ibidi®
cells in focus

Tube Formation Assays for the Investigation of Angiogenesis

Only a Few Steps from Sample Preparation to Image Analysis

Applications:

- Tube formation assays
- Sprouting assays
- 3D cell culture
- Immunofluorescence staining

✓ Brilliant Visualization

No meniscus formation and all cells in one focal plane

✓ Cost-Effective Experiments

Only 10 µl gel per well

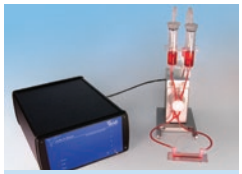
✓ Objective and Reproducible Analysis

Results within minutes using WimTube image analysis

Additional equipment for researchers working with endothelial cells:

µ-Slide I Luer family

Perfusion



ibidi Pump System

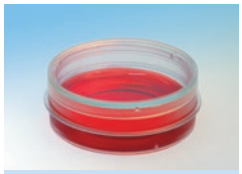
Perfusion

µ-Slides Chemotaxis

Chemotaxis

ibidi Heating Systems

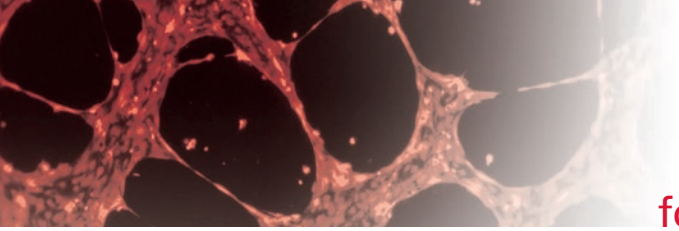
Video Microscopy



µ-Dish 35 mm, high

Microscopy

www.ibidi.com



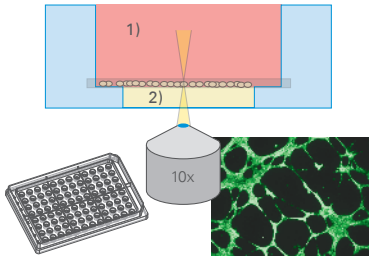
Tube Formation Assays for the Investigation of Angiogenesis

Easy Handling

The ibidi tube formation assay was primarily developed to simplify the assay of endothelial cells on Matrigel™. Using a geometrical trick called "well in a well", the amount of Matrigel needed is reduced to 10 µl per well. Additionally, the gel forms a flat surface (no meniscus), which provides all the cells in one optical plane. After the gel is filled in and given time to solidify, the cells can be seeded on top and tube formation can be analyzed.

ibidi provides two different types of plates that contain this special geometry for angiogenesis assays. The first is the µ-Slide Angiogenesis, with 15 wells, for low throughput applications. The second, for larger screening applications, is ibidi's new µ-Plate Angiogenesis 96 well.

ibidi's „Well-in-a-Well" Compared to a Standard Well

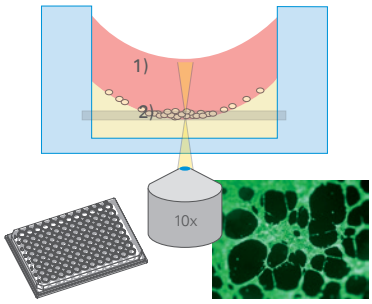


µ-Plate Angiogenesis 96 well

1) Planar air-liquid interface: good phase contrast all over the observation area

2) Planar gel surface: all cells are in one optical plane

Volume of Matrigel: 10 µl



Standard Well

1) Meniscus on air-liquid interface: poor phase contrast in most of the observation area

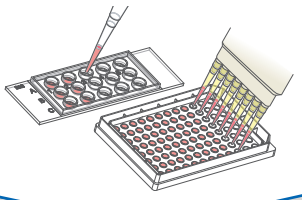
2) Mensicus on the gel surface: not possible to focus on all cells simultaneously

Volume of Matrigel: 100 µl

Easy Data Acquisition and Analysis

Microscopy is used to evaluate the tube formation process (video microscopy or images at distinct time points). The web-based automated image solution WimTube generates analysis data within minutes – fast, easy, and inexpensive.

Sample Preparation



Microscopy

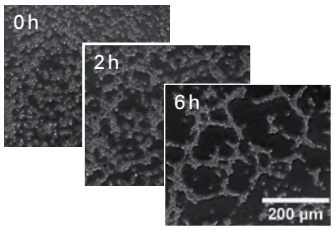
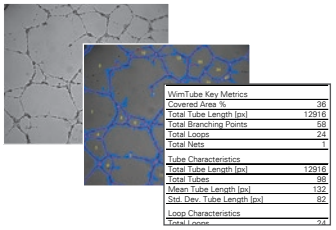
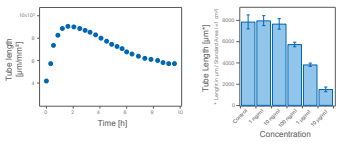


Image Analysis



Quantitative and Statistical Analysis



Technical Details µ-Slide / µ-Plate Angiogenesis:

Number of wells	15 / 96
Volume inner well	10 µl
Ø inner well	4 mm
Volume upper well	50 / 70 µl
Ø upper well	5 mm
Growth area per inner well	0.125 cm²
Bottom: ibidi Standard Bottom	

Ordering Information:

Cat. No.	Description
81506	µ-Slide Angiogenesis, ibiTreat, tissue culture treated, sterile
81501	µ-Slide Angiogenesis, hydrophobic, uncoated, sterile
89646	µ-Plate Angiogenesis 96 well, ibiTreat, tissue culture treated, sterile
30001	WimTube Quantitative Tube Formation Image Analysis

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