

RWPE-1 (prostate epithelial transformed by HPV)

From: Duke/UNC/UT/EBI ENCODE group

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ATCC: Catalog #CRL-11609

The attached protocol was used for growing RWPE-1 cells per ATCC instructions.

Cell Biology

ATCC® Number: **CRL-11609™** [Order this Item](#) Price: **\$279.00**

Designations: RWPE-1
 Depositors: Michigan State University, National Cancer Institute
[Biosafety Level:](#) 2 [Cells contain Human Papilloma viral (HPV) sequences]
 Shipped: frozen
 Medium & Serum: [See Propagation](#)
 Growth Properties: adherent
 Organism: *Homo sapiens* (human)
 epithelial

Morphology:



Source: **Organ:** prostate
Disease: normal
Cell Type: epithelial
 Cellular Products: cytokeratin 18 [[46793](#)]
 cytokeratin 8 [[46793](#)]

Permits/Forms: In addition to the [MTA](#) mentioned above, other [ATCC and/or regulatory permits](#) may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please [click here](#) for information regarding the specific requirements for shipment to your location.

Receptors: androgen receptor, expressed ([[46793](#)] upregulated upon exposure to androgen)

Tumorigenic: No

Antigen Expression: kallikrein 3, KLK3 (prostate specific antigen, PSA); Homo sapiens, expressed (upon exposure to androgen) ([[46793](#)] upon exposure to androgen)

DNA Profile (STR): Amelogenin: X,Y
 CSF1PO: 13
 D13S317: 8,14
 D16S539: 9,11
 D5S818: 12,15
 D7S820: 10,11
 THO1: 8,9.3
 TPOX: 8,11
 vWA: 14,18

Cytogenetic Analysis: At passage 32, a majority of the cells were in the diploid range (45-51) with two main populations: 45, X,-Y and 51, XY. [[46793](#)]

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Isoenzymes:	AK-1, 1 ES-D, 2 G6PD, B GLO-I, 1-2 Me-2, 0 PGM1, 2 PGM3, 1
Age:	54 years adult
Gender:	male
Ethnicity:	Caucasian, White
Comments:	<p>Tumor Suppressor Gene(s): p53 + [PubMed: 9214605] pRB + [PubMed: 9214605]</p> <p>Epithelial cells derived from the peripheral zone of a histologically normal adult human prostate were transfected with a single copy of the human papilloma virus 18 (HPV-18) to establish the RWPE-1 (ATCC CRL-11609) cell line [PubMed: 9214605]. In 3-dimensional Matrigel culture, RWPE-1 cells organize into acini and secrete PSA into the lumen when exposed to androgen [PubMed: 11170142]. When injected with Matrigel or with stromal cells, into male athymic rodents, RWPE-1 cells also organize into acini [PubMed: 11304724] and produce PSA. Cells from the RWPE-1 cell line were further transformed by Ki-ras using the Kirstin murine sarcoma virus (Ki-MuSV) to establish the tumorigenic RWPE-2 cell line (ATCC CRL-11610) [PubMed: 9214605] and the RWPE2-W99 (ATCC CRL-2853) cell line. Further, a family of tumorigenic cell lines, that mimics multiple steps in prostate cancer progression, was also derived from RWPE-1 cells by exposure to N-methyl-N-nitrosourea (MNU). See the WPE1-NA22 (ATCC CRL-2849), WPE1-NB14 (ATCC CRL-2850, WPE1-NB11 (ATCC CRL-2851) and WPE1-NB26 (ATCC CRL-2852) cell lines.</p> <p>The depositor reports that the RWPE-1 cell line (ATCC CRL-11609) was screened, and found negative for, Hepatitis B virus, Hepatitis C virus and Human immunodeficiency virus.</p>

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Propagation: **ATCC complete growth medium:** The base medium for this cell line is provided by Invitrogen (GIBCO) as part of a kit: Keratinocyte Serum Free Medium (K-SFM), Kit Catalog Number 17005-042. This kit is supplied with each of the two additives required to grow this cell line (bovine pituitary extract (BPE) and human recombinant epidermal growth factor (EGF). To make the complete growth medium, you will need to add the following components to the base medium:

- 0.05 mg/ml BPE - provided with the K-SFM kit
- 5 ng/ml EGF - provided with the K-SFM kit. NOTE: Do not filter complete medium.

Atmosphere: air, 95%; carbon dioxide (CO₂), 5%
Temperature: 37.0°C

Protocol:

- Subculturing:**
1. Remove and discard culture medium.
 2. Briefly rinse the cell layer with Ca⁺⁺/Mg⁺⁺ free Dulbecco's phosphate-buffered saline (D-PBS).
 3. Add 2.0 to 3.0 ml (to a T-25 flask) or 3.0 to 4.0 ml (to a T-75 flask) of 0.05% Trypsin - 0.53mM EDTA solution, diluted 1:1 with D-PBS, and place flask in a 37C incubator for 5 to 8 minutes. Observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 10 minutes).
Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach.
 4. Add 6.0 to 8.0 ml of 0.1% Soybean Trypsin Inhibitor (or 2% fetal bovine serum in D-PBS), as appropriate, and aspirate cells by gently pipetting.
 5. Transfer cell suspension to centrifuge tube and spin at approximately 125 x g for 5 to 7 minutes.
 6. Discard supernatant and resuspend cells in fresh serum-free growth medium. Add appropriate aliquots of cell suspension to new culture vessels. An inoculum of 2 X 10⁽⁴⁾ to 4 X 10⁽⁴⁾ viable cells/sq. cm is recommended.
 7. Incubate cultures at 37C. We recommend that you maintain cultures at a cell concentration between 4 X 10⁽⁴⁾ and 7 X 10⁽⁴⁾ cells/sq. cm.

Cells grown under serum-free or reduced serum conditions may not attach strongly during the 24 hours after subculture and should be disturbed as little as possible during that period.

Subcultivation Ratio: A subcultivation ratio of 1:3 to 1:5 is recommended

Medium Renewal: Every 2 days

Preservation: **Freeze medium:** Complete growth medium supplemented with 10% (v/v) DMSO and 15% FBS
Storage temperature: liquid nitrogen vapor phase

Related Products:

derivative:ATCC [CRL-11610](#)

purified DNA:ATCC [CRL-11609D](#)

derivative:ATCC [CRL-2849](#)

derivative:ATCC [CRL-2850](#)

derivative:ATCC [CRL-2852](#)

derivative:ATCC [CRL-2851](#)

derived from same individual:ATCC [CRL-2853](#)

derived from same individual:ATCC [CRL-2854](#)

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