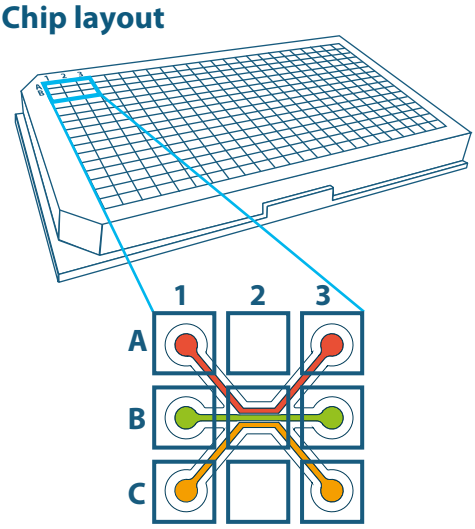
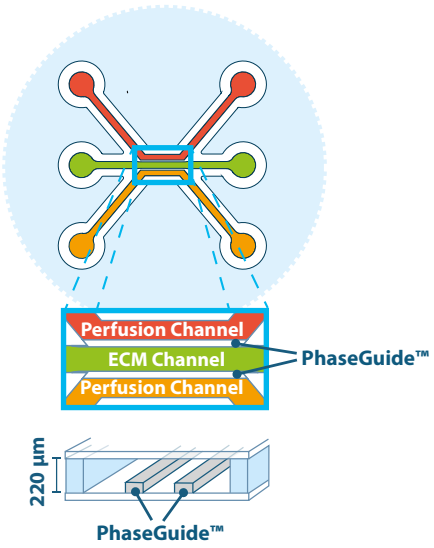
product code 4004-400-B

OrganoPlate® 3-lane in a nutshell

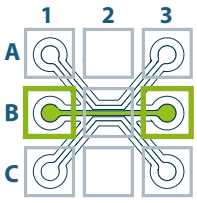
Chip layout

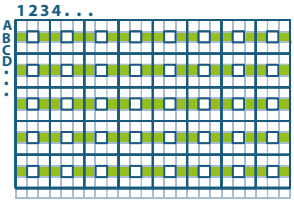




Well layout

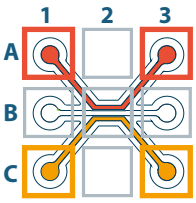
ECM Channel

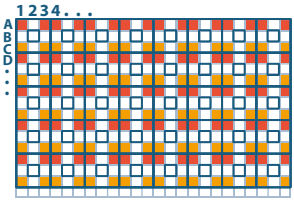




Gel Inlet/Outlet (green)
Used to add extracellular matrix (ECM) gel with or without cells to the gel channel by pipetting into the well.

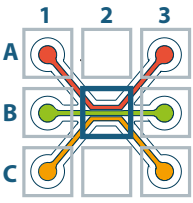
Perfusion Channel

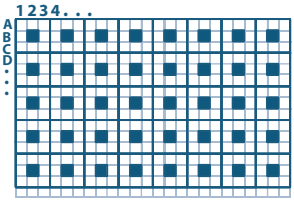




Top Perfusion Channel inlet and outlet (red), bottom Perfusion Channel inlet and outlet (orange)
Used to add medium (with or without cells) to one or both Perfusion Channels.

Observation Window

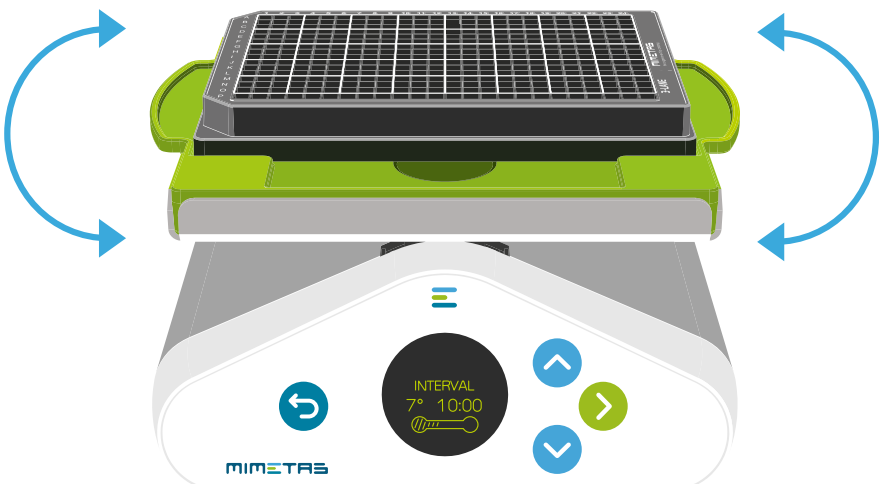




The Observation Window (blue)
Used for imaging your culture. This is where the three channels come together and make contact.

To perfuse your cultures: place on the OrganoFlow® for programmable rocking.

Please check protocols and the OrganoFlow® manual on our website for instructions.

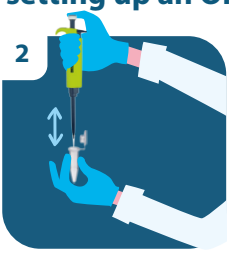


Visit **mimetas.com/support** for the latest protocols.

MIMETAS

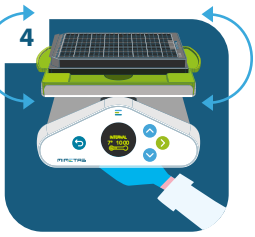
The four steps for setting up an OrganoPlate® culture

1 Check for the latest protocols: mimetas.com/support



2 Select your ECM, cells & medium

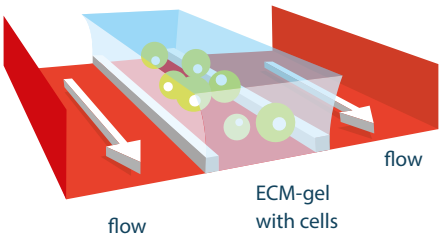
3 Load your plate according to protocols



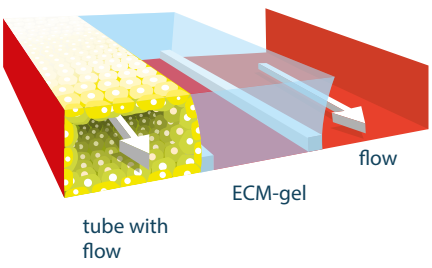
4 Incubate and perfuse your culture

Culture configuration examples in the OrganoPlate® 3-lane

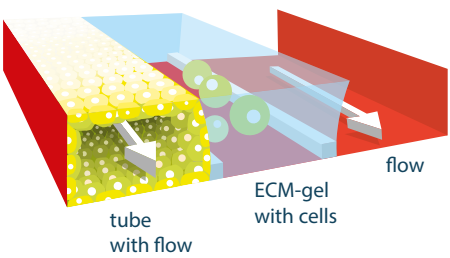
In-gel tissue



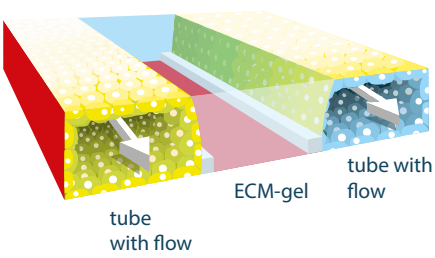
Against-gel tube



In-gel tissue + against-gel tube



Two tubes flanking gel



Product specifications OrganoPlate® 3-lane

Applications	Perfused 3D culture, co-culture up to 3 tissue layers, barrier integrity and transport, angiogenesis, gradient formation, cell migration
Product code	4004-400-B
Number of chips per plate	40 (partial use possible)
Lanes per chip	3 lanes, all perfusable, barrier- and membrane-free
Compound access to tissue tubules	Apical & basal (in- and outside)
Microfluidic lane widths	Top and bottom perfusion lane: 300 µm. Middle lane: 350 µm
ECM-gel loading volume	1.3 - 2.5 µL
Internal volumes	Top and bottom perfusion lane: 1.69 µL. Middle lane: 1.43 µL
Gel-medium interface surface	0.5 mm^2
Plate format	SBS-standard 384-well plate, 127.8 x 85.5 x 14.4 mm, (l x w x h) (17.2 mm height with lid)
Materials	Top plate: virgin polystyrene. Plate bottom: optical quality 150 µm glass (#1 coverslip thickness). Microfluidics: glass, proprietary polymers, biocompatible and low compound-absorbing.
Microfluidic lane height	220 µm
PhaseGuide™ dimensions	100 x 55 µm (w x h)
Medium volume	15-75 µL in each well
Perfusion	Gravity driven, pump free, typical shear forces in tubule 0 - 5 dyne/cm^2
Assays	• Immunostaining • DNA isolation • RNA isolation • Cell viability assays • Transport assays • Migration assays • Barrier integrity assay • Western blot • Mass spectometry • Adhesion assays • ELISA • TEER
Readouts	Imaging (phase contrast, widefield fluorescence, confocal), plate reader (absorption, fluorescence, luminescence), sampling (ELISA, PCR, sequencing, MS, biochemistry)