Product sheet

HCCC-9810 Cells | 305476

General information

Description	The HCCC-9810 cell line is derived from human intrahepatic cholangiocarcinoma (iCCA), which is a highly aggressive cancer originating in the biliary epithelium. This cell line has been extensively utilized to study the molecular and cellular mechanisms underpinning cholangiocarcinoma progression and treatment response. One significant focus of research involving HCCC-9810 cells has been their response to various signaling pathway modulators. For instance, the PI3K/AKT/mTOR pathway, which plays a crucial role in cell proliferation, migration, and invasion, is implicated in iCCA pathogenesis and can be targeted to potentially reduce tumor growth. Studies have shown that the HCCC-9810 cell line exhibits traits that support research into therapeutic approaches, including the role of doublecortin-like kinase 1 (DCLK1) in promoting tumorigenic behaviors such as epithelial-mesenchymal transition (EMT). The inhibition of this pathway, as observed through the administration of specific PI3K/AKT/mTOR inhibitors, can suppress cellular proliferation, invasion, and EMT processes in HCCC-9810 cells. Additionally, investigations involving mesenchymal stem cell interactions with HCCC-9810 have revealed that conditioned media from human umbilical cord-derived mesenchymal stem cells (hUC-MSCs) can inhibit the growth of these cancer cells by inducing apoptosis and reducing proliferative capacity, partly mediated through modulation of the Wnt/β-catenin and PI3K/Akt signaling pathways.
Organism	Human
Tissue	Liver
Disease	Cholangiocarcinoma
Synonyms	HCCC9810, Hccc9810

Characteristics

Age	Unspecified
Gender	Female
Ethnicity	Chinese
Morphology	Epithelial-like
Growth properties	Adherent

Regulatory Data

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Citation	HCCC-9810 (Cytion catalog number 305476)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_6908

Biomolecular Data

Tumorigenic	Yes, in nude mice

Handling

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
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.
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.

Quality Control & Molecular Analysis

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.