Product sheet

NCI-H2347 Cells | 305139

General information

Description	The NCI-H2347 cell line is a human non-small cell lung cancer (NSCLC) cell line derived from a lung adenocarcinoma. This cell line is widely used in studies of lung cancer biology, particularly for research involving tumor suppressor gene mutations and pathways involving apoptosis, chemotherapy resistance, and viral-based cancer therapies. NCI-H2347 has wild-type p53, which contrasts with many lung cancer cell lines that harbor p53 mutations, making it a relevant model for studying the differences in therapeutic response based on p53 status. This cell line has been utilized in experiments to test the efficacy of novel treatments such as ONYX-015, a genetically modified adenovirus that selectively replicates in and lyses tumor cells with non-functional p53. While ONYX-015 was highly effective in lung cancer cell lines with p53 mutations, such as NCI-H522, its effect on NCI-H2347, which has wild-type p53, was limited. Additionally, NCI-H2347 has been involved in studies focusing on MET signaling, particularly in relation to resistance to EGFR tyrosine kinase inhibitors (TKIs). It has been shown that while MET gene amplification is not observed in this cell line, its MET protein can still be activated by EGFR mutations, suggesting a complex interplay between MET and EGFR signaling pathways.
Organism	Human
Tissue	Lung
Disease	Lung adenocarcinoma
Synonyms	NCI-H2347, H-2347, NCIH2347

Characteristics

Age	54 years
Gender	Female
Ethnicity	European
Morphology	Epithelial
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	NCI-H2347 (Cytion catalog number 305139)
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 1:6
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
D13S317: 12,14
D16S539: 11
D5S818: 11
D7S820: 10,11
TH01: 09. Mrz
TPOX: 8
vWA: 16,19
D3S1358: 16
D21S11: 31,31.2
D18S51: 12,19
Penta E: 8,19
Penta D: 12
D8S1179: 10,13
FGA: 20,25
D1S1656: 16,17.3
D6S1043: 14
D2S1338: 17,19
D12S391: 19,2
D19S433: 13,15