Product sheet

SNU-368 Cells | 305631

Renseignements généraux

Description	The SNU-368 cell line is a human hepatocellular carcinoma (HCC) model derived from a primary tumor of a 54-year-old male patient. This cell line is part of a panel of eight HCC cell lines established from Korean patients, designed to reflect the diverse molecular and phenotypic characteristics of liver cancers. SNU-368 cells exhibit a polygonal adherent morphology and display many histological features of the original tumor, including trabecular and acinar arrangements, which are characteristic of Edmondson grade II to IV differentiation. Genetically, SNU-368 cells harbor integrated hepatitis B virus (HBV) DNA and express HBV transcripts, including HBx and preS/S. These features make it a valuable model for studying HBV-related hepatocarcinogenesis. SNU-368 also expresses transferrin and insulin-like growth factor II (IGF-II), but it does not produce alpha-fetoprotein (AFP), either at the RNA or protein level. Such molecular characteristics are important for exploring liver cancer pathways associated with viral infection, growth factor signaling, and metabolic alterations. SNU-368 has been employed in pharmacogenomic studies, particularly in the Liver Cancer Model Repository (LIMORE), to investigate drug responses and identify potential biomarkers for targeted therapies. The cell line's inclusion in large-scale genomic and transcriptomic analyses underscores its relevance in modeling the heterogeneity of primary HCCs, making it a robust tool for studying the molecular underpinnings of liver cancer and evaluating novel therapeutic agents.
Organism	Human
Tissue	Liver
Disease	hepatocellular carcinoma
Synonyms	SNU368

Caractéristiques

Age	54 years
Gender	Male
Ethnicity	Korean
Morphology	Polygonal
Cell type	Endothelial
Growth properties	Adherent

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Données réglementaires

Citation	SNU-368 (Cytion catalog number 305631)
Biosafety level	2
NCBI_TaxID	9606
CellosaurusAccession	CVCL_3948

Données biomoléculaires

Viruses	HBV
Mutational profile	Mutation: ARID1A, Simple, p.Leu1607Profs*41 (c.4817dupT), Unspecified; Mutation: AXIN1, Simple, p.Gln184Ter (c.550C>T), Unspecified; Mutation: TERT, Simple, c.1-124C>T (c.228C>T) (C228T), Unspecifie; Mutation: TP53, Simple, p.Ser106Arg (c.318C>G), Unspecified
Karyotype	Has lost chromosome Y.

Manipulation

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% heat inactivated FBS
Dissociation Reagent	Accutase
Doubling time	41 hours
Subculturing	Remove medium, add fresh 0.25 % trypsin 0.02 % EDTA solution, stand culture flask at 37''''C for 3 to 5 minutes, add culture medium and collect the cells, transfer the medium into 15ml tube, centrifuge, aspirate the medium, resuspend the pellets with culture medium and dispense into the culture flask
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.

Contrôle de la qualité et analyse moléculaire

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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.