ATCC® HUMAN PRIMARY CELLS

Aortic Endothelial Cells
Aortic Smooth Muscle Cells
Coronary Artery Endothelial Cells
Coronary Artery Smooth Muscle Cells
Pulmonary Artery Endothelial Cells
Pulmonary Artery Smooth Muscle Cells
Lung Smooth Muscle Cells
Lung Fibroblasts
Small Airway Epithelial Cells
Bronchial/Tracheal Epithelial Cells
Bronchial/Tracheal Smooth Muscle Cells
Branchni Bronchial Epithelial Cells
Disease Airway Cells
Bladder Epithelial Cells (A/T/N)
Bladder Smooth Muscle Cells
Bladder Fibroblast Cells
Prostate Epithelial Cells
Primary Skeletal Muscle Cells
Dermal Microvascular Endothelial Cells
Dermal Fibroblast, Adult & Neonatal
Epidermal Keratinocytes, Adult & Neonatal
Epidermal Melanocytes, Adult & Neonatal
Pre-adipocytes
Adipose-derived Mesenchymal Stem Cells

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Corneal Epithelial Cells
Gingival Fibroblasts
Gingival Keratinocytes
Peripheral Blood Mononuclear Cells (PBMC)
Peripheral Blood CD14+ Cells
Peripheral Blood CD4+ Cells
Peripheral Blood CD8+ Cells
Peripheral Blood CD19+ Cells
Peripheral Blood CD56+ Cells
Primary Cord Blood CD34+ Cells
Cord Blood CD34+ Cells
Cord-derived Mesenchymal Stem Cells
Uterine Fibroblast Cells
Uterine Smooth Muscle Cells
Mammary Endothelial Cells
Vaginal Epithelial Cells
Bone Marrow CD34+ Cells
Bone Marrow Mononuclear Cells
Bone Marrow-Derived Mesenchymal Stem Cells
Hepatocytes: Characterized

To capture the in vivo situation

What are Human Primary Cells?

- Untransformed
- May display similar gene expression as cells in situ
- Many similar physiologic functions as in vivo
- Indispensable for a wide range of experiments
- Ideal to examine physiology or disease pathology
- Can reduce animal usage in preclinical experiments

3-D Culture Models Capture the In Vivo Situation:

- Form functional airway epithelium
- Mucus secretion
- Cilia formation
- Form functional epidermis
- Stratified morphology
- Barrier function
- Form vascular tubules
- Von Willebrand factor & CD31 expression
- AcLDL uptake
- Form Organoids
- Microtissue structure
- Genotypically/phenotypically stable

Complete Primary Cell Solutions for Robust Cell Growth:

ATCC offers:

- Primary cell media
- Cell-specific growth kits
- Dissociation reagents
- Cryopreservation media
- Optimized growth protocols
- Primary Cell Culture Guide

To serve as ideal controls to in vitro models

From in situ

Use the new Human Primary Cell selection guide at
www.atcc.org/primarycellselection
hTERT-IMMORTALIZED PRIMARY CELLS combine the best of both worlds:

ATCC human telomerase reverse transcriptase (hTERT)-immortalized primary cells combine the in vivo nature of primary cells with the growth potential of a continuous cell line.

Pros and cons of different cell models for tissue-relevant functional studies

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hTERT-IMMORTALIZATION

- Primary cells are restricted to a finite number of cell divisions
- Telomers are repeat sequences that cap chromosome ends
- This limit is due to the loss of telomeres during cell division
- Transfect target cells with the catalytic subunit of telomerase enzyme (hTERT)
- hTERT catalyzes the replacement of telomere subunits
- The hTERT-expressing cell escapes senescence

Bypassing replicative senescence: Overexpression of telomerase and supportive oncoproteins in primary cells

- 5-fold increase in lifespan
- Retention of physiological characteristics

hTERT-immortalized and normal Primary Cell Culture Guides

Learn all about:
- Growth media formulations
- Culturing conditions
- Seeding densities
- Cell counting
- Confluence
- Cryopreservation
- Subculturing protocols
- Download the guides at www.atcc.org-guides

Browse ATCC’s wide variety of hTERT-immortalized primary cells at www.atcc.org/hTERT