

HFL1 Cells | 305065**General information****Description**

The HFL1 cell line, derived from human fetal lung tissue, is commonly used in biological and medical research. These cells exhibit fibroblast-like properties, making them particularly valuable for studies related to cellular morphology, fibrosis, and tissue repair mechanisms. HFL1 cells are instrumental in the exploration of pulmonary diseases, including investigations into the pathogenesis of lung fibrosis and the evaluation of antifibrotic therapies.

In addition to their application in disease models, HFL1 cells are often utilized in pharmacological research and toxicology studies. Their sensitivity to viral infections and responsiveness to pharmacological agents enable researchers to study the effects of various drugs and compounds on lung tissues. The HFL1 cell line supports the propagation of viruses, facilitating studies on viral life cycles and host-virus interactions, which are crucial for the development of antiviral drugs and vaccines.

Overall, the HFL1 cell line is a versatile tool in the fields of respiratory disease research, pharmacology, and toxicology, providing insights into cellular processes and potential therapeutic approaches for lung-related diseases.

Organism Human**Tissue** Lung**Synonyms** HFL-1, HFL 1, Human fetal lung fibroblast 1, HFL**Characteristics****Age** Fetus**Gender** Male**Morphology** Fibroblast**Growth properties** Adherent**Identifiers / Biosafety / Citation****Citation** HFL1 (Cytion catalog number 305065)**Biosafety level** 1**Expression / Mutation**

HFL1 Cells | 305065**Handling**

Culture Medium	Ham's F12K Medium, w: 2.0 mM L-Glutamine, w: 2.0 mM Sodium pyruvate, w: 2.5 g/L NaHCO ₃ (Cytion article number 820608a)
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Medium supplements	Supplement the medium with 10% FBS
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Passaging solution	Accutase
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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.
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Split ratio	1:2 to 1:4
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Fluid renewal	2 to 3 times per week
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Freeze medium	CM-1 (Cytion catalog number 800100)
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Handling of cryopreserved cultures

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.

Quality control / Genetic profile / HLA

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.

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STR profile

Amelogenin: x,y
CSF1PO: 10,12
D13S317: 11,12
D16S539: 9,11
D5S818: 12,12
D7S820: 9,1
TH01: 7,9
TPOX: 6,9
vWA: 17,17
D3S1358: 14,17
D21S11: 27,3
D18S51: 18,19
Penta E: 12,2
Penta D: 2.2,9
D8S1179: 12,14
FGA: 21,22
D6S1043: 11,18
D2S1338: 17,25
D12S391: 20,21
D19S433: 11,13