

Code:	0259
Cell Line:	TT
Species:	Homo sapiens Vulgar Name: Human
Tissue:	Thyroid/Medulla
Morphology:	Epithelial
Disease:	Carcinoma
Growth Properties:	Adherent
Sex:	Female
Age Ethnicity:	77 YEARS; Caucasian
Derivation:	The TT cell line was established by S.S. Leong, et al. from a specimen obtained by needle biopsy from a 77 year old female with thyroid medullary carcinoma.
DNA Profile:	Amelogenin: X CSF1PO: 10,13 D13S317: 11 D16S539: 12,13 D5S818: 12,13 D7S820: 10,12 THO1: 6,9 TPOX: 8,11 vWA: 16,18
Tumor Formation:	Yes, Tumors developed within 21 days at 100% frequency (5/5) in nude mice inoculated subcutaneously with 10(7) cells.
Products:	calcitonin; carcinoembryonic antigen (CEA) [21867]
Biosafety:	1
Additional info:	TT cells continuously produce high levels of calcitonin and CEA. Immunoreactive calcitonin was found to be produced in cell culture at levels of 3900 pg/million cells and 7700 pg/million cells 24 and 72 hours respectively, after a medium change. CEA was found to accumulate to greater than 27 ng/million cells over a 72 hours period.
Culture Medium:	F-12K Medium (Kaighn's Modification of Ham's F-12 Medium) contains 2 mM L-glutamine and 1500 mg/L sodium bicarbonate and fetal bovine serum to a final concentration of 10%.

Subculturing: Remove medium, and rinse with PBS without calcium and magnesium. Remove the solution and add an additional 1 to 2 mL of trypsin-EDTA solution. Allow the flask to sit at room temperature (or at 37°C) until the cells detach. Add fresh culture medium, aspirate and dispense into new culture flasks. Population Doubling Time: 83 hrs 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.

Medium Renewal: Twice per week

Subcultivation ratio: 1:3 to 1:4 is recommended

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

Cryopreservation: 95% FBS + 5% DMSO (Dimethyl sulfoxide)

Thawing Frozen Cells: SAFETY PRECAUTION: Is highly recommend 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 submersed 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 Oring 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 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 a 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).



BANCO DE CÉLULAS DO RIO JANEIRO

Data Sheet

Página 3/3

References: 21867: . Advances in thyroid neoplasia, 1981. Rome: Field Educational Italia; 1981.

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ATCC: CRL-1803