# SNU-368

305631

## GENERAL INFORMATION

### 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.

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| **Tissue** | Liver |
| **Disease** | hepatocellular carcinoma |

### Synonyms

- SNU368

## CLASSIFICATION

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| **Organism** | Human |
| **Sex** | Male |
| **Growth properties** | Adherent |
| **Biosafety level** | 2 |

## CHARACTERISTICS

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| **Morphology** | Polygonal |
| **Cell type** | Endothelial |

### Karyotype

Has lost chromosome Y.

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| **Doubling time** | 41 hours |

## IDENTIFIERS

### Citation

SNU-368 (Cytion catalog number 305631)

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| **NCBI TaxID** | 9606 |
| **Cellosaurus** | CVCL_3948 |

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## EXPRESSION AND SUSCEPTIBILITY

### 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

### Viruses

HBV

## HANDLING AND CULTURE

### Culture medium

RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)

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| **Incubation atmosphere** | 37°C, 5% $CO_2$, humidified atmosphere. |

### Supplements

Supplement the medium with 10% heat inactivated FBS

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| **Dissociation reagent** | Accutase |

### 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

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| **Fluid renewal** | 2 to 3 times per week |

### Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
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.
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.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
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.
Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
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.
Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

## QUALITY CONTROL AND CRYOPRESERVATION

### 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.

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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. |

### 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.

### 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.

## DONOR

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| **Donor age** | 54 years |
| **Ethnicity** | Korean |

## LEGAL AND SAFETY

### Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

### Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

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| **Material Transfer Agreement required** | Yes |