**Product sheet**

# HCC827 Cells | 305041

## General information

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|---|---|
| **Description** | HCC827 is a human non-small cell lung cancer cell line derived from the lung adenocarcinoma of a middle-aged female patient. These cells exhibit an epithelial morphology and are often used in research related to the epidermal growth factor receptor (EGFR). HCC827 cells are particularly noted for their sensitivity to tyrosine kinase inhibitors (TKIs), specifically those targeting EGFR mutations. This characteristic makes them a valuable model for studying the molecular mechanisms of lung cancer responsiveness to EGFR inhibitors, as well as for testing the efficacy of new therapeutic agents targeting EGFR-dependent pathways.<br><br>The cell line is also used to explore the mechanisms of acquired resistance to targeted therapies, which is a significant challenge in the treatment of lung cancer. Studies utilizing HCC827 cells have contributed to a better understanding of the genetic and epigenetic alterations that confer resistance to EGFR inhibitors. These findings have implications for the development of strategies to overcome resistance and improve treatment outcomes in lung cancer patients. Furthermore, the HCC827 cell line serves as a tool for investigating the broader cellular and molecular landscape of lung adenocarcinoma, including studies on cell signaling, tumor microenvironment, and cancer metastasis. |
| **Organism** | Human |
| **Tissue** | Lung |
| **Disease** | Lung adenocarcinoma |
| **Synonyms** | HCC-827, HCC 827, HCC0827 |

## Characteristics

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|---|---|
| **Age** | 39 years |
| **Gender** | Female |
| **Morphology** | Epithelial |
| **Growth properties** | Adherent |

## Identifiers / Biosafety / Citation

| | |
|---|---|
| **Citation** | HCC827 (Cytion catalog number 305041) |
| **Biosafety level** | 1 |

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## Expression / Mutation

## Handling

| | |
|---|---|
| **Culture Medium** | RPMI 1640, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a) |
| **Medium supplements** | Supplement the medium with 10% FBS |
| **Passaging solution** | 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. |
| **Split ratio** | 1:2 to 1:4 |
| **Fluid renewal** | 2 to 3 times per week |
| **Freeze medium** | CM-1 (Cytion catalog number 800100) |

**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,x
**CSF1PO**: 11,11
**D13S317**: 9,9
**D16S539**: 12,12
**D5S818**: 12,12
**D7S820**: 11,12
**TH01**: 6,6
**TPOX**: 8,8
**vWA**: 18,18
**D3S1358**: 17,17
**D21S11**: 31,31
**D18S51**: 13,13
**Penta E**: 20,2
**Penta D**: 14,14
**D8S1179**: 12,12
**FGA**: 22,24
**D6S1043**: 11,12
**D2S1338**: 17,24
**D12S391**: 17,17
**D19S433**: 14,14