Product sheet

NCI-H146 growing culture | 330182

General information

Description	The NCI-H146 cell line was derived by A.F. Gazdar and associates in 1979 from the pleural fluid of a patient with small cell cancer of the lung. The bone marrow specimen was taken prior to therapy.
Organism	Human
Tissue	Lung
Disease	Small cell carcinoma
Metastatic site	Bone marrow
Synonyms	H146, H-146, NCIH146

Characteristics

Age	59 years
Gender	Male
Ethnicity	Caucasian
Morphology	Epithelial-like
Growth properties	Aggregates in suspension

Identifiers / Biosafety / Citation

Citation	NCI-H146 (Cytion catalog number 300182)
Biosafety level	1

Expression / Mutation

Receptors expressed	insulin-like growth factor II receptor (IGF II)
Protein expression	The cells stain positively for vimentin and keratin, but are negative for neurofilament triplet protein.

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Antigen expression	The line expresses elevated levels of four biochemical markers: neuron specific enolase, brain isoenzyme of creatine kinase, L-DOPA decarboxylase and bombesin-like immunoreactivity
Isoenzymes	G6PD, B, PGM1, 1-2, PGM3, 1-2, ES-D, 1, Me-2, 2, AK-1, 1, GLO-1, 1, Phenotype Frequency Product = 0.0009
Tumorigenic	Forms transplantable tumors in nude mice which histologically resemble tumor cells from the original biopsy specimen
Products	The cells produce relatively high amounts of c-myc mRNA, but c-myc DNA sequences are not amplified. The cells do not express vasopressin, oxytocin or gastrin releasing peptide.
Ploidy status	Aneuploid
Karyotype	This is a near triploid human cell line. The modal chromosome number is 68, but cells with 66, 70 and 71 chromosomes also occurred frequently. The x chromosomes were paired, and no Y chromosome was detected in QM stained preparations.

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	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 cells should be subcultured by transferring part of the suspension into fresh new cell culture flasks prefilled with fresh medium. Alternatively, the clusters may be collected by centrifugation and resuspended in fresh medium.
Split ratio	A ratio of 1:2 to 1:6 is recommended
Seeding density	1 to 2 x 10^5 cells/ml
Fluid renewal	2 to 3 times per week
Freezing recovery	After thawing allow the cells to recover from the freezing process for at least 24 to 48 hours.

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Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)
Handling of cryopreserved cultures	NCI-H146 cells are shipped in a deep-frozen state on dry ice. Upon receipt, confirm that the vial remains frozen. For storage, place the cryovial immediately at temperatures below -150 degrees. If you plan to culture the cells immediately, swiftly thaw the vial by shaking it in a 37 degrees water bath with clean water and an antimicrobial agent for 40-60 seconds. Remove the vial once a small ice clump persists, ensuring it remains cold. Proceed with all subsequent steps under aseptic conditions. In a sterile flow hood, disinfect the cryovial with 70% ethanol. Then, gently open the vial and transfer the cell suspension into a 15 ml centrifuge tube pre-filled with 8 ml of room temperature culture medium. Gently mix the cells. For cell separation, centrifuge at 300 x g for 3 minutes and dispose of the supernatant. Skipping centrifugation is optional, although any residual freezing medium should be removed after 24 hours. Resuspend the pellet gently in 10 ml of fresh culture medium and divide between two T25 culture flasks. Follow the subculture protocol for subsequent steps.
Handling of proliferating cultures	One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in a 50 ml centrifuge tube. 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. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Examine cell morphology and confluency using a microscope. Finally, incubate the flasks at 37 degrees Celsius for at least 24 hours.

Quality control / Genetic profile / HLA

Sterility	Mycoplasma contamination is rigorously 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.
STR profile	**Amelogenin**: x,x
HLA alleles	**A***: 01:01:01, 03:01:01 **B***: 14:02:01, 44:03:01 **C***: 08:02:01, 16:01:01 **DRB1***: 08:01:01, 15:01:01G **DQA1***: 01:02:01, 04:01:01 **DQB1***: 04:02:01, 06:02:01 **DPB1***: 02:01:02, 05:01:01 **E**: 01:01:01