Product sheet

NCI-H209 growing culture | 330183

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

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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
Medium supplements	10% FBS, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO3
Passaging solution	The utilization of a passaging solution is not necessary when passaging cells that are cultured in suspension. The appropriate procedure is to dilute the cells in accordance with the indicated guidelines.
Subculturing	The line should be subcultured by dilution with fresh medium. Alternatively, the clusters may be collected by centrifugation and resuspended in fresh medium.
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)

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Handling of cryopreserved cultures	The cells come deep-frozen shipped on dry ice. Please make sure that the vial is still frozen. If immediate culturing is not intended, the cryovial must be stored below -150 degree Celsius after arrival. If immediate culturing is intended, please follow the below instructions: Quickly thaw by rapid agitation in a 37 degree Celsius water bath within 40-60 seconds. The water bath should have clean water containing an antimicrobial agent. As soon as the sample has thawed, remove the cryovial from the water bath. A small ice clump should still remain and the vial should still be cold. From now on, all operations should be carried out under aseptic conditions. Transfer the cryovial to a sterile flow cabinet and wipe with 70% alcohol. Carefully open the vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of culture medium (room temperature). Resuspend the cells carefully. Centrifuge at 300 x g for 3 min and discard the supernatant. The centrifugation step may be omitted, but in this case the remains of the freeze medium have to be removed 24 hours later. Resuspend the cells carefully in 10 ml fresh cell culture medium and transfer them into two T25 cell culture flasks. All further steps are described in the subculture section.
Handling of proliferating cultures	One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in 1 or 2 x 50 ml centrifuge tubes, respectively. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Control the cell morphology and confluency under the microscope. Incubate at 37 degree Celsius for a minimum of 24 hours. Spin down the collected medium at 300 x g for 3 minutes to collect the cells which may have detached during transit. If a cell pellet is visible, resuspend the cells in 5 ml of cell culture medium and transfer to a T25 cell culture flask. Incubate at 37 degree Celsius for a minimum of 24 hours.

Quality control / Genetic profile / HLA

Sterility	Mycoplasma contaminations are ruled out through PCR-based and luminescence-based mycoplasma assays. The absence of bacterial, fungal or yeast contamination is controlled through daily visual cell monitoring.
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

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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