



hTERT IMMORTALIZED CELL LINES

Enjoy the best of all worlds with human telomerase reverse transcriptase (hTERT) Immortalized Cell Lines from ATCC.

PHYSIOLOGICALLY RELEVANT DATA

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

REDUCED TIME AND EXPENSE

hTERT Immortalized Cell Lines offer extended proliferative capacity *in vitro*. Unlike primary cells, hTERT Immortalized Cells do not senesce after a few passages reducing the need to repurchase and initiate growth of primary cells.

STABLE GENOTYPES

hTERT Immortalized Cell Lines exhibit a stable karyotype and genotype and do not show changes associated with transformation such as tumorigenicity.

USEFUL CANCER MODELS

hTERT Immortalized Cell Lines are invaluable tools in several research areas including carcinogenesis. 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 Cell Lines are tested for extended proliferative capacity, selected phenotypic markers from the tissue of interest, stable genotype and continuous expression of hTERT.

Ordering Information

Description	ATCC® No.
hTERT IMMORTALIZED BRONCHIAL EPITHELIAL CELL LINES	
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™
hTERT IMMORTALIZED CHONDROCYTE FIBROBLAST CELL LINES	
CHON-001, human bone cartilage fibroblast, normal	CRL-2846™
CHON-002, human bone cartilage fibroblast, normal	CRL-2847™
hTERT IMMORTALIZED DERMAL MICROVASCULAR ENDOTHELIAL CELL LINES	
TIME, human dermal microvascular endothelium, normal	CRL-4025™
TIME-GFP, human dermal microvascular endothelium, normal	CRL-4045™
NFKB-TIME, human dermal microvascular endothelium, normal	CRL-4049™
hTERT IMMORTALIZED ENDOMETRIAL FIBROBLAST CELL LINES	
T HESCs, human endometrium fibroblast, non-malignant myoma	CRL-4003™
hTERT IMMORTALIZED BARRETT'S ESOPHAGEAL EPITHELIAL CELL LINES	
CP-A (KR-42421), human Barrett's esophageal epithelium	CRL-4027™
CP-B (CP-52731), human Barrett's esophageal epithelium	CRL-4028™

Description	ATCC® No.
hTERT IMMORTALIZED BARRETT'S ESOPHAGEAL EPITHELIAL CELL LINES (Continued)	
CP-C (CP-94251), human Barrett's esophageal epithelium	CRL-4029™
CP-D (CP-18821), human Barrett's esophageal epithelium	CRL-4030™
hTERT IMMORTALIZED SKIN CELL LINES	
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™
hTERT IMMORTALIZED MAMMARY EPITHELIAL CELL LINES	
hTERT-HME1 (ME16C), human mammary epithelium, normal	CRL-4010™
hTERT IMMORTALIZED PANCREAS DUCT EPITHELIAL CELL LINES	
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™
hTERT IMMORTALIZED RENAL EPITHELIAL CELL LINES	
UMB1949 [UMBSVtel], human renal epithelium, angiomyolipoma	CRL-4004™
SV7tert PDGFtu1, human renal epithelium, angiomyolipoma	CRL-4008™
RPTEC/TERT1, human renal proximal tubules epithelium	CRL-4031™
hTERT IMMORTALIZED RETINAL PIGMENTED EPITHELIAL CELL LINES	
hTERT RPE-1, human retinal pigmented epithelium, normal	CRL-4000™
hTERT IMMORTALIZED ADIPOSE DERIVED MESENCHYMAL STEM CELLS	
ASC52telo, hTERT immortalized adipose-derived MSC	SCRC-4000™

These materials are subject to claims under U.S. Patent Nos. 6,261,836 and 6,337,200, other pending patent applications, and foreign counterparts thereof. They are provided under the ATCC Material Transfer Agreement and the terms of the Addendum for Commercial and For-Profit Organizations or the Addendum for Non-commercial and Academic Organizations. The TERT-containing plasmid is not available to commercial and for-profit organizations or for work to be conducted under funding from a commercial organization unless a commercial license is obtained. For information please contact the ATCC Office of IP, Licensing and Services.

HELPFUL REFERENCES

hTERT-HPNE (ATCC® No. CRL-4023™)

Campbell PM, Groehler AL, Lee KM, Ouellette MM, Khazak V, Der CJ. K-Ras promotes growth transformation and invasion of immortalized human pancreatic cells by Raf and phosphatidylinositol 3-kinase signaling. *Cancer Res.* 2007 Mar 1;67(5):2098-106. PubMed PMID: 17332339.

NuLi-1 (ATCC® No. CRL-4011™)

Zabner J, Karp P, Seiler M, Phillips SL, Mitchell CJ, Saavedra M, Welsh M, Klingelhut J. Development of cystic fibrosis and noncystic fibrosis airway cell lines. *Am J Physiol Lung Cell Mol Physiol* 284:L844. 2003. PubMed PMID: 12676769.

hTERT-HME1 (ATCC® No. CRL-4010™)

Herbert BS, Wright WE, Shay JW. p16^{INK4a} inactivation is not required to immortalize human mammary epithelial cells. *Oncogene.* 2002 Nov 7;21(51):7897-900. PubMed PMID: 12420227.

hTERT RPE-1 (ATCC® No. CRL-4000™)

Rambhatla L, Chiu CP, Glickman RD, Rowe-Rendleman C. *In vitro* differentiation capacity of telomerase immortalized human RPE cells. *Invest Ophthalmol Vis Sci.* 2002 May;43(5):1622-30. PubMed PMID: 11980883.

BJ-5ta (ATCC® No. CRL-4001™)

Bodnar AG, Ouellette M, Frolkis M, Holt SE, Chiu CP, Morin GB, Harley CB, Shay JW, Lichtsteiner S, Wright WE. Extension of life-span by introduction of telomerase into normal human cells. *Science.* 1998 Jan 16;279(5349):349-52. PubMed PMID: 9454332.

See our online catalog at www.atcc.org/hTERT for a full description of each item.



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