

Data Sheet

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BCRJ Code:	0232
Cell Line:	T84
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Colon; Derived From Metastatic Site: Lung
Morphology:	Epithelial
Disease:	Colorectal Carcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethnicity:	72 Year /
Derivation:	The T84 cell line is a transplantable human carcinoma cell line derived from a lung metastasis of a colon carcinoma in a 72-year-old male. Tumor tissue was inoculated subcutaneously and serially transplanted in BALB/c nude mice.
Applications:	The T84 cell line is a transplantable human carcinoma cell line. It is also a suitable transfection host.
DNA Profile:	Amelogenin: X CSF1PO: 10 D13S317: 9 D16S539: 10,11 D5S818: 12 D7S820: 8,10 THO1: 6,9 TPOX: 8,11 vWA: 17,18
Tumor Formation::	Yes, in nude mice (Tumors developed within 21 days at 100% frequency (5/5) in nude mice inoculated subcutaneously with 10(7) cells)
Products:	Carcinoembryonic antigen (CEA), 600ng/ml per 10Ecellspers 10 days; Keratin.
Biosafety:	1

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Additional Info:

The original histological characteristics of the colon carcinoma were maintained throughout transplantation in nude mice. After 23 passages in athymic mice, the T84 cell line was established. These cells grow to confluence as monolayers and exhibit tight junctions and desmosomes between adjacent cells. They have receptors for many peptide hormones and neurotransmitters and maintain vectorial electrolyte transport. This line exhibits tight junctions, and desmosomes between adjacent cells. The cells are positive for keratin by immunoperoxidase staining.

Culture Medium:

1:1 mixture of Dulbecco's modified Eagle's medium and F12 Medium containing 1% non-essential amino acids, 2 mM L-glutamine, 1 mM sodium pyruvate and fetal bovine serum to a final concentration of 5%.

Subculturing:

Volumes used in this protocol are for 75 cm² flask; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes. Remove and discard culture medium. Briefly rinse the cell layer with PBS without calcium and magnesium to remove all traces of serum which contains trypsin inhibitor. Add 2.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes). Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal. Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting. Add appropriate aliquots of the cell suspension to new culture vessels. Incubate cultures at 37°C. NOTE: For more information on enzymatic dissociation and subculturing of cell lines consult Chapter 12 in Culture of Animal Cells, a manual of Basic Technique by R. Ian Freshney, 6th edition, published by Alan R. Liss, N.Y., 2010.

Subculturing Medium Renewal:

Twice per week

Subculturing Subcultivation Ratio:

1:2 to 1:4

Culture Conditions:

Atmosphere: air, 95%; carbon dioxide (CO₂), 5% Temperature: 37°C

Cryopreservation:

95% FBS + 5% DMSO (Dimethyl sulfoxide)

Thawing Frozen Cells:

SAFETY PRECAUTION: It is highly recommended that protective gloves and clothing always be used and a full face mask always be worn when handling frozen vials. It is important to note that some vials leak when submerged in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vessel exploding or blowing off its cap with dangerous force creating flying debris. 1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes). 2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions. 3. For cells that are sensitive to DMSO it is recommended that the cryoprotective agent be removed immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 125 x g for 5 to 7 minutes. 4. Discard the supernatant and Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio). 5. Incubate the culture in an appropriate atmosphere and temperature (see "Culture Conditions" for this cell line). **NOTE:** It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).

References:

Dharmasathaphorn K, et al. A human colonic tumor cell line that maintains vectorial electrolyte transport. *Am. J. Physiol.* 246: G204-G208, 1984. PubMed: 6141741 Murakami H, Masui H. Hormonal control of human colon carcinoma cell growth in serum-free medium. *Proc. Natl. Acad. Sci. USA* 77: 3464-3468, 1980. PubMed: 6932031 White LJ, et al. Attachment and entry of recombinant norwalk virus capsids to cultured human and animal cell lines. *J. Virol.* 70: 6589-6597, 1996. PubMed: 8794293 Cross References: Nucleotide (GenBank) : BE519991 EST-TIG1 cDNA from T84 cells Homo sapiens cDNA, mRNA sequence.

Depositors:

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ATCC:

CCL-248