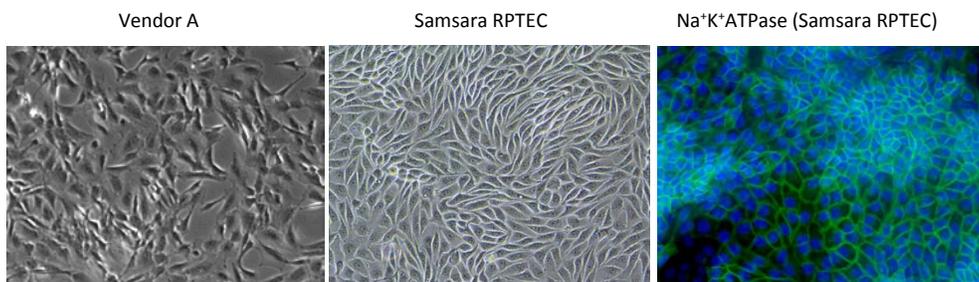
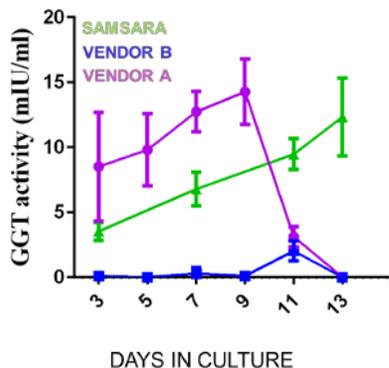
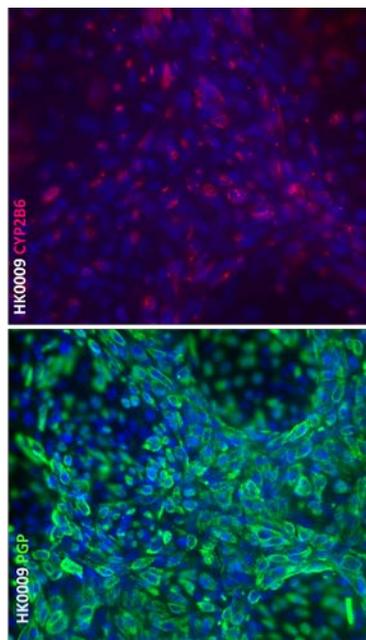


## PRIMARY HUMAN RENAL PROXIMAL TUBULAR EPITHELIAL CELLS (RPTEC)

Samsara's primary human Renal Proximal Tubular Epithelial Cells (RPTEC) are provided as cryopreserved stock ready for plating and use in a variety of *in vitro* assays. Thawed cells can be used directly or expanded 1-2 passages in our GBG<sup>Epithelial</sup>™ Media and cryopreserved for future use. Unlike many commercially available cells, our cells have not been conditionally or constitutively genetically modified or immortalized, and they have not undergone the epithelial-mesenchymal-transformation (EMT) common to renal epithelial cells *in vitro*. The typical morphology of renal epithelial cells affected by EMT is shown in Vendor A's cells in the left panel below. In contrast, Samsara's RPTEC form a stable, confluent polarized monolayer of cells that express a broad range of proximal tubule markers, including Na<sup>+</sup>K<sup>+</sup>ATPase, PGP, OCT2, and OAT3.

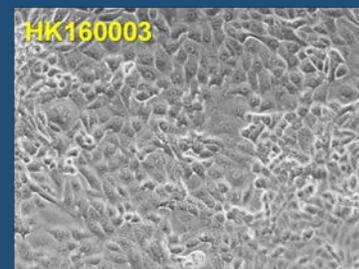


Samsara RPTEC cultures can be maintained for at least two weeks *in vitro* without significant loss of epithelial morphology or certain tubular cell functions, such as gamma glutamyl transpeptidase (GGT) activity.



## PRODUCT HIGHLIGHTS

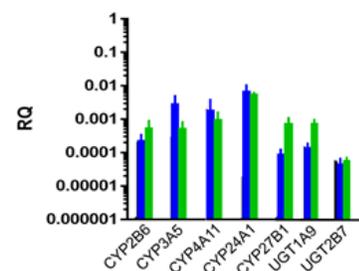
### Persistent epithelial morphology



### Express proximal tubule markers

- Megalin / Cubilin
- Na<sup>+</sup>K<sup>+</sup>ATPase
- SGLT2 / PGP (MDR1)
- MATE1/MATE2K
- OCT2 / OAT3
- GGT

### Metabolically competent

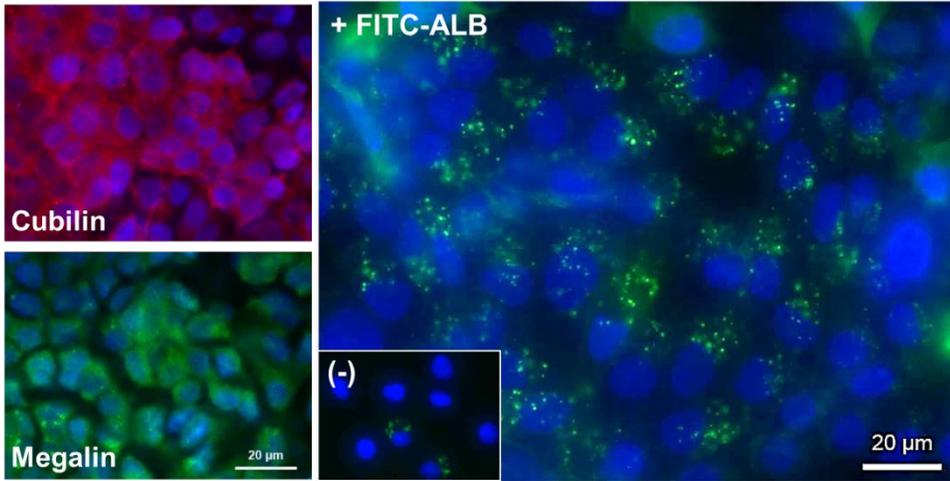


### PRODUCTS AVAILABLE

- Cryopreserved cells
- GBG<sup>EPITHELIAL</sup> media
- Snap-frozen tissues
- Paraffin-embedded tissues

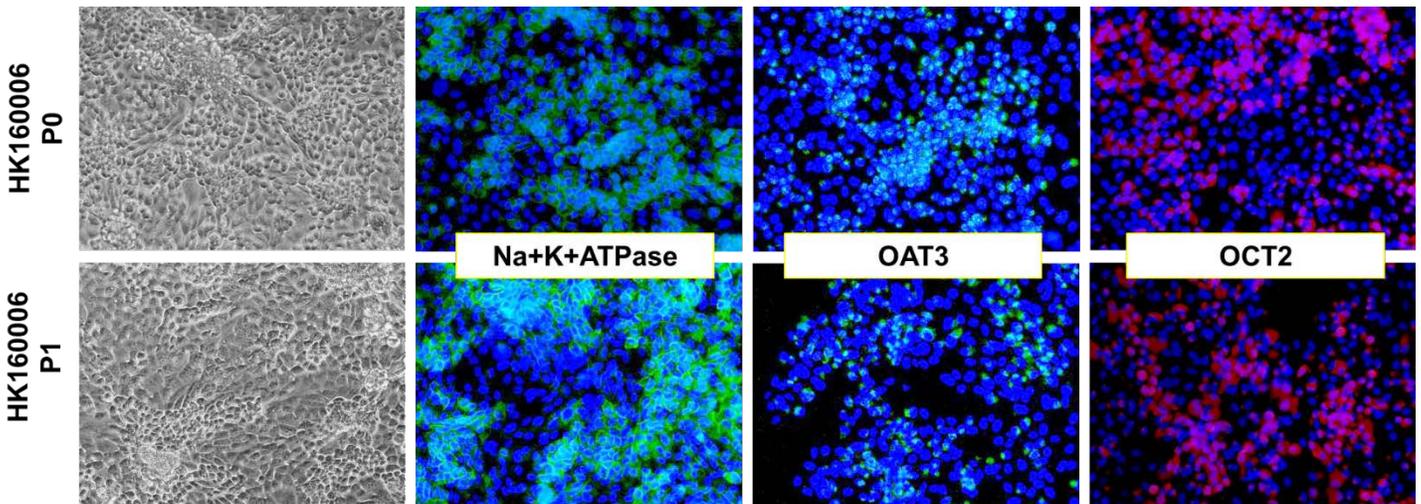
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The proximal tubule is the primary site for albumin resorption from the glomerular filtrate, and the quantity of albumin found in the urine is influenced both by leakage from the glomerulus and degree of uptake from the tubule. Consistent expression of both Cubilin and Megalin by Samsara's RPTEC ensure that important functions, such as



receptor-mediated albumin transport, are intact in the cultured cells. The proximal tubule is responsible for returning albumin that ends up in the glomerular filtrate back to the circulation. Expression of both receptors are evident, and the uptake of FITC-conjugated albumin by the cubilin+/megalin+ cells is shown on the right after a 120-minute exposure at 250μg/mL.

Use of Samsara's GBG<sup>Epithelial</sup> Media ensures cells can be maintained in a functional state and expanded on a limited basis for use in *in vitro* assays. As shown in the figure below, the epithelial morphology of the cultures at p1 is consistent with the morphology at p0, as are the expression of Na+K+ATPase, OAT3, and OCT2.



Antibodies were as follows: rabbit polyclonal anti-Na+K+ATPase (Abcam ab58475), rabbit polyclonal anti-OAT3 (Novus Biologics, NBP1-92396), and mouse anti-OCT2 (Novus Biologics H00005452-M01).



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[www.samsarasciences.com](http://www.samsarasciences.com)  
[info@samsarasciences.com](mailto:info@samsarasciences.com)  
phone: 858-617-0790