput cell microscopy applications

ANGIOGENESIS

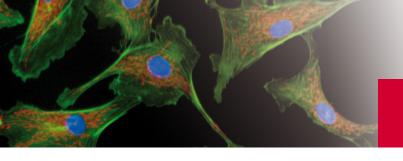


#### μ-Slide Angiogenesis | μ-Plate Angiogenesis 96 Well

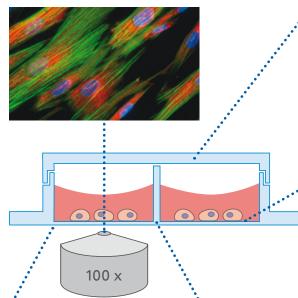
A slide optimized for tube formation assays, 3D cell culture and immunofluorescence staining, also available in a 96 well format for high throughput applications

Order your **free sample** and test ibidi's microscopy chambers with your experiments.





## Learn the Principles of the ibidi Imaging Chambers



## Pick the Optimal Size and Geometry for Your Application

- Chamber slides
- Dishes
- Channel slides
- Specialized geometry

## Choose From a Broad Range of Coatings for Excellent Cell Growth

- ibiTreat (tissue culture treated surface)
- Hydrophobic, uncoated
- Collagen IV
- Poly-L-Lysine

Immersion Oil Compatible

### Proven Mechanical and Chemical Stability

ibidi Polymer Coverslip #1.5 or glass bottom #1.5H for high resolution microscopy

## Use the ibidi Imaging Chambers in Every Lab



#### μ-Slide 2 Well | 4 Well | 8 Well

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







#### μ-Dish Family

Petri dishes for cell culture and high end microscopy; available with an ibidi Polymer Coverslip or a glass bottom



#### Collagen Type I, rat tail

A ready-to-use rat tail collagen solution for the preparation of 3D collagen gels; storage at -20°C for well-defined quality and reproducibility

## **Create & Maintain Physiologic Conditions**

ibidi Stage Top Incubators

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

#### In Vivo-Like Conditions:

Fast and precise control of temperature, humidity,  $\mathrm{CO}_2$ , and  $\mathrm{O}_2$ 

#### Easy Installation and Use:

Quick mounting on the microscope, just like a multiwell plate

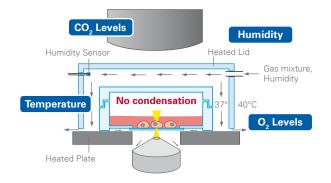
#### Microscope Compatibility:

Fits to inverted microscopes that have a plate holder or a frame



## Create Physiologic Conditions With the ibidi Stage Top Incubators

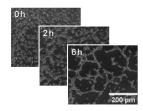
- Accurate and homogeneous heating
- Constant humidity to prevent evaporation
- Precise control and smooth change of CO<sub>2</sub> and O<sub>2</sub> levels



Contact ibidi for a **free demo** of the ibidi Stage Top Incubation System.

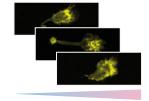


## **Experimental Examples**



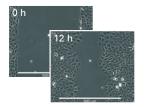
#### Tube Formation / Angiogenesis Assays

HUVEC cells on Matrigel<sup>TM</sup> in a  $\mu$ -Slide Angiogenesis.



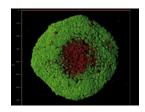
#### 2D and 3D Chemotaxis Assays

Migration of a dendritic cell in a chemotactic gradient.



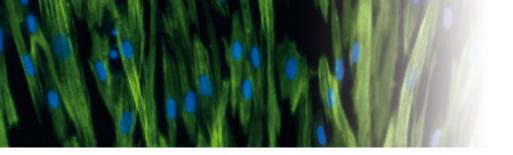
## Wound Healing and Migration Assays

Closure of a cellfree gap in an ibidi Culture-Insert.



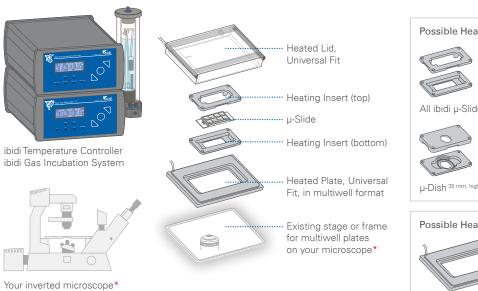
Oxygen Depletion

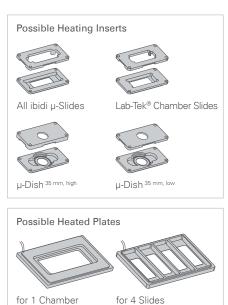
Spheroid with living (green) and apoptotic cells (red) due to oxygen depletion.



## ibidi Stage Top Incubation System for Slides and Dishes

#### Compatible with all inverted microscopes that have a multiwell plate holder





Possible Plates

μ-Plate 24 Well Black

μ-Plate 384 Well Clear

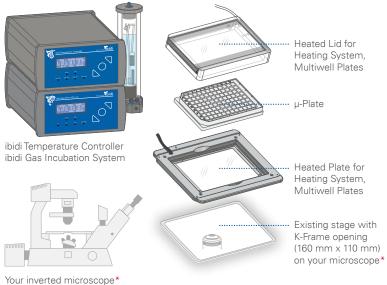
μ-Plate 96 Well Black

μ-Plate Angiogenesis

96 Well

## ibidi Stage Top Incubation System for Multiwell Plates

#### Compatible with all inverted microscopes that have a K-Frame stage





## Wound Healing and Migration Assays

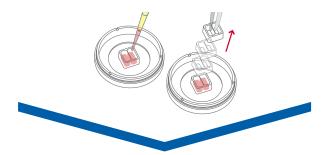
Keep Your Assays Easy and Reproducible

- Perform your experiment 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 Offers the Complete Solution for Your Wound Healing or Migration Assay:

#### Sample Preparation \_

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



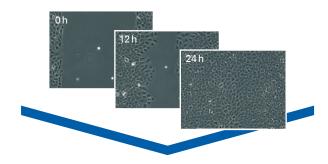


#### Culture-Insert 2 Well | 3 Well | 4 Well

Silicone insert with a defined cell-free gap

#### Live Cell Imaging

Measure wound closure and migration under physiological conditions in real time



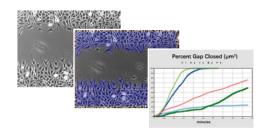


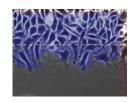
#### ibidi Stage Top Incubation System

The ibidi solution for creating and maintaining a physiological environment

#### Data Analysis \_

Speed up your experimental workflow with quick and reliable automated image analysis





Wound Healing ACAS Image Analysis Software

Create your **free account** and get 15 free analysis jobs per month.





## **Chemotaxis Assays**

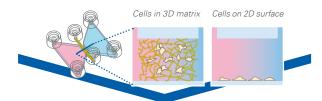
Precisely Analyze Directed Cell Migration Behavior in 2D or 3D

- Investigate the migration 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 Offers the Complete Solution for Your Chemotaxis Assay:

#### Sample Preparation \_

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



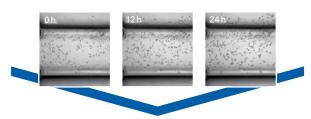


#### μ-Slide Chemotaxis

Specialized geometry and brilliant optical features

#### Live Cell Imaging \_

Measure chemotaxis under physiological conditions in real time



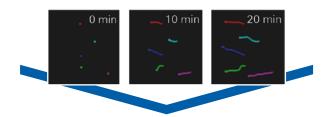


### ibidi Stage Top Incubation System

The ibidi solution for creating and maintaining a physiological environment

#### Cell Tracking -

Quantify cell movements between frames of a temporal stack



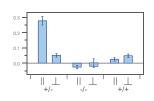


ImageJ Manual Tracking Plugin

Download the **free manual tracking** plugin here: ibidi.com/manual-tracking

#### Data Analysis \_

Visualize migrational paths and analyze various parameters







ibidi Chemotaxis and Migration Tool

Download the **free chemotaxis analysis** software here: ibidi.com/chemotaxis-tool

## **Angiogenesis Assays**

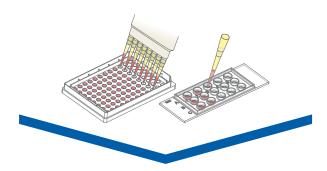
Perform Tube Formation and Sprouting Assays in 2D or 3D

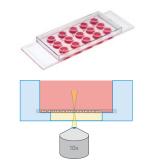
- Investigate the behavior of endothelial cells using tube formation assays, sprouting assays, 3D cell culture, and immunofluorescence analysis
- Benefit from brilliant microscopic visualization without meniscus formation all cells in one optical plane
- Reduce your costs by minimizing the amounts of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

### ibidi Offers the Complete Solution 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



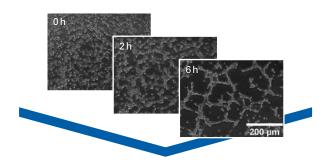


#### μ-Slide Angiogenesis

Due to the "well-in-a-well" technology, the amount of Matrigel is reduced to 10 µl per well and no meniscus is formed

#### Live Cell Imaging

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



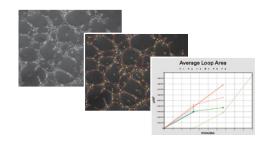


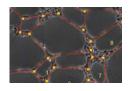
#### ibidi Stage Top Incubation System

The ibidi solution for creating and maintaining a physiological environment

#### Data Analysis \_

Speed up your experimental workflow with quick and reliable automated image analysis





Tube Formation ACAS Image Analysis Software

Create your **free account** and get 15 free analysis jobs per month.





## Flow Assays

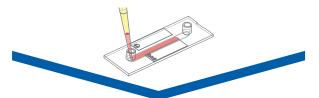
Simulate Physiologic Systems Under Various Conditions

- Mimic *in vivo*-like conditions for cells that are physiologically exposed to shear stress (e.g., endothelial cells and epithelial cells)
- Establish long-term cell culture under defined flow conditions—days to even weeks—and perform various downstream analyses
- Reduce your costs by using minimal amounts of medium and supplements

### ibidi Offers the Complete Solution for Your Flow Assay:

#### Sample Preparation \_\_\_\_\_

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



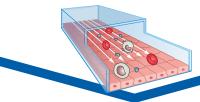


#### u-Slide I Luer

Channel slides with a variety of heights and coatings for different shear stress ranges

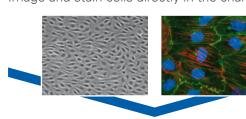
#### Flow Conditioning \_

Apply unidirectional, oscillatory, or pulsatile flow



#### Staining and Microscopy \_

Image and stain cells directly in the channel slide



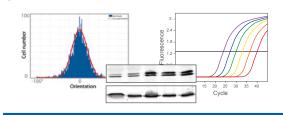


#### The ibidi Pump System

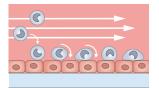
A perfusion system to cultivate cells under flow for the simulation of blood vessels

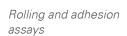
#### Downstream Analysis

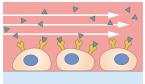
Easily analyze your cells with, e.g., Western Blot, qRT-PCR, or FACS



## **Experimental Examples**







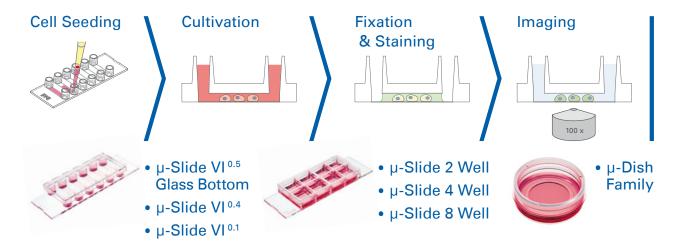
Defined liquid exchange

## **Immunofluorescence Assays**

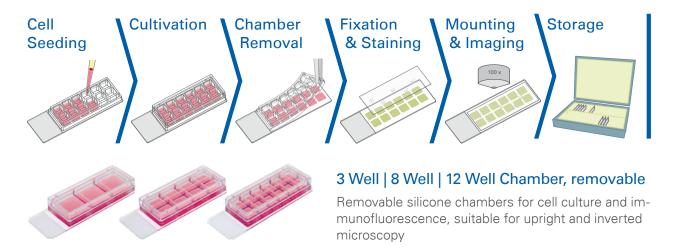
Get Brilliant Stainings With Reduced Time and Material

- Simplify your staining procedure—perform all steps in one single slide and reduce your experimental steps
- Reduce your costs—use only small numbers of cells and a low amount of medium and antibodies
- Get brilliant microscopic images due to the slides' optical specifications

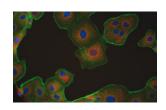
#### All-in-One Chambers



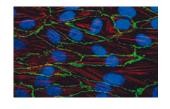
#### Removable Chamber Slides



### **Experimental Examples**



Cell line Madin-Darby canine kidney (MDCK) cultured in μ-Slide VI<sup>0.4</sup>.



Human umbilical vein endothelial cells (HUVEC) cultured under flow conditions in μ-Slide I<sup>0.4</sup> Luer.

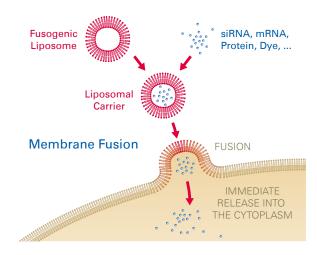


## **Reagents and Cells**

We're not Only Labware: Explore Our Fuse-It and LifeAct Product Portfolio

#### Fuse-It—Next Generation Transfection

- Rapidly and directly transfer molecules into the cytoplasm without any interference by endocytosis or lysosomal degradation
- Retain the highest viability, even in sensitive and difficult-to-transfect cells (e.g., primary neurons, keratinocytes, endothelial cells, or stem cells)





#### Fuse-It-siRNA

Silence your gene of interest even in sensitive cells



#### Fuse-It-mRNA

Transfer mRNA fast and directly into the cytoplasm



#### Fuse-It-P

Immediately transfer soluble proteins into living cells



#### Fuse-It-Color

Label the plasma membrane with various dyes



#### Fuse-It-Beads

Transfer beads and nano-particles into the cytoplasm



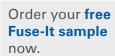
#### Fuse-It-B

Biotinylate the cell membrane for versatile use



#### Fuse-It-L

Incorporate lipids into the plasma membrane





## LifeAct—Visualization of F-Actin in Living Cells



#### LifeAct Plasmid

Get brilliant F-actin staining in living cells



#### LifeAct Adenoviral Vectors

Visualize F-actin in difficult-to-transfect cells



#### LifeAct Lentiviral Vectors

Generate stable cell lines for F-actin visualization



#### LifeAct mRNA

Rapid expression for quick cytoskeleton studies



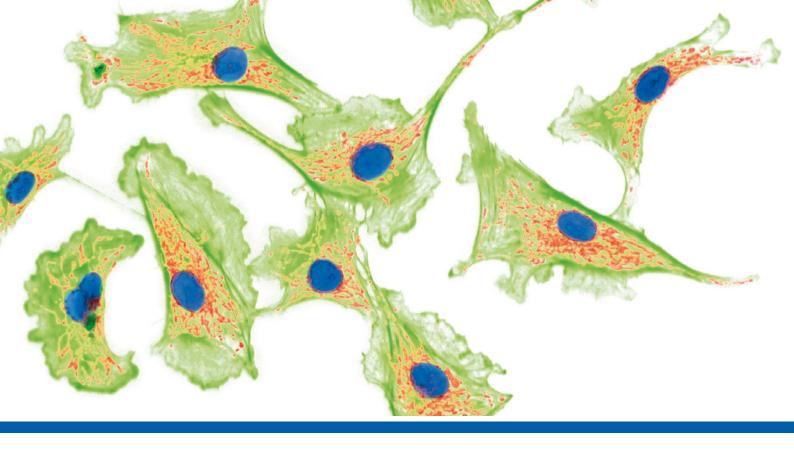
#### LifeAct Protein

Rapidly visualize F-actin in living cells



#### LifeAct Stable Cell Line

For direct use in cellbased assays





#### Manufacturer

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