Product sheet

NCI-H209 Cells | 300183

General information

Description	The NCI-H209 cell line was derived by A.F. Gazdar and associates in 1979 from the bone marrow of a patient with small cell cancer of the lung. The bone marrow specimen was taken prior to therapy. The line is a classic SCLC cell line which expresses elevated levels of four biochemical markers (neuron specific enolase, brain isoenzyme of creatine kinase, L-DOPA decarboxylase and bombesin-like immunoreactivity. C-myc DNA sequences are not amplified. No gross structural DNA abnormalities were detected. This is a cell line that grows as large aggregates in suspension. Only the aggregates are viable, but no meaningful viability percentage can be measured. The medium will normally contain large amounts of cell debris. The cells express an aberrant form of RB1 that is not phosphorylated, apparently due to a single point mutation at codon 706 (Cys-> Phe).
Organism	Human
Tissue	Lung
Disease	Small cell carcinoma
Metastatic site	Bone marrow
Synonyms	H209, H-209, NCIH209

Characteristics

Age	55 years
Gender	Male
Ethnicity	Caucasian
Morphology	Epithelial-like
Growth properties	Suspension

Identifiers / Biosafety / Citation

Citation	NCI-H209 (Cytion catalog number 300183)
Biosafety level	1

Expression / Mutation

Protein expression	p53 negative
Isoenzymes	G6PD, B, PGM1, 1-2, PGM3, 1, ES-D, 1, Me-2, 0, AK-1, 1, GLO-1, 1-2, Phenotype Frequency Product = 0.0624
Tumorigenic	Yes, forms transplantable tumors with typical SCLC histology in nude mice
Products	The line produces normal amounts of p53 mRNA relative to normal lung.

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
Subculturing	Maintain cultures by periodically adding or replacing the medium. Initiate cultures with a density of 2 x 10^5 cells/ml and keep the cell concentration within the range of 1 x 10^5 to 1 x 10^6 cells/ml for optimal growth.
Split ratio	A ratio of 1:2 to 1:3 is recommended
Seeding density	1 x 10^5 cells/mL
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)

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. Optionally, skip centrifugation but remove any remaining freezing medium after 24 hours.

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**: 11 **D16S539**: 9,12 **D5S818**: 12 **D7S820**: 9 **TH01**: 7,9 **TPOX**: 8 **vWA**: 18,19 **D3S1358**: 18 **D21S11**: 32.2 **D18S51**: 13 **Penta E**: 11,12 **Penta D**: 11,12 **D8S1179**: 12,13 **FGA**: 20,24
HLA alleles	**A***: 02:01:01, 34:02:01 **B***: 14:01:01, 40:01:02 **C***: 03:04:01, 08:02:01 **DRB1***: 04:05:01, 15:01:01G **DQA1***: 01:02:01, 03:03:01 **DQB1***: 03:02:01, 06:02:01 **DPB1***: 03:01:01G, 04:01:01G **E**: 01:01:01, 01:03