Product sheet

SNU-423 Cells | 305874

Información general

Description	The SNU-423 cell line is a human hepatocellular carcinoma (HCC) model established from a Korean adult patient. It is one of eight HCC cell lines derived from primary liver tumors and characterized for their morphological, genetic, and virological properties. SNU-423 displays substrate adherence and maintains many of the histological features of the original tumor, consistent with hepatocyte-derived epithelial morphology. It exhibits aneuploidy and has a modal chromosome number indicative of chromosomal instability, which is common in HCC-derived lines. At the molecular level, SNU-423 is notable for integration of hepatitis B virus (HBV) DNA within its genome, a characteristic shared by all lines in its cohort, reflecting the high prevalence of HBV-associated liver cancer in Eastern Asia. While some cell lines in the series express HBV transcripts such as HBVx, specific transcript expression in SNU-423 was not reported. Additionally, SNU-423 does not express alpha-fetoprotein (AFP) at either the RNA or protein level, aligning it with a subset of HCCs that lack AFP secretion. It has been used in pharmacogenomic screens such as the LIMORE (Liver Cancer Model Repository), where it contributes to understanding gene-drug associations in liver cancer, including drug response variability potentially linked to HBV status or distinct oncogenic alterations.
Organism	Human
Tissue	Liver
Disease	Adult hepatocellular carcinoma
Synonyms	SNU423, NCI-SNU-423

Características

Age	40 years
Gender	Male
Ethnicity	Korean
Morphology	Epithelial-like
Growth properties	Adherent

Datos normativos

Citation	SNU-423 (Cytion catalog number 305874)

SNU-423 Cells | 305874

Biosafety level	2
NCBI_TaxID	9606
CellosaurusAccession	CVCL_0366

Datos biomoleculares

Antigen expression	Blood Type B; Rh +
Mutational profile	Mutation: TERT, Simple, c.1-124C>T (c.228C>T) (C228T), Unspecified, Note=In promoter. Mutation, TP53, Simple, c.376-2A>G, Unspecified, Note=Splice acceptor mutation
Karyotype	Aneuploid; modal number = 79

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% heat-inactivated FBS
Dissociation Reagent	Accutase
Doubling time	72 hours
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.

SNU-423 Cells | 305874

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.