Product sheet

NCI-H889 Cells | 305842

Información general

Description	NCI-H889 is a human small cell lung cancer (SCLC) cell line with neuroendocrine features. It was established from an adult patient and is categorized as a classic SCLC model based on morphological and molecular criteria. The cells grow in suspension and display the round-to-oval morphology typical of SCLC. NCI-H889 expresses several neuroendocrine markers and has been widely used in mechanistic and pharmacologic studies related to this aggressive lung cancer subtype. Functionally, NCI-H889 is characterized by autocrine signaling through the insulin-like growth factor II (IGF-II) and its receptor IGF-R. While IGF-I mRNA is widely detected among lung cancer cell lines, direct secretion of IGF-I protein is rare; in NCI-H889, the predominant ligand involved in growth stimulation is IGF-II. This is consistent with findings that support IGF-II/IGF-R signaling loops as key drivers of autocrine growth in SCLC cell lines. These autocrine interactions make NCI-H889 a valuable system for studying IGF-mediated mitogenic signaling and its therapeutic disruption. Epigenetic analyses of NCI-H889 have also provided insight into the regulation of drug response. Methylation profiling indicates alterations in several genes involved in DNA damage response, cell cycle regulation, and transcriptional control. For example, NCI-H889 has been included in studies showing differential methylation and expression of genes like SLFN11, which is associated with sensitivity to DNA-damaging agents, and EZH2, a histone methyltransferase frequently upregulated in SCLC. These characteristics collectively position NCI-H889 as a relevant preclinical model for exploring therapeutic vulnerabilities associated with neuroendocrine lung tumors.
Organism	Human
Tissue	Metastatic
Disease	Lung small cell carcinoma
Metastatic site	Lymph node
Synonyms	H889, H-889, NCIH889

Características

Age	69 years
Gender	Female
Ethnicity	Caucasian
Morphology	Epithelial

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Cell type	Epithelial like
Growth properties	Clusters in suspension

Datos normativos

Citation	NCI-H889 (Cytion catalog number 305842)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1598

Datos biomoleculares

Mutational profile	Mutation: TP53, Simple, p.Cys242Ser (c.725G>C), Unspecified (PubMed=1312696, PubMed=1565469).

Manejo

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	Accutase
Fluid renewal	2 to 3 times per week
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.

Control de calidad y análisis molecular

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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.