Product sheet

LXF-289 Cells | 300269

General information

Description	The LxF-289 cell line is a human lung adenocarcinoma cell line established from a 63-year-old male patient. This cell line has a doubling time of approximately 50 hours, making it suitable for studies that require consistent cell proliferation. LxF-289 is particularly valuable in research focused on lung cancer, especially non-small cell lung cancer (NSCLC), as it provides a robust in vitro model for studying the molecular mechanisms underlying cancer progression, treatment resistance, and the effects of therapeutic interventions. Studies on LxF-289 have demonstrated that this cell line exhibits characteristics that make it responsive to specific genetic and therapeutic manipulations. For instance, research has shown that LxF-289, along with other lung cancer cell lines, can undergo significant cell death when treated with an adenovirus expressing antisense heat shock protein 70 (Hsp70). This cell death is p53-independent and does not require DNA cleavage, suggesting that Hsp70 plays a crucial role in the survival of lung cancer cells. Notably, this response is selective to cancer cells, as normal lung fibroblasts and bronchial epithelial cells do not show similar levels of cytotoxicity when Hsp70 is downregulated, highlighting the potential of targeting Hsp70 in lung cancer therapy. Moreover, LxF-289 has been used to study the effects of irradiation on drug resistance-related proteins. The cell line exhibited overexpression of glutathione S-transferase (GSTπ) at both mRNA and protein levels following irradiation. This overexpression is associated with the development of multidrug resistance, which is a significant challenge in the clinical management of lung cancer. These findings underscore the utility of LxF-289 in exploring the mechanisms of resistance and testing novel strategies to overcome it.
Organism	Human
Tissue	Lung
Disease	Adenocarcinoma
Synonyms	LxF289, LxF 289, LxF 289L

Characteristics

Age	62 years
Gender	Male
Ethnicity	Caucasian
Morphology	Epithelial-like
Growth properties	Adherent

Cytion

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Regulatory Data

Citation	LxF-289 (Cytion catalog number 300269)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1394

Biomolecular Data

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 x 10^4 cells/ml
Fluid renewal	Every 3 to 5 days
Post-Thaw Recovery	24 to 48 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.