

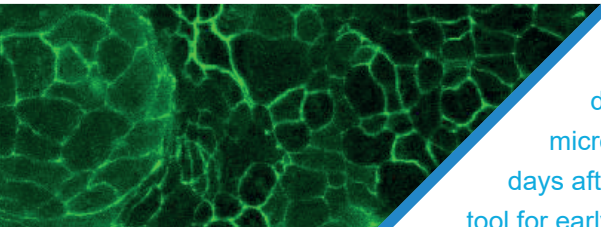
# ReadyCell

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

Ready-to-use  
Cell Barrier



#2  
Liquefy

Liquefying of Solid  
Shipping Medium



#3  
Apply

Incubation with  
Test Compound



#4  
Assay

Assessment of  
Permeability/Transport  
End Point

### Benefits of CacoGoblet

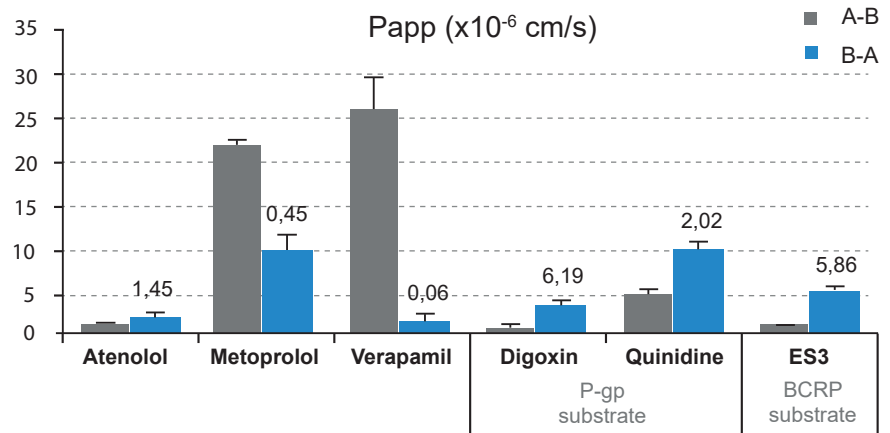
- Available on demand
- Ready-to-use without in-house cell line development or acquisition and cell propagation
- Transportation and storage at room temperature in proprietary shipping medium
- User friendly and easy-handling system
- Adaptable to automation
- High reproducibility

**ORDER YOUR PLATES**  
[reagents@readycell.com](mailto:reagents@readycell.com)  
+34 93 403 70 77

## 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 <sup>-6</sup> (cm/s)	SD	Papp x 10 <sup>-6</sup> (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 recommended 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·cm <sup>2</sup> )	20-110	1000-3000	70-120