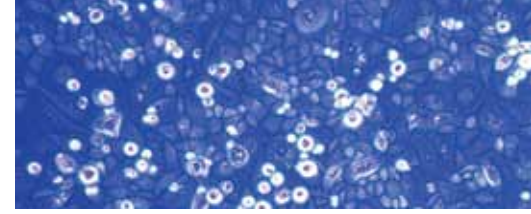
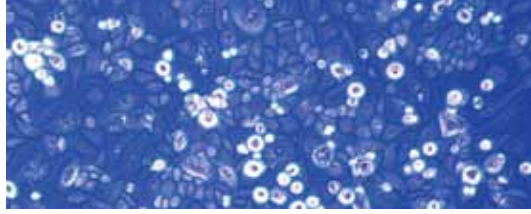


THE ESSENTIALS OF
LIFE SCIENCE RESEARCH
GLOBALLY DELIVERED™



CORNEAL EPITHELIAL CELLS

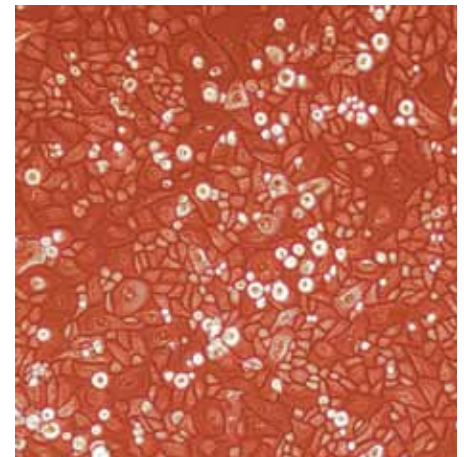
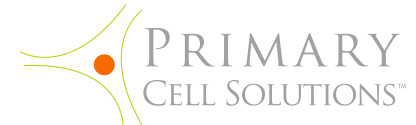
Set your eyes on a clear path to research success.

ATCC® Normal Human Corneal Epithelial Cells, when grown in Corneal Epithelial Cell Basal Medium supplemented with Corneal Epithelial Cell Growth Kit components, provides an ideal cell system for propagation in serum-free conditions.

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

- Cryopreserved in the second 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 validation of alternative methods in toxicology as well as research related to gene regulation and tissue development, cell-matrix interactions, and drug development.



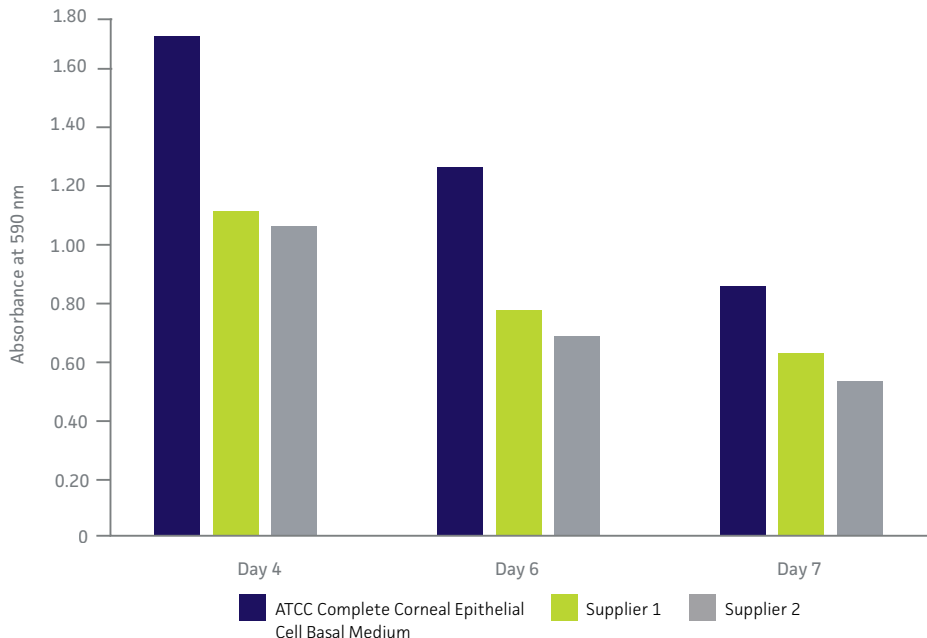
OPTIMIZED GROWTH MEDIUM MAKES A DIFFERENCE

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

- Superior growth and proliferation
- Normal morphology

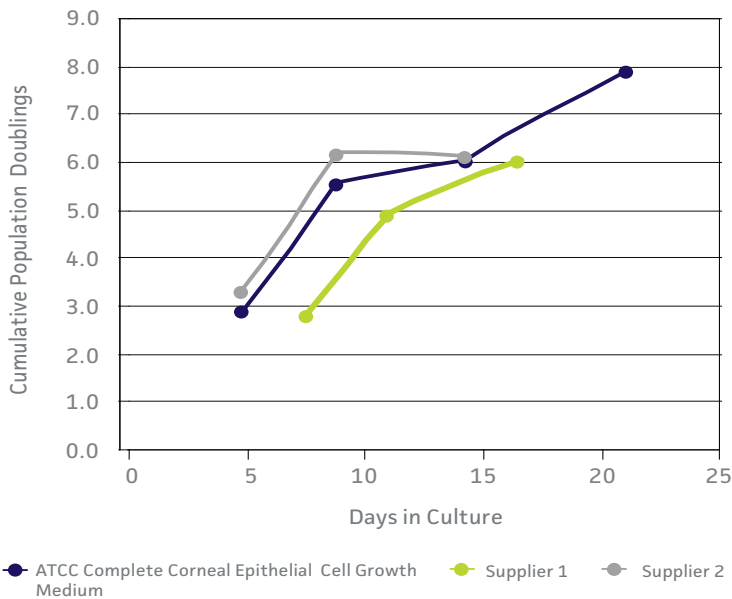
Use of this complete system removes the need for additional components such as feeder layers, extracellular matrix proteins or other substrates.

Growth of Primary Human Corneal Epithelial Cells in Different Brands of Serum-Free Media



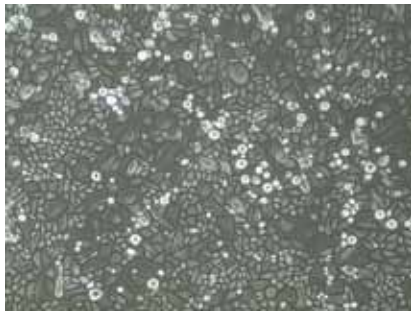
ATCC Primary Cell Solutions corneal epithelial cells were taken from liquid nitrogen and cultures initiated. The cells were cultured for 3 to 4 days. The cells were then seeded in triplicate into a 24-well plate at 1,500 cells/cm², 600 cells/cm², or 400 cells/cm², and grown for 4, 6, or 7 days respectively in different brands of serum-free media. Cell proliferation was measured by removing the medium and adding 0.05% Crystal Violet stain solution and incubating for 30 minutes at room temperature. The plates were rinsed and then allowed to air-dry. The dried stain was then resolubilized using alcohol. Absorbance at 590 nm was measured using a Wallac VICTOR2™ MultiLabel Counter. The medium was not changed during the incubation period; the assay is a measure of a media's capacity to support log-phase growth over time. The higher the absorbance value, the higher the rate of cell proliferation.

Population Doubling: Corneal Epithelial Cells in Different Brands of Serum-Free Media

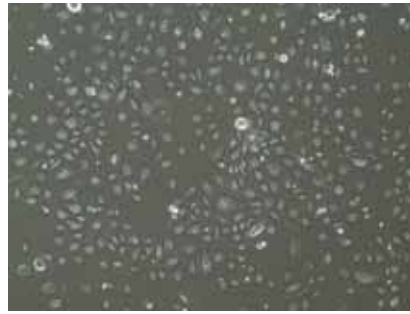


This experiment was conducted while various lots of ATCC Primary Cell Solutions corneal epithelial cells were undergoing QC testing. When grown in ATCC Complete Growth Medium, primary corneal epithelial cells maintained normal morphology and growth characteristics through four passages after thaw. The morphology of cells grown in Supplier 1 Medium was unsatisfactory after two passages and cell growth drastically slowed; the cells were discarded in passage 3. Cells grown in Supplier 2 Medium appeared to stop dividing after passage 2. (See cell photos and population doubling times on page 3.)

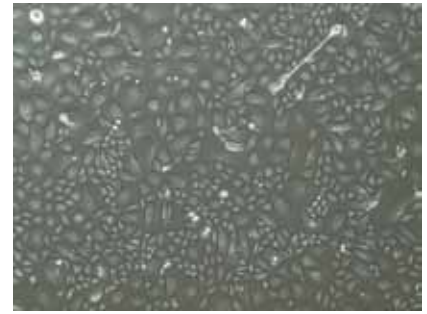
Comparison of ATCC Primary Cell Solutions Corneal Epithelial Cell Morphology in Different Brands of Media



ATCC Complete Corneal Epithelial Cell Growth Medium (passage 2, day 4)



Supplier 1 Medium (passage 2, day 2)



Supplier 2 Medium (passage 2, day 4)

Population Doubling Times by Passage Number

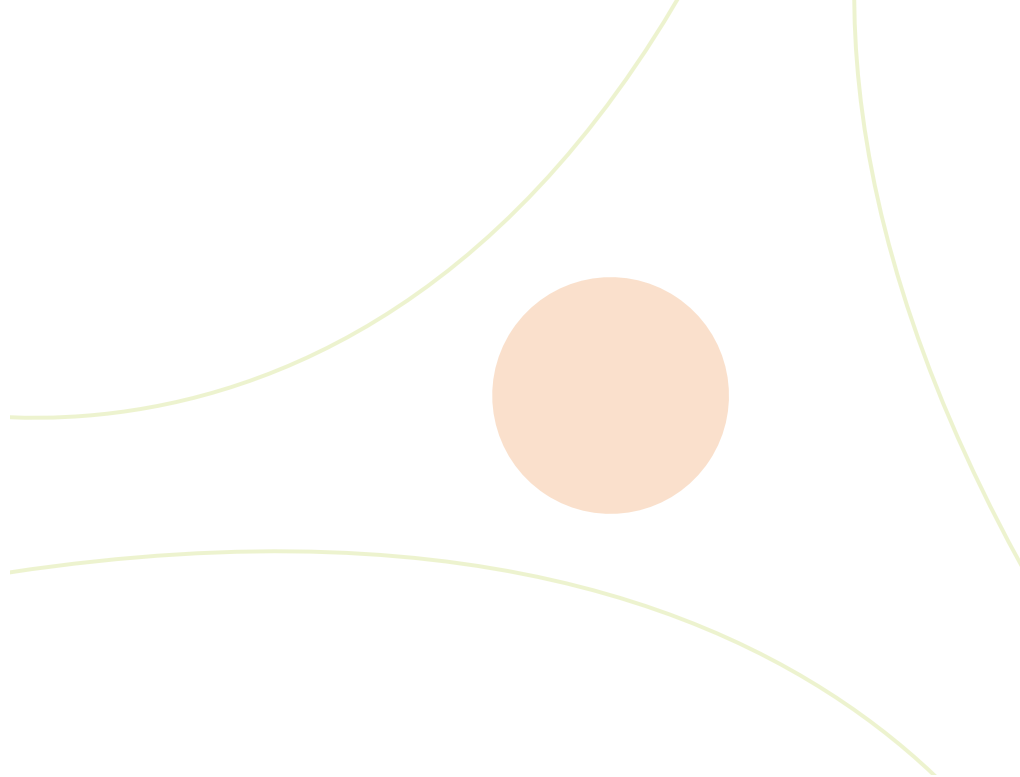
Medium	Passage Number After Thaw			
	1	2	3	4
ATCC Complete Corneal Epithelial Cell Growth Medium	34.8 h	24.8 h	73.5 h	102 h
Supplier 1	54.6 h	46.6 h	104 h	N/A
Supplier 2	31.4 h	30.6 h	N/A	N/A

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 Corneal Epithelial Cells; Normal, Human	$\geq 5 \times 10^5$ viable cells	PCS-700-010
2	Corneal Epithelial Cell Basal Medium	485 mL	PCS-700-030
3	Corneal Epithelial Cell Growth Kit	1 kit	PCS-700-040
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.

SUPERIOR QUALITY. EXPERT SUPPORT. RELIABLE RESULTS.



10801 University Blvd.
Manassas, VA 20110

PC-1010-0.1-02

© 2010 American Type Culture Collection. The ATCC trademark and trade name, any and all ATCC catalog numbers and any other trademarks listed in this publication are trademarks of the American Type Culture Collection unless indicated otherwise. Wallac VICTOR2™ is a trademark of PerkinElmer Corporation.

These products are for laboratory use only. Not for human or diagnostic use. ATCC products may not be resold, modified for resale, used to provide commercial services or to manufacture commercial products without prior ATCC written approval.

PHONE

800.638.6597
703.365.2700

EMAIL

sales@atcc.org
tech@atcc.org

WEB

www.atcc.org