Product sheet

SNU-719 Cells | 305636

Información general

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.
Organism	Human
Tissue	Stomach
Disease	tubular adenocarcinoma
Synonyms	SNU719, NCI-SNU-719

Características

Age	53 years
Gender	Male
Ethnicity	Korean
Morphology	Epithelial-like
Cell type	Epithelial
Growth properties	Adherent, monolayer

Datos normativos

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Citation	SNU-719 (Cytion catalog number 305636)
Biosafety level	2
NCBI_TaxID	9606
CellosaurusAccession	CVCL_5086

Datos biomoleculares

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

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% FBS
Dissociation Reagent	Accutase
Doubling time	43 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.

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.