Product sheet

C127I Cells | 400134

General information

Description	The C127I cell line is a murine mammary gland epithelial cell line, commonly used in biomedical research for its ability to synthesize and secrete recombinant proteins. These cells originate from the mammary gland of the BALB/c mouse and are particularly noted for their epithelial morphology and responsiveness to hormones and other growth factors. The C127I cell line has been instrumental in the study of gene expression, signal transduction pathways related to cancer development, and the production of viral vectors for gene therapy. One of the key features of the C127I cell line is its ability to be easily transfected, making it a valuable tool for the production of recombinant proteins and for gene editing studies. It supports the replication of various murine retroviruses, facilitating the production of stable recombinant lines expressing desirable genes. This characteristic has made C127I cells especially useful in the fields of molecular biology and genetics, where they are often employed to explore the effects of gene overexpression or knockdown in a controlled environment.
Organism	Mouse
Tissue	Breast, mammary gland
Disease	Carcinoma
Applications	Transfection host for transformation with bovine papilloma virus DNA plasmids. Visualization of sarcoma virus-induced foci. Quantitative in vitro assays for bovine papilloma virus.
Synonyms	C 1271, C-127I, C-127 I, CNC 127I

Characteristics

Breed/Subspecies	RIII
Gender	Female
Morphology	Epithelial-like
Growth properties	Adherent

Regulatory Data

Citation	C127I (Cytion catalog number 400134)
Biosafety level	1

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NCBI_TaxID	10090
CellosaurusAccession	CVCL_3882
GMO Status	GMO-S1: This murine breast carcinoma cell line (C127I) contains recombinant viral sequences encoding T7 RNA polymerase and CFTR delivered via infection with engineered viruses, functioning as a transfection host. The construct is stably integrated into C127 cells. This classification applies only within Germany and may differ elsewhere.

Biomolecular Data

Viruses	Negative for ectromelia virus (mousepox).
Virus susceptibility	Bovine papilloma virus
Reverse transcriptase	Negative (as determined in supernatant fluid)

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
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.
Fluid renewal	2 to 3 times per week
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.
Flask Coating	None
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.