

# MIMETAS

- 96 tissue culture chips
- Pump-free perfusion
- Membrane-free co-culture
- Automation compatible
- 384 well format
- Easy handling



## OrganoPlate® 2-lane 96

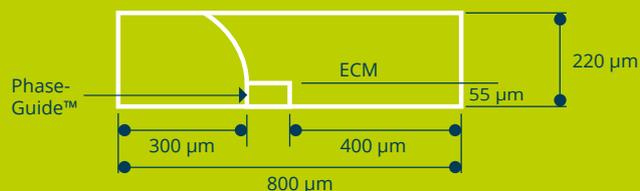
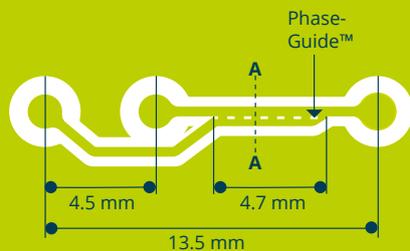
Product code 9605-400-B

The OrganoPlate® 2-lane 96 is an advanced microfluidic tissue culture device that contains 96 independent tissue culture chips. Each chip supports an extracellular matrix (ECM) channel and a perfused medium channel. There is no membrane between the channels, as the channels are separated by PhaseGuide™ technology. A single chip is connected to four wells of the OrganoPlate®: a gel inlet, two medium reservoirs, and an observation window. Any number of chips can be used in an experiment.

The OrganoPlate® 2-lane 96 supports apical access to epithelial and endothelial tubules.

### Supported Tissue Models

The OrganoPlate® 2-lane 96 supports a range of cell types in different tissue configurations. The system enables the culture of perfused tubules adjacent to an ECM of choice without artificial membranes. With direct access to the apical lumen of tubules, the platform enables perfusion and addition of cells, compounds, and stimuli. You can use any ECM that remains solid at culture temperature, including chemically crosslinked ECMs and natural ECMs. Endothelial and epithelial tubules (e.g. blood vessels, Caco-2 gut tubules) can be combined with in-ECM culture, such as neurons, hepatocytes and organoids.



Cross section A-A

## Specifications

<b>Applications</b>	Perfused 3D culture, up to 2-layer co-culture (tubule and cells in ECM)
<b>Product code</b>	9605-400-B
<b>Number of cultures per plate</b>	96
<b>Liquid handling system</b>	Liquid handling systems able to work with industry standard (384 well plates)
<b>Channels per tissue culture chip</b>	2 channels, 1 perfusable, all barrier- and membrane-free
<b>Compound access to tissue</b>	Apical
<b>Microfluidic channel width</b>	Perfusion channel: 300 μL, ECM channel: 400 μL
<b>Microfluidic channel height</b>	220 μm
<b>PhaseGuide™ dimensions</b>	100 x 55 μm (w x h)
<b>ECM-gel loading volume</b>	2.0 μL recommended for both channels
<b>Internal volumes</b>	Perfusion channel: 1.4 μL ; ECM channel: 1.4 μL
<b>Medium volume</b>	50 μL recommended in each well. 15 μL - 90 μL possible.
<b>Gel-medium interface surface</b>	1.00 mm <sup>2</sup>
<b>Plate format</b>	SBS Standard 384 well plate
<b>Materials</b>	Top plate: virgin polystyrene. Bottom plate: optical quality 150 μm glass (1H coverslip thickness). Microfluidics: glass, proprietary polymers, biocompatible and low compound-absorbing.
<b>Perfusion</b>	Gravity driven and pump free using the OrganoFlow®. With the recommended 7° rocking angle, intermittent shear stress forces ranging between 0 - 2.2 dyne/cm <sup>2</sup>
<b>Readouts</b>	Imaging (phase contrast, widefield fluorescence, confocal and more) ; plate reader (absorption, fluorescence, luminescence) ; off plate (ELISA, RNA/DNA analysis, MS, biochemistry)