ISO 9001:2015

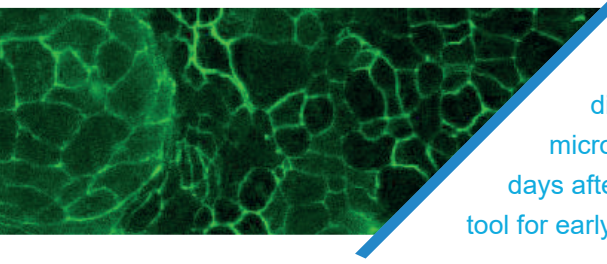
CacoGoblet is a product manufactured in compliance with ISO 9001:2015

CacoGoblet

ReadyCell

EASING YOUR SCREENING

# A mucus-secreting concept for intestinal absorption evaluation

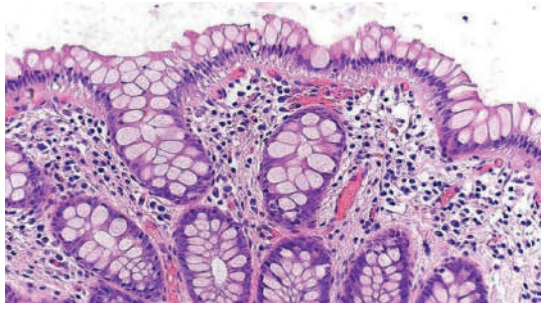


## ReadyCell introduces CacoGoblet

The kit consists of 24-well permeable supports seeded with differentiated polarized Caco-2 and human goblet cells on polycarbonate microporous filters. CacoGoblet is flexible, since plates can be used up to 5 days after ideal cell barrier differentiation at day 21, being a time and cost-saving tool for early stage drug discovery and development.

## CacoGoblet Applications

- Evaluation of oral absorption efficiency, oral bioavailability and oral toxicity
- Study of mechanisms involved in oral and intestinal absorption
- Predictive model for compounds or formulations with passive diffusion transport pathway



Mucus-secreting CacoGoblet allows in vitro intestinal absorption evaluation of drug targets in a barrier physiologically closer to the intestinal epithelium.

## Four simple steps to use CacoGoblet

| #1 Receive | #2 Liquefy | #3 Apply | #4 Assay |
|---|---|---|---|
| Ready-to-use Cell Barrier | Liquefying of Solid Shipping Medium | Incubation with Test Compound | Assessment of Permeability/Transport End Point |

## Benefits of CacoGoblet

- Available on demand
- Ready-to-use without in-house cell line development or acquisition and cell propagation
- Transportation and storage at room temperature in proprietary shipping medium
- User friendly and easy-handling system
- Adaptable to automation
- High reproducibility

***ORDER YOUR PLATES***
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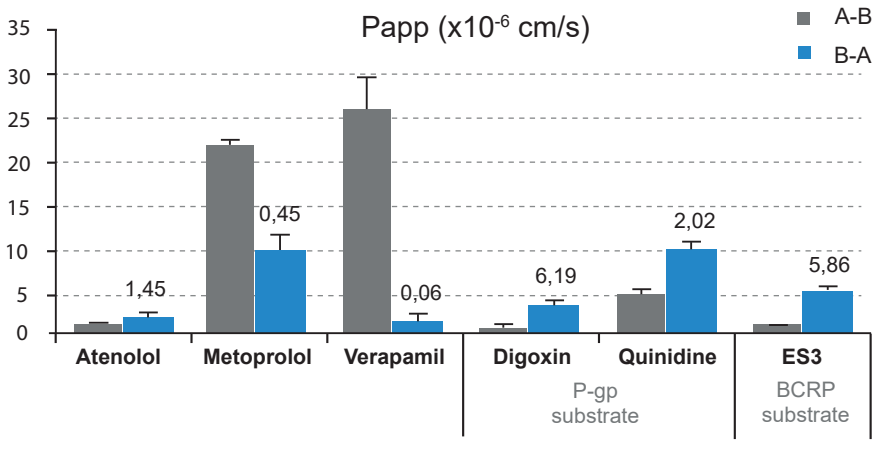
CacoGoblet

# EXPERIMENTAL DATA

## Functional Stability of CacoGoblet

Functionality of co-culture Caco-2 and HT-29 barrier is evaluated by permeability assays of different compounds at day 21. Results are expressed as the average of Papp values.




## Permeability and Efflux Ratio Values for Reference Compounds

| Test compound | Concentration (µM) | APICAL BASAL | | BASAL APICAL | | Permeability | Efflux Ratio |
|---|---|---|---|---|---|---|---|
| | | Papp x $10^{-6}$ (cm/s) | SD | Papp x $10^{-6}$ (cm/s) | SD | | |
| Atenolol | 10 | 0.99 | 0.01 | 1.43 | 0.37 | Low | 1.45 |
| Metoprolol | 10 | 22.51 | 0.44 | 10.13 | 1.27 | High | 0.45 |
| Verapamil | 10 | 25.99 | 3.09 | 1.58 | 0.49 | High | 0.06 |
| Digoxin | 10 | 0.45 | 0.20 | 2.78 | 0.54 | Low | 6.19 |
| Quinidine | 10 | 5.04 | 0.66 | 10.21 | 0.94 | Medium | 2.02 |
| Estrone 3-Sulfate (E3S) | 10 | 0.95 | 0.02 | 5.59 | 0.53 | Low | 5.86 |

Table 1. Recommended control compounds recomended to validate in vitro permeability testing

## ReadyCell In Vitro Permeability Systems compared to Physiological Intestinal Absorption

| | Human Intestine | CacoReady | CacoGoblet |
|---|---|---|---|
| Composition | Absorptive (80%), mucus-secreting (10-30%) | Absorptive (100%) | Absorptive (50%), mucus-secreting (50%) |
| Presence of Mucus | YES | NO | YES |
| Paracellular Permeability | Permissive epithelium | Tight epithelium | Permissive epithelium |
| Transepithelial Electrical Resistance (Ohms·cm2) | 20-110 | 1000-3000 | 70-120 |