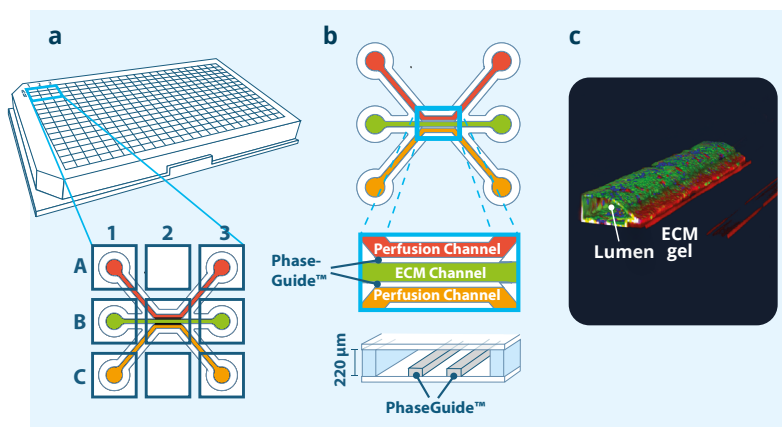


The OrganoPlate® Technology

Trans-Epithelial/Endothelial Electrical Resistance (TEER): measuring the integrity of cellular barriers in 3D models.

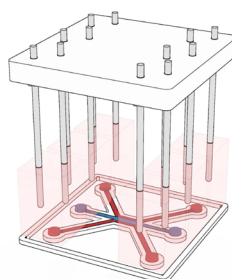
The OrganoPlate® 3-lane 40 is a culture plate with 40 microfluidic chips built into a standard 384 well plate. Within 4 days of cell culturing, 3D tubular structures form in the perfusion channels. These barrier-like structures can be accessed from both their apical and basal sides. The OrganoPlate® 3-lane 40 is very well suited for barrier function and polarization studies with a variety of cell types.



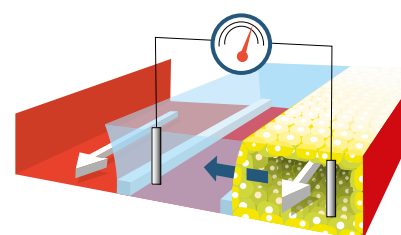
(a) The OrganoPlate® 3-lane 40 lay out and chip design. The plate contains 40 microfluidic chips with 3 channels. **(b)** The 3 channels are adjacent in the observation window. The PhaseGuides™ allow for use of extra cellular matrix (ECM)-like gel in the middle channel. There are no artificial membranes between the ECM channel and perfusion channels. **(c)** 3D IHS staining of intestinal (Caco-2) tubules cultured in the OrganoPlate 3-lane 40.

The OrganoTEER®

We developed OrganoTEER®: a fast, automated, TEER measurement device capable of quantifying 40 chips in under 1 minute. Epithelial and endothelial cell layers exhibit an electrical resistance, which is representative of their paracellular permeability. Using the OrganoTEER, we can characterise cell barrier models in the OrganoPlate®.



The electrode board of the OrganoTEER® is lowered into the wells of the OrganoPlate®



The OrganoTEER® can perform real time and continuous measurements of 2 tubules per chip.

Overview

Rapid measurements

Immediate access to results

High-throughput screening

Time lapse measurements

Measure TEER values of 3D cell barrier models

Easy to set up and use

What is included

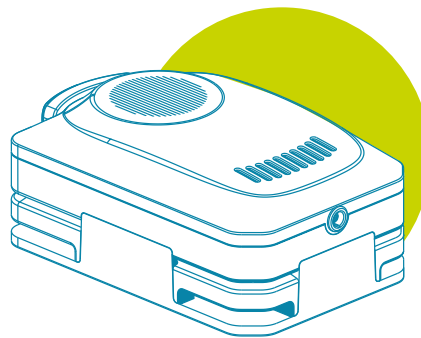
OrganoTEER®

Installation and training

Laptop with the OrganoTEER software



Detailed instructions for use and protocols are available on www.mimetas.com.



Measuring TEER with the OrganoPlate®

The OrganoPlate® and OrganoTEER® combination is a great asset for studies evaluating cytotoxicity and inflammatory reactions to compounds. Timelapse series can be performed in the incubator, where the cells can be exposed to flow conditions.

In the OrganoTEER software, you can easily select the exact cells you need to measure. The software gives results immediately, helping you save time.

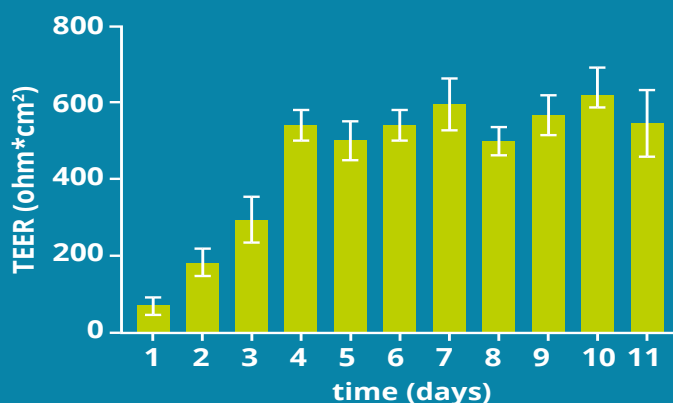
MIMETAS the Organ-on-a-Chip Company

Our goal is to empower you to study complex 3D tissue biology, with devices that are simple to use. So simple to use that you forget you are working with an advanced, optimized combination of a 3-D culture platform and its custom TEER device.

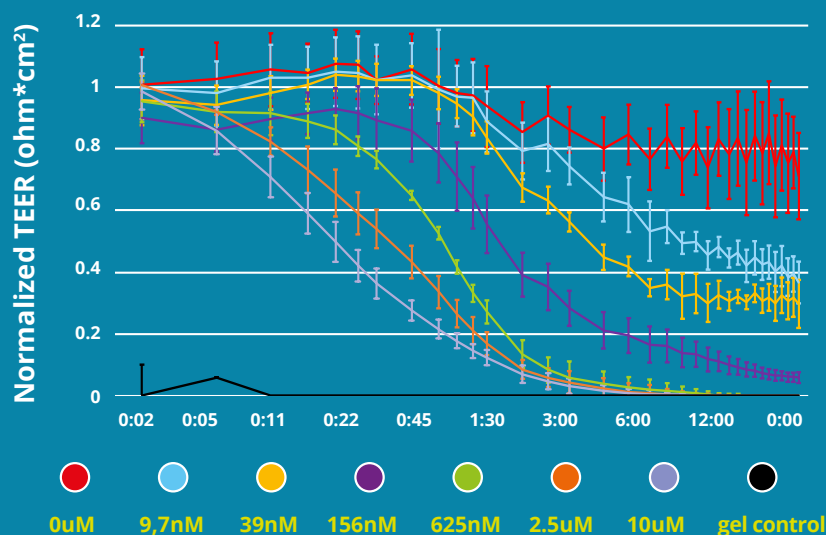
Say Hello to the future of tissue modelling.



After 4 days of culture in the OrganoPlate®, Caco-2 (intestinal) cells have stable barrier function



Time-lapse measurements of Caco-2 tubules exposed to different Staurosporine concentrations in the OrganoPlate® over 20 hours



0uM 9,7nM 39nM 156nM 625nM 2.5uM 10uM gel control