Product sheet

SNU-C1 Cells | 305875

Informações gerais

Description	The SNU-C1 cell line is a human colorectal carcinoma model established from the ascitic fluid of a Korean adult patient. It originates from a moderately differentiated adenocarcinoma of the colon and represents one of a group of SNU-series cell lines derived from colorectal cancer patients. SNU-C1 has been used in numerous studies focused on gastrointestinal cancer biology and pharmacogenomics due to its molecular features and relatively stable growth characteristics under in vitro conditions. Genomically, SNU-C1 is characterized by microsatellite instability (MSI), a phenotype frequently observed in a subset of colorectal cancers due to defects in the DNA mismatch repair (MMR) system. This MSI status has significant implications for drug sensitivity and genomic instability. Despite harboring multiple genetic alterations common to colorectal carcinoma, including mutations in key pathways such as WNT and p53, SNU-C1 shows distinct proteomic and transcriptomic profiles that make it suitable for molecular subtype classification and high-throughput drug response profiling. It has been included in large-scale datasets such as the Cancer Cell Line Encyclopedia (CCLE), where proteomic quantification confirms expression patterns consistent with epithelial origin and MSI phenotype. These attributes make SNU-C1 a valuable resource for studying therapeutic responses in MSI-high colorectal cancers and for understanding the molecular diversity within colorectal tumors.
Organism	Human
Tissue	Metastatic
Disease	Colon adenocarcinoma
Metastatic site	Peritoneum
Synonyms	SNUC1, NCI-SNU-C1

Características

Age	71 years
Gender	Male
Ethnicity	Korean
Morphology	Floating aggregates of round cell clusters
Growth properties	Suspension

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Dados regulatórios

Citation	SNU-C1 (Cytion catalog number 305875)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1708

Dados biomoleculares

Mutational profile	Mutation: Gene fusion, APIP + HGNC, SLC1A2, Name(s)=APIP-SLC1A2, Note=In frame. Mutation, TP53, Simple, p.Ser166Ter (c.497C>A), Homozygous

Manuseio

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	None
Doubling time	31 hours
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.

Controle de Qualidade e Análise Molecular

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.