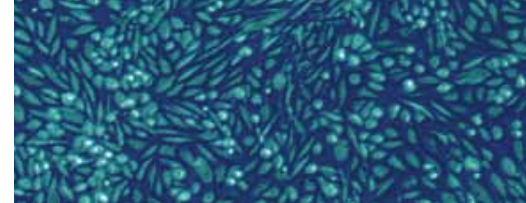
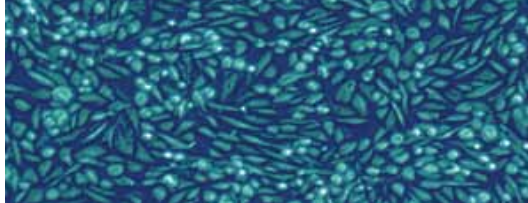


THE ESSENTIALS OF
LIFE SCIENCE RESEARCH
GLOBALLY DELIVERED™



RENAL EPITHELIAL CELLS

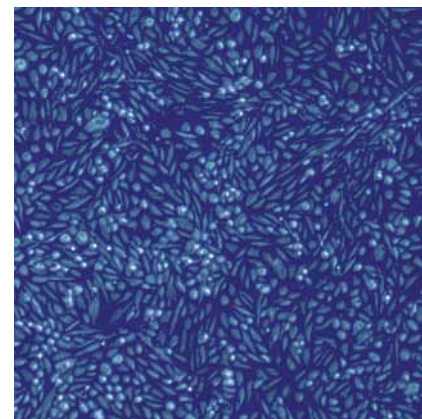
ATCC® Normal Human Primary Renal Epithelial Cells, when grown in Renal Epithelial Cell Basal Medium supplemented with Renal Epithelial Cell Growth Kit components, provides an ideal cell system for propagation in low-serum conditions (0.5% FBS).



Each lot of ATCC Normal Human Primary Renal Epithelial Cells is:

- Cryopreserved in the first (Renal Cortical Epithelial Cells, Renal Mixed Epithelial Cells) or second (Renal Proximal Tubule Epithelial Cells) passage to ensure the highest viability and plating efficiency.
- Performance tested together with ATCC® Primary Cell Solutions™ media, kit supplements and reagents to guarantee optimum reliability.
- Thoroughly tested for sample purity as part of the ATCC commitment to quality.

Applications for use might include research related to hypertension, diabetes, oncology, renal fibrosis, inflammation, autoimmune disease, drug screening/development, and toxicology.



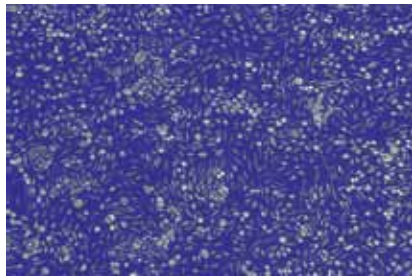
OPTIMIZED GROWTH MEDIUM MAKES A DIFFERENCE

Primary renal epithelial cells are effectively supported by the complete ATCC Primary Cell Solutions cell system consisting of Renal Epithelial Cell Basal Medium supplemented with the Renal Epithelial Cell Growth Kit. This unique formulation is designed to produce cultures with:

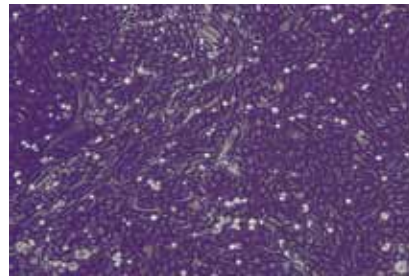
- Normal morphology
- Functional expression of relevant biomarkers
- Excellent growth rates

Use of this complete system eliminates the need for additional components such as feeder layers, extracellular matrix proteins or other substrates to enhance attachment and proliferation. Cells grown in complete Renal Epithelial Cell Growth Medium are clear, highly refractile, and have a more compact cuboidal morphology compared to cells grown in other brands of renal epithelial media. More compact cells means more cells per flask.

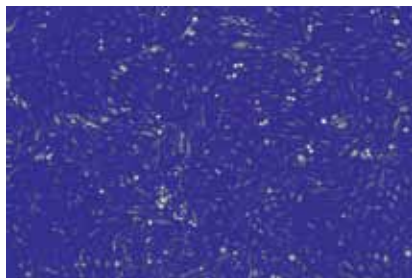
Comparison of ATCC Primary Cell Solutions Renal Proximal Tubule Epithelial Cell Morphology and Cell Density in Different Complete Renal Epithelial Cell Growth Media*



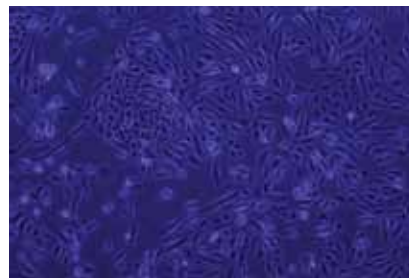
ATCC Complete Renal Epithelial Cell Growth Medium



Supplier 1 Medium



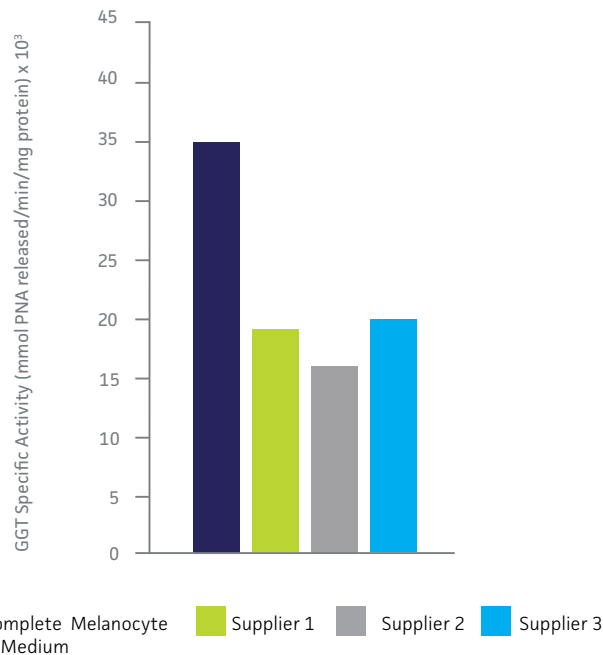
Supplier 2 Medium



Supplier 3 Medium

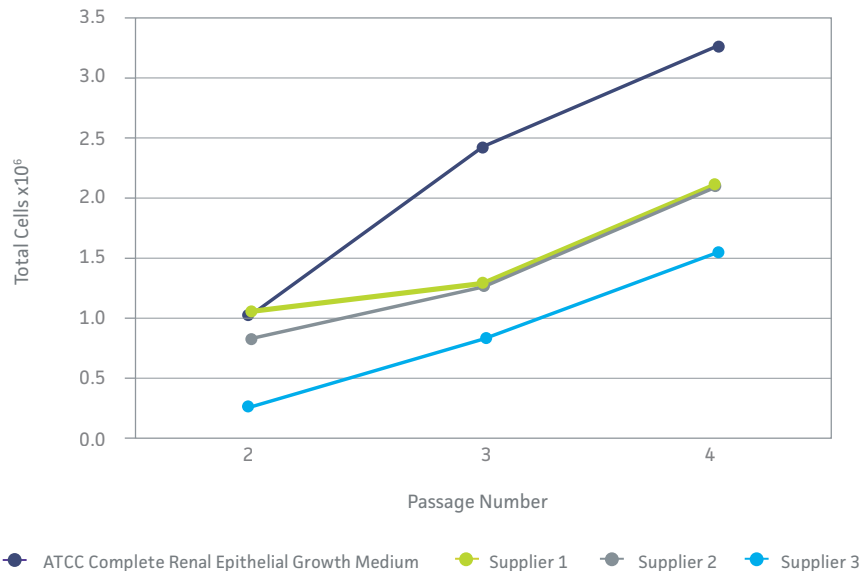
*All cells were imaged at passage 4.

Renal Proximal Tubal Epithelial Cells in Different Brands of Low Media: Levels of γ -glutamyl Transferase Activity



ATCC Primary Cell Solutions Renal Proximal Tubule Epithelial Cells were taken from liquid nitrogen and cultures initiated. The cells were grown for 4 days and then seeded in quintuplicate into a 24-well plate at 1,000 cells/cm² and grown in different brands of low serum medium for 13 days with periodic changes of media. 500 μ L of assay buffer (150 mM Tris-HCl [pH 8.0], 187.5 mM NaCl, 0.2% Triton X-100) was added to each well and the plates were agitated on an orbital shaker for at least 5 minutes to solubilize the cells. The contents of 5 wells per medium were combined and total protein measured using the Bio-Rad Protein Assay (Bradford method). 400 μ L of assay buffer containing solubilized cell material, 400 μ L of 100 mM Gly-Gly (pH 8.0) reagent, and 200 μ L of 12.5 mM L-gamma-glutamyl-p-nitro-anilide (PNA) were combined and incubated at 37°C for 30 min. Absorbance at 410 nm was measured using a Wallac VICTOR2™ MultiLabel Counter. The activity of the samples was calculated against a standard curve of the reaction product, p-nitroaniline.

Comparison of Total Renal Proximal Tubule Cell Number Over Time



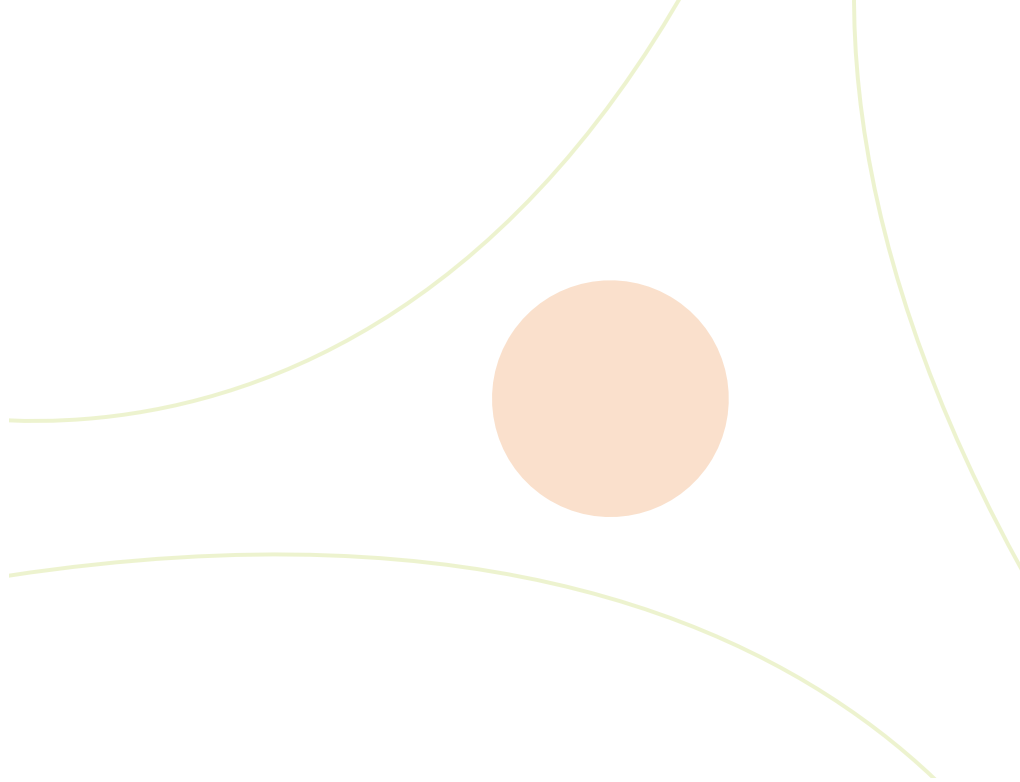
ATCC Primary Cell Solutions Renal Proximal Tubule Epithelial Cells were taken from liquid nitrogen and cultures initiated by seeding at 5,000 cells/cm². The cells were grown in different brands of low serum medium and subcultured four times. The elapsed time for this experiment ranged from 18 days for cells grown in ATCC Complete Renal Epithelial Cell Medium and 29 days for cells grown in Supplier 3 medium.

PUTTING ALL THE PIECES TOGETHER ADDS UP TO YOUR SUCCESS.



To achieve the best possible results, we suggest that you order a complete system for each cell type:

	Product Name	Components	Catalog No.
1	Primary Renal Proximal Tubule Epithelial Cells; Normal, Human	≥ 5 x 10 ⁵ viable cells	PCS-400-010
1	Primary Renal Cortical Epithelial Cells; Normal, Human	≥ 5 x 10 ⁵ viable cells	PCS-400-011
1	Primary Renal Mixed Epithelial Cells; Normal, Human	≥ 5 x 10 ⁵ viable cells	PCS-400-012
2	Renal Epithelial Cell Basal Medium	485 mL	PCS-400-030
3	Renal Epithelial Cell Growth Kit	1 kit	PCS-400-040
4	Phenol Red	1 mL	PCS-999-001
4	Penicillin-Streptomycin-Amphotericin B Solution	1 mL	PCS-999-002
4	Trypsin-EDTA for Primary Cells	100 mL	PCS-999-003
4	Trypsin Neutralizing Solution	100 mL	PCS-999-004
4	Gentamicin-Amphotericin B Solution	1 mL	PCS-999-025
4	Dulbecco's Phosphate Buffered Saline (D-PBS)	500 mL	ATCC 30-2200



Additional cells/cell types will be added in the coming months.
Visit us online at www.atcc.org/PCS to bookmark the primary cell page for easy reference.

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