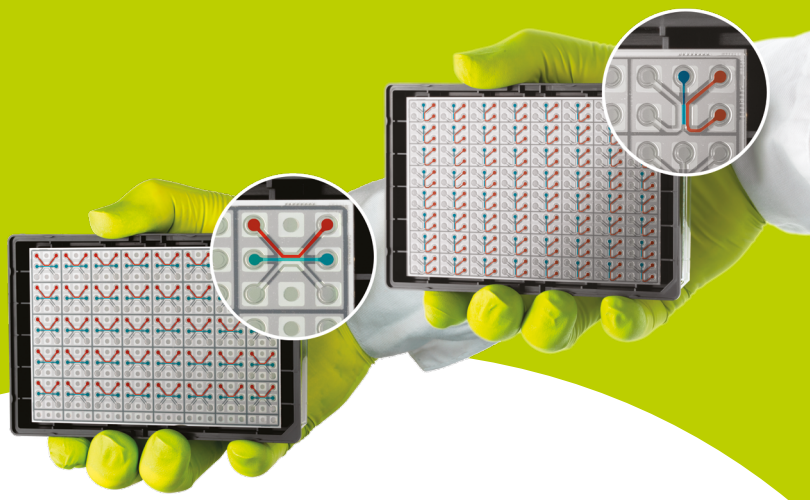
MIMETAS

OrganoReady®
BBB HBMEC

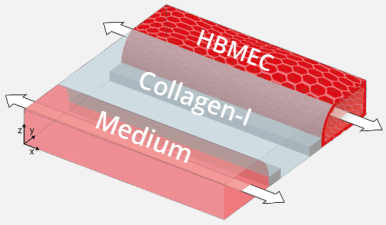


3D Human Blood-Brain Barrier Tissue Model

3D-lumenized, perfused, polarized and leak tight tubules of primary human brain microvasculature endothelial cells (HBMEC) prepared by MIMETAS experts in the OrganoPlate® 3–lane platform.

This primary endothelial model is made to quantitatively predict & mechanistically dissect small molecule transport across the blood-brain barrier (BBB), and to study vascular toxicity.

Built on a 384 well plate format, the platform is made for quantitative high-throughput and high-content microscopy, compatible with standard incubators, plate readers and liquid handlers. No need for specialized consumables, equipment, expertise with pumps or 3D biology. After a few days of recovery, the cell tubules are ready to use and will remain viable for an assay window of at least 7 days. Just add your compounds and start screening.



3D schematic of a HBMEC tubule grown in the OrganoPlate®.

Why OrganoReady®?

Live-cell culture

- 40 or 64 primary HBMEC tubules ready to use after a few days of recovery
- Includes OrganoMedium HBMEC-BM
- Ready to screen with optimized protocols

Translatable

- Expressing most important endothelial markers
- Membrane-free tissue culture
- Polarized apical and basolateral access

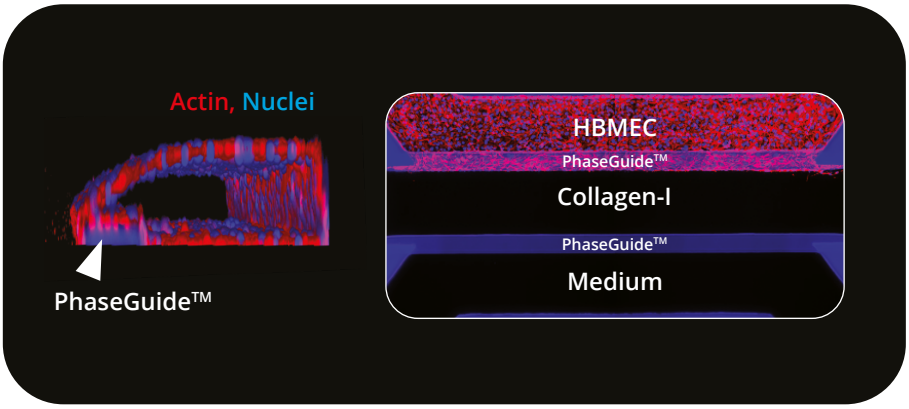
Robust

- Minimal variability with a consistent pre-validated batch of Collagen-I and cells
- TEER data without operator-induced variability
- 15 compounds, 1 control with 4 replicates each in a single plate

How the OrganoReady® model is used in routine screens

> The OrganoReady model has been very useful for fast screening of novel gene therapy related technologies in our company.
> The membrane-free fluidics is a high throughput screening tool to monitor a transfer of antibodies through the blood brain barrier.

Svetlana Pasteuning,
VectorY B.V., The Netherlands



From production to your lab

Collagen-I and HBMEC seeding in OrganoPlate® ▶ QC & Shipping on Monday* ▶ Receive by Friday ▶ Assay window of >7 days after recovery

*Shipping to Europe, United States and Canada

One plate ready for a variety of applications

Compound-induced Barrier Disruption

- Use the OrganoTEER® for sensitive and robust assessment of barrier function in 40 or 64 tissue culture chips in less than 2 minutes
- The ideal assay to study toxicity and inflammation in a physiologically relevant 3D human model

Measurement module

Electrode board

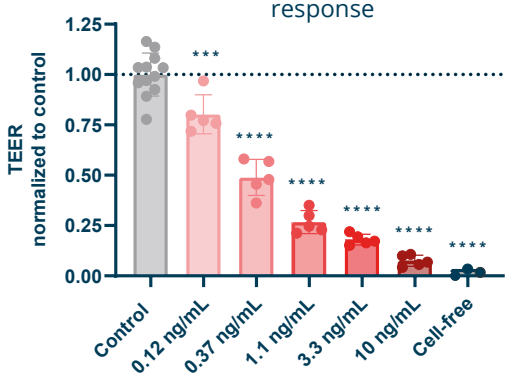
The OrganoPlate

Plate holder

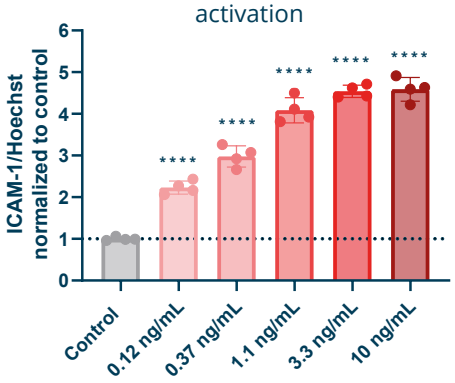
Multiparametric barrier function assessment

24H TNFα + IL1ß

Quantitative TEER response

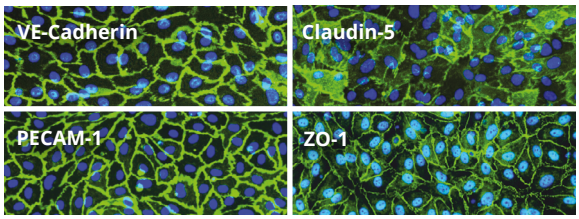


Quantitative endothelial activation



Small Molecule Transport

- Assess the permeability and transcytosis of your compounds with distinct access to both apical and basolateral compartments in a more translatable human primary model
- Expose the polarized HBMEC cells to your analytes' gradients, enabling you to quantify active efflux, and validate your compound delivery to the brain



Endothelial and junctional markers expressed: VE-Cadherin, PECAM-1, Claudin-5, ZO-1, ICAM-1, VCAM-1

Influx and efflux transporters expressed: GLUT-1, P-gp, BCRP1, MRP-1, and TfRC

Are you ready to take your cell culture to the next level?

Want to know more?
support@mimetas.com