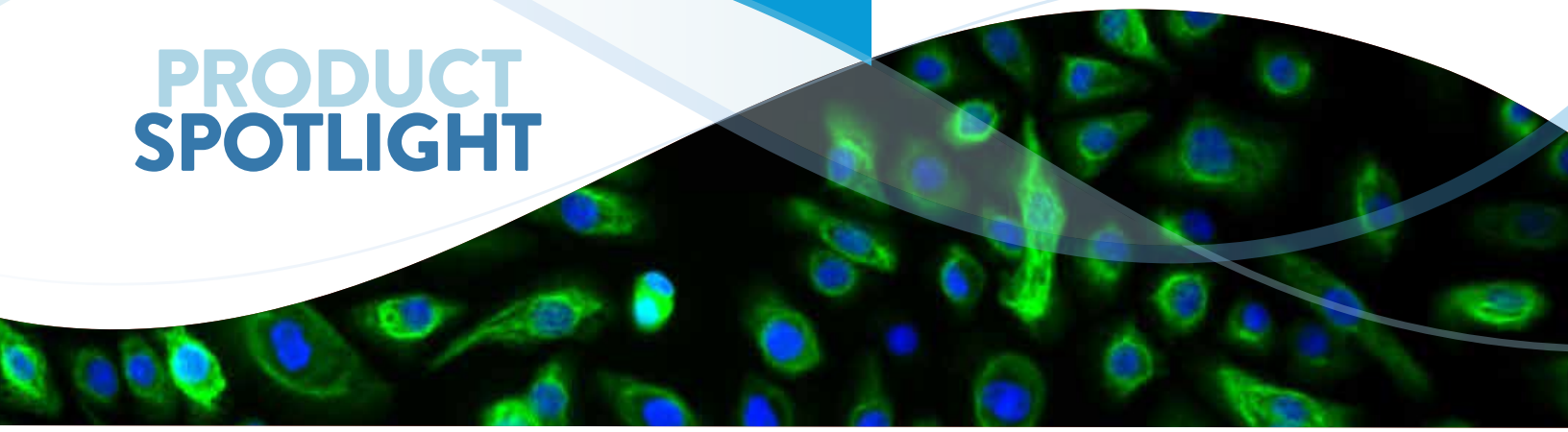
ATCC

PRODUCT SPOTLIGHT



hTERT-IMMORTALIZED PRIMARY CELLS

ENJOY THE BEST OF ALL WORLDS WITH HUMAN TELOMERASE REVERSE TRANSCRIPTASE (HTERT)-IMMORTALIZED PRIMARY CELLS FROM ATCC.

PHYSIOLOGICALLY RELEVANT DATA

hTERT-immortalized Primary Cells more closely mimic the physiology of cells in vivo. hTERT-immortalized Primary Cells are derived from differentiated cells and exhibit tissue-specific features, express differentiation-specific proteins, and form structures that resemble those in vivo.

LONG TERM EXPRESSION OF PRIMARY CELL PHENOTYPE

hTERT-immortalized Primary Cells offer extended proliferative capacity in vitro. They exhibit the growth characteristics of a continuous cell line. Unlike primary cells, hTERT-immortalized Primary Cells do not senesce after a few passages, but continue to proliferate and continue to express primary cell phenotypic characteristics.

STABLE GENOTYPES

hTERT-immortalized Primary Cells exhibit a stable karyotype and genotype and do not show changes associated with transformation such as tumorigenicity.

USEFUL CANCER MODELS

hTERT-immortalized Primary Cells are invaluable tools in several research areas including investigating the pathogenesis of many disease states, toxicological testing, and drug screening. The cells are effective controls because they do not transform spontaneously in culture and yet, they can be easily transformed to malignant phenotypes (as compared to primary cells) because of their proliferative capacity.

GROWING SPECTRUM OF TOOLS

ATCC offers a growing line of immortalized cells of diverse cell types and tissue sources. In addition to standard ATCC authentication, hTERT-immortalized Primary Cells are tested for extended proliferative capacity, selected phenotypic markers from the tissue of interest, stable genotype and continuous expression of hTERT.

Table 1: hTERT-immortalized Airway Cells

Description	ATCC® No.
NuLi-1, human bronchial epithelium, normal	CRL-4011™
CuFi-1, human bronchial epithelium, cystic fibrosis	CRL-4013™
CuFi-4, human bronchial epithelium, cystic fibrosis	CRL-4015™
CuFi-5, human bronchial epithelium, cystic fibrosis	CRL-4016™
CuFi-6, human bronchial epithelium, cystic fibrosis	CRL-4017™
HSAEC1-KT, human small airway epithelium, normal	CRL-4050™
HBEC3-KT, human bronchial epithelium, normal	CRL-4051™
hTERT lung fibroblast	CRL-4058™

Table 2: hTERT-immortalized Chondrocyte Fibroblast Cells

Description	ATCC® No.
CHON-001, human bone cartilage fibroblast, normal	CRL-2846™
CHON-002, human bone cartilage fibroblast, normal	CRL-2847™

Table 3: hTERT-immortalized Fallopian Tubule Cells

Description	ATCC® No.
hTERT-immortalized human fallopian tubule cells, preB-ALL, relapse	CRL-3445™

Table 4: hTERT-immortalized Dermal Microvascular Endothelial Cells

Description	ATCC® No.
TIME, human dermal microvascular endothelium, normal	CRL-4025™
TIME-GFP, human dermal microvascular endothelium, normal	CRL-4045™
NFκB-TIME, human dermal microvascular endothelium, normal	CRL-4049™
hTERT dermal microvascular endothelium, neonatal	CRL-4060™

Table 5: hTERT-immortalized Endometrial Fibroblast Cells

Description	ATCC® No.
T HESCs, human endometrium fibroblast, non-malignant myoma	CRL-4003™

Table 6: hTERT-immortalized Barrett's Esophageal Epithelial Cells

Description	ATCC® No.
CP-A (KR-42421), human Barrett's esophageal epithelium	CRL-4027™
CP-B (CP-52731), human Barrett's esophageal epithelium	CRL-4028™
CP-C (CP-94251), human Barrett's esophageal epithelium	CRL-4029™
CP-D (CP-18821), human Barrett's esophageal epithelium	CRL-4030™

Table 7: hTERT-immortalized Skin Cells

Description	ATCC® No.
BJ-5ta, human foreskin fibroblast, normal	CRL-4001™
TelCOFS02MA, human skin fibroblast, cerebro-oculo-facio-skeletal-syndrome	CRL-4005™
Ker-CT, human foreskin keratinocyte, normal	CRL-4048™
Neonatal dermal melanocytes	CRL-4064™
Dermal melanocyte, normal, adult	CRL-4059™

Table 8: hTERT-immortalized Gingival Fibroblasts

Description	ATCC® No.
hTERT-immortalized human gingival fibroblast, normal, adult	CRL-4061™

Table 9: hTERT-immortalized Mammary Epithelial Cells

Description	ATCC® No.
hTERT-HME1 (ME16C), human mammary epithelium, normal	CRL-4010™

Table 10: hTERT-immortalized Gingival Epithelial Cells

Description	ATCC® No.
hTERT TIGKs gingival epithelium	CRL-3397™

Table 11: hTERT-immortalized Schwann Cells

Description	ATCC® No.
hTERT ipNF05.5 (Mixed clones) human plexiform neurofibroma	CRL-3387™
hTERT ipNF05.5 human plexiform neurofibroma	CRL-3388™
hTERT ipNF95.6 human plexiform neurofibroma	CRL-3389™
hTERT ipNF95.11b human C plexiform neurofibroma	CRL-3390™
hTERT ipNF95.11c human Schwann cell	CRL-3391™
hTERT ipn02.3 2λ human Schwann cell	CRL-3392™

Table 12: hTERT-immortalized Pancreas Duct Epithelial Cells

Description	ATCC® No.
hTERT-HPNE, human pancreas duct epithelium, normal	CRL-4023™
hTERT-HPNE E6/E7, human pancreatic duct epithelium	CRL-4036™
hTERT-HPNE E6/E7/st, human pancreatic duct epithelium	CRL-4037™
hTERT-HPNE E6/E7/K-RasG12D, human pancreatic duct epithelium	CRL-4038™
hTERT-HPNE E6/E7/K-RasG12D/st, human pancreatic duct epithelium	CRL-4039™

Table 13: hTERT-immortalized Prostate Cells

Description	ATCC® No.
hTERT EP156T, human prostate epithelium, normal	CRL-3289™
hTERT PF179T CAF, human prostate fibroblast, cancer associated	CRL-3290™
hTERT SMC PM151T, human prostate fibroblast, normal	CRL-3291™

Table 14: hTERT-immortalized Renal Epithelial Cells

Description	ATCC® No.
UMB1949 [UMBSVtel], human renal epithelium, angiomyolipoma	CRL-4004™
SV7tert PDGFtu1, human renal epithelium, angiomyolipoma	CRL-4008™
RPTEC/TERT1, human renal proximal tubule epithelium	CRL-4031™
RPTEC/TERT1 OAT1 human renal proximal tubule epithelium	CRL-4031-OAT1™
RPTEC/TERT1 OCT2 human renal proximal tubule epithelium	CRL-4031-OCT2™
RPTEC/TERT1 OAT3 human renal proximal tubule epithelium	CRL-4031-OAT3™

Table 15: hTERT-immortalized Retinal Pigmented Epithelial Cells

Description	ATCC® No.
hTERT RPE-1, human retinal pigmented epithelium, normal	CRL-4000™

Table 16: hTERT-immortalized Adipose-derived Cells

Description	ATCC® No.
ASC52telo, hTERT-immortalized adipose-derived mesenchymal stem cells (MSC)	SCRC-4000™
hTERT A41hWAT-SVF superficial neck fat; adipose derived, fibroblast like	CRL-3386™

Table 17: hTERT-immortalized Aortic Endothelial Cells

Description	ATCC® No.
TeloHAEC, human aortic endothelium, normal	CRL-4052™
TeloHAEC-GFP, human aortic endothelium, normal	CRL-4054™

Table 18: hTERT-immortalized HUVEC Cells

Description	ATCC® No.
HUVEC/TERT 2, human umbilical vascular endothelium, normal	CRL-4053™

HELPFUL REFERENCES

Additional references can be found on the product detail pages of individual hTERT-immortalized primary cells located on the ATCC website.

hTERT-HPNE (ATCC® CRL-4023™) Campbell PM, *et al.* K-Ras promotes growth transformation and invasion of immortalized human pancreatic cells by Raf and phosphatidylinositol 3-kinase signaling. Cancer Res 67(5):2098-106, 2007. PubMed: 17332339

NuLi-1 (ATCC® CRL-4011™) Zabner J, *et al.* Development of cystic fibrosis and noncystic fibrosis airway cell lines. Am J Physiol Lung Cell Mol Physiol 284:L844, 2003.PubMed: 12676769

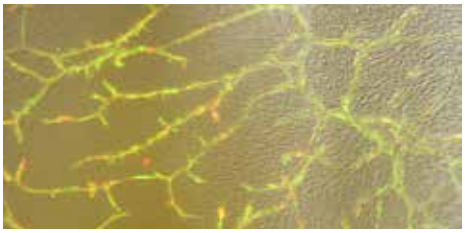
hTERT-HME1 (ATCC® CRL-4010™) Herbert BS, *et al.* p16(INK4a) inactivation is not required to immortalize human mammary epithelial cells. Oncogene 21(51):7897-900, 2002. PubMed: 12420227

hTERT RPE-1 (ATCC® No. CRL-4000™) Kabeche L, Compton DA. Cyclin A regulates kinetochore microtubules to promote faithful chromosome segregation. Nature 502(7469):110-3, 2013. PubMed: 24013174

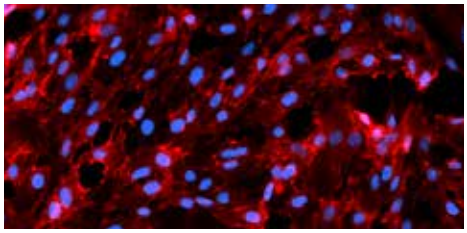
BJ-5ta (ATCC® No. CRL-4001™) Bodnar AG, *et al.* Extension of life-span by introduction of telomerase into normal human cells. Science 279(5349):349-52, 1998. PubMed: 9454332.

RPTEC/TERT1 (ATCC® CRL-4031™) Simon BR, *et al.* The RPTEC/TERT1 cell line models key renal cell responses to the environmental toxicants, benzo[a]pyrene and cadmium. Toxicol Rep 1:231-242, 2014. PubMed: 25126521

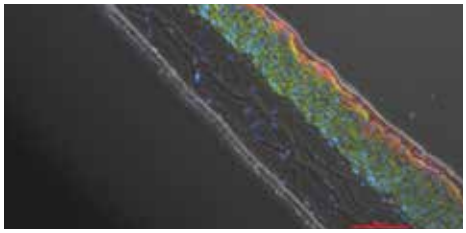
SEE OUR ONLINE CATALOG AT WWW.ATCC.ORG/HTERT FOR A FULL DESCRIPTION OF EACH ITEM.



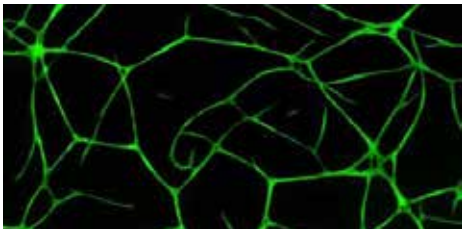
Coculture of TeloHAEC-GFP and ASC52telo cells after treatement with VEGF and stained for GFP (green) and alpha-actin (red).



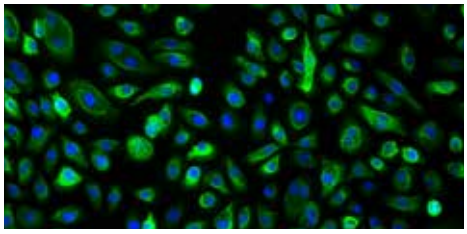
TIME endothelial cells in culture , stained for PECAM/CD31 (red).



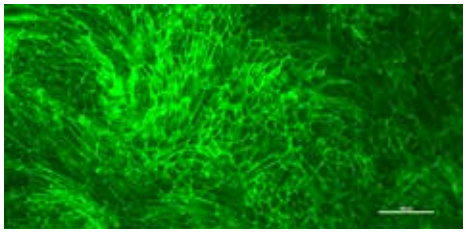
3D organotypic model of differentiated Ker-CT cells in culture , stained for keratin 14 (green) and filiggrin (red).



TeloHAEC-GFP cultured on Cell Basement Membrane Gel (ATCC® ACS-3035™) in the presence of VEGF.



EP156T human prostate epithelium cells in culture, stained with antibodies against cytokeratin 18.



RPTEC/TERT1-OAT3 cells stained against organic anion transporter (OAT)3.

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