Product sheet

HuH-6 Cells | 305092

General information

Description	The HuH-6 cell line is a human hepatoblastoma cell line derived from the liver tissue of a child diagnosed with hepatoblastoma, a rare malignant liver tumor that primarily affects pediatric patients. HuH-6 cells exhibit characteristics typical of hepatic lineage, including the expression of hepatocyte-associated markers such as alpha-fetoprotein (AFP), albumin, and cytokeratins. These cells are adherent in culture and display epithelial morphology, making them a valuable in vitro model for studying liver development, hepatoblastoma pathogenesis, and liver-specific metabolic functions. HuH-6 cells are particularly useful in research focused on pediatric liver cancers, as they retain many of the molecular features observed in primary hepatoblastoma tissues. These include the activation of Wnt/β-catenin signaling, a pathway frequently implicated in hepatoblastoma tumorigenesis. The cell line has also been employed in studies investigating the effects of chemotherapeutic agents, drug metabolism, and resistance mechanisms, as well as in the exploration of gene expression profiles associated with tumor progression and differentiation. Due to their reproducibility and consistent growth characteristics, HuH-6 cells serve as a robust model system for both basic liver cancer research and preclinical drug screening.
Organism	Human
Tissue	Liver
Disease	Hepatoblastoma
Synonyms	HUH-6, HuH 6, HuH6, HUH6, Huh6

Characteristics

Age	1 year
Gender	Male
Ethnicity	Asian
Morphology	Epithelial
Growth properties	Adherent

Regulatory Data

Citation	HuH-6 (Cytion catalog number 305092)

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Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_4381

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.
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.

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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.