SNU-719

305636

GENERAL INFORMATION

Description

The SNU-719 cell line is a human gastric carcinoma model established from the primary gastric tumor tissue of an adult male patient in Korea. It belongs to a collection of gastric cancer lines developed to support cancer research in East Asia, where gastric cancer prevalence is particularly high. SNU-719 was derived from a moderately differentiated adenocarcinoma and has demonstrated strong attachment to plastic culture surfaces, growing as a diffuse monolayer. The line was maintained in RPMI-1640 medium supplemented with 10% heat-inactivated fetal bovine serum.
Comprehensive biochemical and genetic profiling of SNU-719 revealed expression of carcinoembryonic antigen (CEA) and high levels of tissue polypeptide antigen (TPA) in both supernatant and cell lysate. However, alpha-fetoprotein (aFP) was not detected. Mutation analysis identified alterations in the TP53 gene, although the c-Ki-ras oncogene remained unmutated in this line. These features make SNU-719 a suitable model for studying the molecular mechanisms of gastric adenocarcinoma and for evaluating biomarker expression and therapeutic interventions. Additionally, STR and SNP profiling have confirmed its identity and uniqueness, ensuring the cell line's reliability for in vitro experimentation.

Tissue	Stomach
Disease	tubular adenocarcinoma

Synonyms

- SNU719
- NCI-SNU-719

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Adherent
Biosafety level	2

CHARACTERISTICS

Morphology	Epithelial-like
Cell type	Epithelial
Doubling time	43 hours

IDENTIFIERS

Citation

SNU-719 (Cytion catalog number 305636)

NCBI TaxID	9606
Cellosaurus	CVCL_5086

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EXPRESSION AND SUSCEPTIBILITY

Mutational profile

Mutation: CTNNB1, Simple, p.Gly34Val (c.101G>T), Heterozygous; Mutation: MET, Simple, p.Asp153Ala (c.458A>C), Heterozygous; Mutation: NRAS, Simple, p.Gln61Leu (c.182A>T), Homozygous; Mutation: PIK3CA, Simple, p.Pro104Arg (c.311C>G), Heterozygous

HANDLING AND CULTURE

Culture medium

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

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 10% FBS

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

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.

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

Donor age	53 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.

Material Transfer Agreement required	Yes

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