SCLC-22H

300445

GENERAL INFORMATION

Description

The SCLC-22H cell line was established from the pericardial effusion of a male patient diagnosed with small cell lung cancer (SCLC) of the oat cell type, an aggressive subtype of lung cancer. The SCLC-22H cell line, derived from a small cell lung cancer (SCLC) patient, exhibits a mixture of features typical of both the classic and variant types of SCLC. This intermediate nature makes it a valuable model for studying the transition between these two subtypes. The cell line shows morphological characteristics such as small and large cell-like features, which are typically seen in both small cell and large cell lung cancer, especially when examined in xenografts.
SCLC-22H expresses several neuroendocrine markers, including neuron-specific enolase (NSE), carcinoembryonic antigen (CEA), bombesin, and creatine kinase-BB (CK-BB), which are hallmarks of classic SCLC. However, compared to the closely related SCLC-21H cell line, SCLC-22H has a slower population doubling time and a lower colony-forming efficiency. These biochemical and kinetic properties distinguish it from SCLC-21H, which displays more features of the variant subtype with predominantly large cell morphology.
SCLC-22H is considered an important model for understanding the in vivo progression from classic to variant SCLC. Its mixed phenotype suggests that it represents an intermediate or transitional phase, offering insights into how treatment resistance and changes in cell morphology and growth characteristics develop in aggressive lung cancers.

Tissue	Lung
Disease	Small cell carcinoma
Metastatic site	Pericardial effusion

Synonyms

- SCLC22H

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Suspension
Biosafety level	1

CHARACTERISTICS

Morphology	Floating cell aggregates, few single cells
Tumourigenic	Yes, in nude mice

Karyotype

Modal number 43

IDENTIFIERS

Citation

SCLC-22H (Cytion catalog number 300445)

NCBI TaxID	9606
Cellosaurus	CVCL_2186

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EXPRESSION AND SUSCEPTIBILITY

Reverse transcriptase	Negative

HANDLING AND CULTURE

Culture medium

RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 10% FBS

Subculturing

Maintain cultures by periodically adding or replacing the medium. Initiate cultures with a density of 5 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.

Seeding density	1 x 10^5 cells/ml
Fluid renewal	1 to 2 times per week

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit. 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.
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.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
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.
Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
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.
Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

QUALITY CONTROL AND CRYOPRESERVATION

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.

Freeze medium	As a cryopreservation medium, we use 50% basal medium + 40% FBS + 10% DMSO, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

Storage conditions

For long-term preservation, place vials in vapor-phase liquid nitrogen at about −150 to −196 °C. Storage at −80 °C is acceptable only as a short interim step before transfer to liquid nitrogen.

Shipping conditions

Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately −78 °C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.

DONOR

Donor age	46 years
Ethnicity	Caucasian

LEGAL AND SAFETY

Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

Material Transfer Agreement required	Yes

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