Product sheet

NCI-H2126 Cells | 300639

Informações gerais

Description	The NCI-H2126 cell line is derived from a human large cell carcinoma, a subtype of non-small cell lung cancer (NSCLC). Originating from the lung tissue of a male patient, this cell line exhibits characteristics typical of large cell carcinomas, including poorly differentiated, undifferentiated cellular features. It is an important model for understanding the genetic and molecular mechanisms underlying large cell lung cancers and for testing therapeutic agents targeting this NSCLC subtype. Genomic studies on NCI-H2126 have identified frequent allelic losses and chromosomal aberrations, such as deletions on chromosome arms 6q and 13q, which are commonly implicated in tumor suppressor gene inactivation in NSCLC. These genetic alterations contribute to the disruption of key regulatory pathways, including those involved in cell cycle control and apoptosis. The cell line has been employed in comparative studies to distinguish patterns of chromosomal loss across different lung cancer subtypes, enhancing the understanding of NSCLC-specific molecular signatures. NCI-H2126 has also been included in extensive drug screening programs to evaluate its sensitivity and resistance to various chemotherapeutic agents and targeted therapies. The cell line's genetic profile and its tumorigenic potential in xenograft models make it a valuable resource for preclinical studies focused on the development and refinement of treatments for large cell carcinoma and other forms of NSCLC.
Organism	Human
Tissue	Lung
Disease	Large cell carcinoma
Metastatic site	Pleural effusion
Applications	3D cell culture, Cancer research
Synonyms	H-2126, NCIH2126, NCI-H2126

Características

Age	65 years
Gender	Male
Ethnicity	European
Morphology	Epithelial

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Growth properties	Adherent

Dados regulatórios

Citation	NCI-H2126 (Cytion catalog number 300639)
Biosafety level	2
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1532

Dados biomoleculares

Isoenzymes	AK-1, 1, ES-D, 1-2, G6PD, B, GLO-I, 2, Me-2, 0, PGM1, 1-2, PGM3, 2
Tumorigenic	Yes, in nude mice
Viruses	EBV (Transformant)
Ploidy status	Hypertriploid

Manuseio

Culture Medium	DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 2.5 mM L-Glutamine, w: 15 mM HEPES, w: 0.5 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a)
Supplements	Supplement the medium with 5% FBS, 0.005 mg/mL Insulin, 0.01 mg/mL Transferrin, 30nM Sodium selenite, 10 nM Hydrocortisone, 10 nM beta-estradiol
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.

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Freeze medium	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

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.

Controle de Qualidade e Análise Molecular

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.