Product sheet

SCLC-24H Cells | 300177

General information

Description	SCLC-24H is a small cell lung carcinoma (SCLC) cell line that exhibits characteristics typical of neuroendocrine tumors, which are aggressive and associated with poor prognosis. As with other SCLC models, SCLC-24H expresses a range of neuroendocrine markers such as neuron-specific enolase (NSE), L-DOPA decarboxylase (DDC), and creatine kinase-BB (CK-BB), which are used to differentiate SCLC from non-SCLC tumors. SCLC-24H also expresses carcinoembryonic antigen (CEA), a classical tumor marker, which is detectable in this cell line at levels higher than normal lung tissues. In vitro studies on SCLC-24H have shown that this cell line is responsive to kinase inhibitors like staurosporine (SSP) and its analogs. These compounds can induce polyploidy and morphologic changes, such as process formation, characteristic of neuron-like differentiation in SCLC-24H. Staurosporine and related inhibitors like stauprimide and UCN-01 have been shown to influence the cell cycle of SCLC-24H by promoting cell flattening and sometimes process formation. However, SSPAs do not consistently induce extensive process outgrowth in SCLC-24H compared to other SCLC lines. Additionally, like other SCLC cell lines, SCLC-24H demonstrates chromosomal abnormalities typical of small cell lung carcinoma, including deletions of the short arm of chromosome 3 (specifically at 3p14-23). These genetic alterations are often associated with the malignant behavior of SCLC cells. SCLC-24H, like other neuroendocrine tumors, can be a valuable model for studying therapeutic interventions targeting neuroendocrine markers and pathways such as PI3K/Akt or MAPK/ERK, which remain active in these cells.
Organism	Human
Tissue	Lung
Disease	Small cell carcinoma
Metastatic site	Pleural effusion
Synonyms	MAR-24H, MAR 24H, MAR24H, 24H

Characteristics

Age	46 years
Gender	Male
Ethnicity	Caucasian
Growth properties	Suspension

SCLC-24H Cells | 300177

Regulatory Data

Citation	SCLC-24H (Cytion catalog number 300177)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_8262

Biomolecular Data

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	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.
Freeze medium	As a cryopreservation medium, 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.

SCLC-24H Cells | 300177

Thawing and Culturing Cells	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.
Incubation Atmosphere	37°C, 5% CO_2, humidified atmosphere.
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.
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.

Quality control / Genetic profile / HLA

SCLC-24H Cells | 300177

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.