Product sheet

CCD-18Lu Cells | 305248

General information

Description	The CCD-18Lu cell line is derived from normal lung fibroblasts of a human adult. These cells were established from the lung tissue of a male patient and are commonly used as a model for studying the behavior of normal human lung fibroblasts. The CCD-18Lu cell line exhibits typical fibroblast morphology, characterized by spindle-shaped cells that grow adherently in culture and form a monolayer. Researchers utilize CCD-18Lu cells in various studies related to pulmonary biology, including investigations into lung development, repair, and fibrosis. These cells are instrumental in understanding the mechanisms underlying normal lung function and the response of lung fibroblasts to different environmental stimuli, such as cytokines, growth factors, and extracellular matrix components. Additionally, CCD-18Lu cells are employed in studies examining the effects of various drugs and compounds on lung fibroblast proliferation, differentiation, and collagen production. In cancer research, CCD-18Lu cells serve as a control or reference cell line to compare with lung cancer cell lines, helping to identify specific molecular and cellular alterations associated with lung cancer progression. By providing insights into the behavior of normal lung fibroblasts, the CCD-18Lu cell line contributes to the development of therapeutic strategies for treating lung diseases, including fibrosis and cancer.
Organism	Human
Tissue	Lung
Synonyms	CCD 18Lu, CCD-18 Lu

Characteristics

Age	2 months 17 days
Gender	Female
Ethnicity	African American
Morphology	Fibroblast
Cell type	Fibroblast
Growth properties	Adherent

Regulatory Data

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Citation	CCD-18Lu (Cytion catalog number 305248)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_2380

Biomolecular Data

Handling

Culture Medium	EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS (Cytion article number 820100a)
Supplements	Supplement the medium with 10% FBS and 1% NEAA
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.
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.