Product sheet

LCLC-97TM1 Cells | 300409

General information

Description	The LCLC-97TM1 cell line is derived from a large cell lung carcinoma (LCLC) and was established using a xenograft approach, specifically from the first nude mouse passage of a primary large cell carcinoma. This cell line exhibits densely packed epithelioid islets in culture, with cell borders that are typically indistinguishable under standard microscopic examination. Unlike many other cell lines, LCLC-97TM1 cultures do not generally reach confluency, which may be attributed to their unique growth patterns. Cytologically, LCLC-97TM1 cells are characterized by a large, single, round nucleus that contains one or two prominent nucleoli, and an evenly distributed chromatin pattern. This nuclear morphology is indicative of the aggressive nature often associated with large cell lung carcinoma. The cell line is also noted for being PAS (Periodic Acid-Schiff) negative and showing no reactivity with Alcian blue staining, which are consistent with the characteristics observed in both the original tumor and the xenograft derived from the cell line. Chromosomal analysis of LCLC-97TM1 reveals its complex karyotype, which is typical of large cell carcinomas and suggests significant genetic instability. This genetic profile, combined with its distinct morphological features, makes LCLC-97TM1 a valuable model for studying the pathobiology of large cell lung carcinoma, particularly in the context of tumorigenesis, metastasis, and therapeutic response in non-small cell lung cancer (NSCLC).
Organism	Human
Tissue	Lung
Disease	Large cell carcinoma
Synonyms	LCLC97TM1

Characteristics

Age	44 years
Gender	Male
Ethnicity	Caucasian
Morphology	Epithelial-like
Growth properties	Adherent

Regulatory Data

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Citation	LCLC-97TM1 (Cytion catalog number 300409)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1376

Biomolecular Data

Protein expression	P53 expression
Tumorigenic	Yes, in nude mice
Reverse transcriptase	Negative

Handling

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	Accutase
Subculturing	Remove the old medium from the adherent cells and wash them with PBS that lacks calcium and magnesium. For T25 flasks, use 3-5 ml of PBS, and for T75 flasks, use 5-10 ml. Then, cover the cells completely with Accutase, using 1-2 ml for T25 flasks and 2.5 ml for T75 flasks. Let the cells incubate at room temperature for 8-10 minutes to detach them. After incubation, gently mix the cells with 10 ml of medium to resuspend them, then centrifuge at 300xg for 3 minutes. Discard the supernatant, resuspend the cells in fresh medium, and transfer them into new flasks that already contain fresh medium.
Seeding density	1 to 3 x 10^5 cells/cm^2
Fluid renewal	Every 3 to 5 days
Post-Thaw Recovery	After thawing, plate the cells at 5 x 10^4 cells/cm^2 and allow the cells to recover from the freezing process and to adhere for at least 24 hours.

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Freeze medium	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.
Thawing and Culturing Cells	1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit. 2. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required. 3. For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains. 4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening. 5. Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently. 6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium. 7. Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth. 8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.
Incubation Atmosphere	37°C, 5% CO_2, humidified atmosphere.
Shipping Conditions	Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately −78 °C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.
Storage Conditions	For long-term preservation, place vials in vapor-phase liquid nitrogen at about −150 to −196 °C. Storage at −80 °C is acceptable only as a short interim step before transfer to liquid nitrogen.

Quality Control & Molecular Analysis

Sterility	Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods. To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.