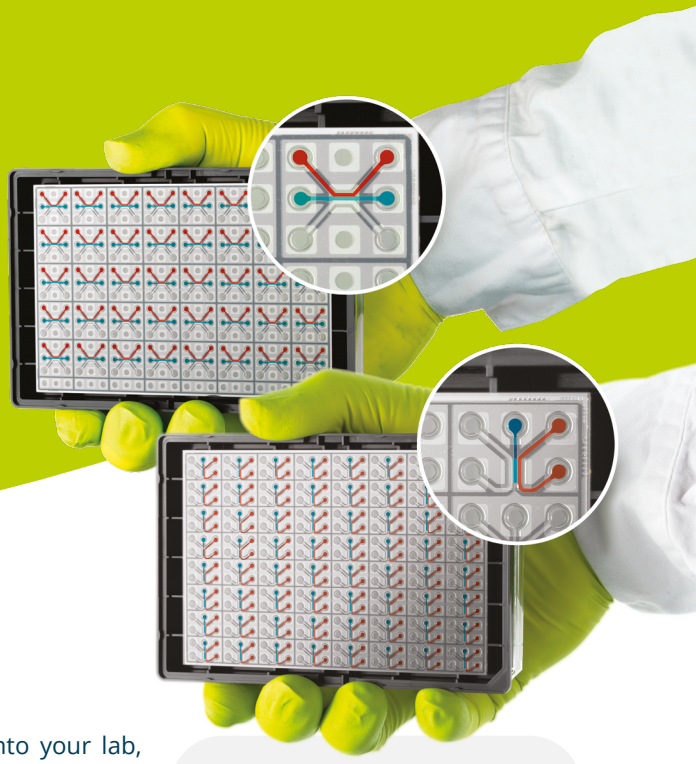
MIMETAS

OrganoReady® Colon Organoid

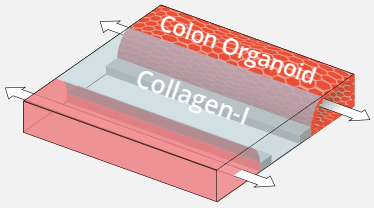


3D Human Colon Organoid Model

The OrganoReady® platform is designed for seamless integration into your lab, delivering 40 or 64 ready-to-use perfusable colon tubes. Following a few days of recovery, the tubules are leak-tight and ready for toxicological applications.

Derived from adult stem cells (HUB Organoids*), this model harnesses the physiological relevance of organoids with membrane-free apical and basal access, enabling more accurate predictions of gastrointestinal toxicity (GIT) – a common and severe adverse event that poses significant challenges in drug discovery and development.

This is the first ready-to-use solution derived from adult stem cells, complete with single-use license. This OrganoReady product will take your GIT screening to the next level!



3D schematic of a colon organoid tubule grown in the OrganoPlate® platform.

* HUB ORGANOIDS

Why OrganoReady®?

Translatable

- Adult stem cell- derived tissue
- Modulatable barrier (membrane free)
- Polarized epithelium
- Proliferative phenotype
- Fully characterized adult phenotype
- Predictable gastrointestinal toxicity

Robust

- Reproducible TEER data using the OrganoTEER®
- Validated and consistent batch of Collagen-I & organoids
- Guaranteed >95% viable tubules per plate

Ready-to-use

- Optimized model with no cell and ECM handling needed
- Includes all reagents and culture medium
- HUB license (single-use) included
- Optimized protocols provided

High-throughput assessment of barrier function

- Use the OrganoTEER® device for sensitive and robust assessment of barrier function in the colon organoid tissues in less than 1 minute per plate
- The ideal assay to study toxicity and inflammation in a physiologically relevant 3D human gut model

Measurement module

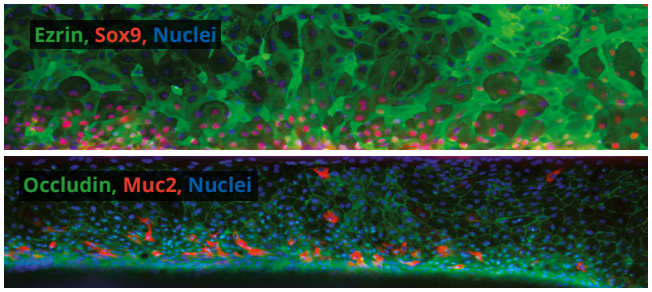
Electrode board

The OrganoPlate

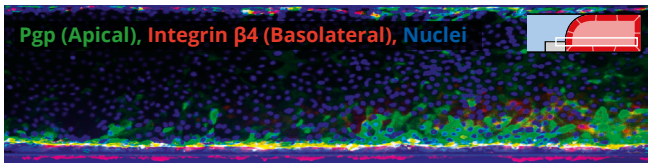
Plate holder

Fully Characterized Intestinal Model

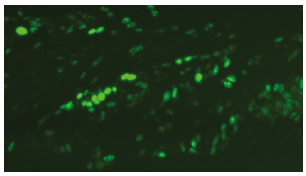
Adult tissue phenotype

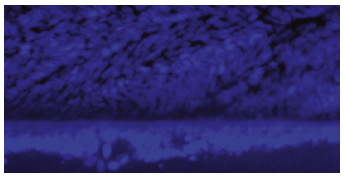


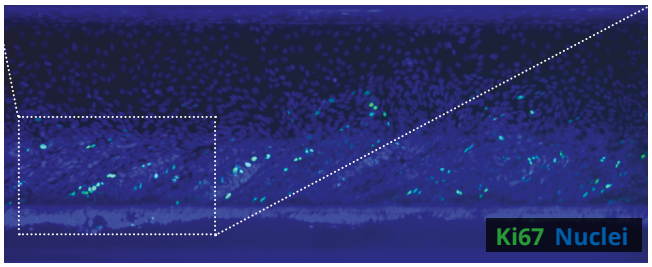
Polarized transporter expression



Proliferative phenotype



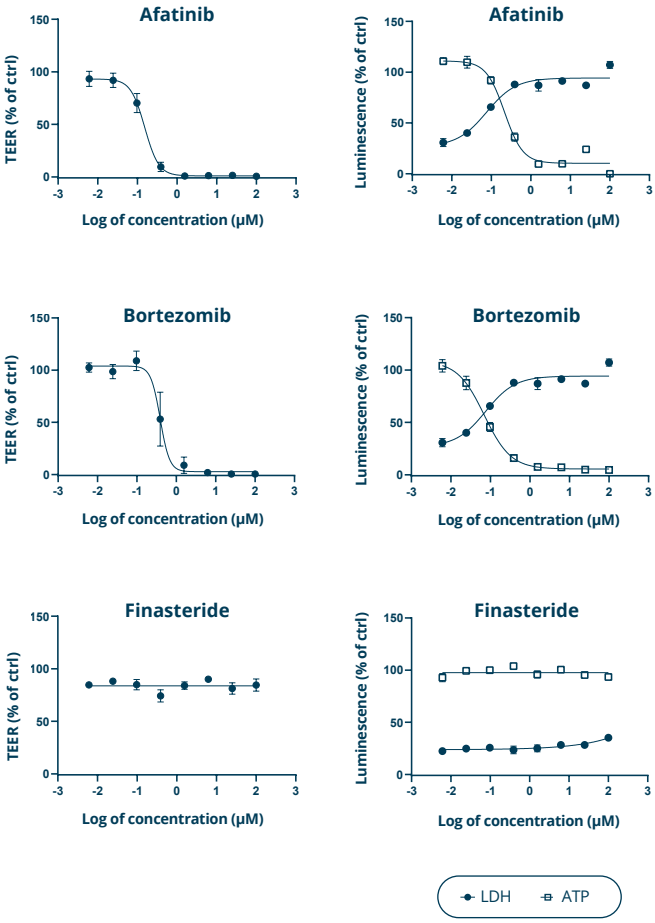




Immunofluorescence staining confirms the presence of goblet cells (MUC-2), enterocytes (Occludin and Villin), and stem cells (Ki67), indicating a mature yet proliferative intestinal tissue. The 3D-lumenized structure is also polarized, with proper expression of apical (Ezrin) and basolateral (Integrin β4) markers, and shows expression of the transport marker P-glycoprotein (Pgp).

Multiparametric toxicity assessment

Barrier Integrity | **Cytotoxicity and Cell viability**



GIT assessment using multiplexed read-outs on the OrganoReady Colon Organoid model. Dose-dependent TEER (barrier resistance), LDH (cytotoxicity) and ATP (cell viability) measurements of colon organoid tubules exposed to Afatinib, Bortezomib and Finasteride (n=4, N=2). After 72 hours of exposure to Afatinib and Bortezomib, a dose-dependent decrease in barrier integrity, cytotoxicity and cell viability was observed, while the control drug, Finasteride, did not cause significant changes.

How can you get access to our OrganoReady Colon Organoid?

Services

MIMETAS offers tailored fee-for-service solutions to advance your therapeutics portfolio using the OrganoReady Colon Organoid model, providing a variety of optimized assays at scale. Contact our experts to discuss how we can help you with disease modeling, compound safety and DMPK studies.

Shipped product

The OrganoReady Colon Organoid model allows for the screening of compounds to de-risk safety liabilities. Kick-start your 3D cell culture research in the fastest and most accessible manner with our OrganoReady models, and receive the model directly in your lab, complete with all the necessary media to support your safety studies with optimized protocols.

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

Want to know more? support@mimetas.com

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