Product sheet

SNU-5 Cells | 305633

General information

Description	The SNU-5 cell line is a human gastric carcinoma model established from a metastatic lesion. It has been characterized for its molecular abnormalities, particularly those involving the p53 tumor suppressor gene. Studies show that SNU-5 exhibits a deletion of the p53 gene transcript, as determined by the absence of p53 mRNA in Northern blot analyses. This loss was further supported by RNase protection assays and sequencing, which revealed that SNU-5 lacks detectable mutations in the coding regions but fails to express the transcript altogether, indicating a possible regulatory or epigenetic mechanism of gene silencing rather than a structural mutation. Proteomic analyses have provided deeper insights into the molecular characteristics of SNU-5. Large-scale studies have included SNU-5 among a panel of cancer cell lines used to map the human cancer cell line proteome. In this context, SNU-5 contributes to datasets integrating mass spectrometry-based quantification of thousands of proteins. These proteomic datasets have been correlated with transcriptomic, genomic, and phenotypic profiles, offering a comprehensive view of protein expression, post-transcriptional regulation, and drug response characteristics. Such datasets position SNU-5 as a valuable model for investigating gastric cancer biology, especially in the context of metastatic disease and p53 pathway dysregulation.
Organism	Human
Tissue	Gastric
Disease	Adenocarcinoma
Metastatic site	Ascites
Applications	3D cell culture, Cancer research
Synonyms	SNU5, NCI-SNU-5

Characteristics

Age	33 years
Gender	Female
Ethnicity	Korean
Morphology	Lymphoblast-like
Cell type	Lymphoblast

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Growth properties	Suspension

Regulatory Data

Citation	SNU-5 (Cytion catalog number 305633)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_0078
GMO Status	GMO-S1: This 4T1 carcinoma derivative contains a-Luc reporter construct introduced by lentiviral transduction, enabling bioluminescent tumor monitoring. This classification applies only within Germany and may differ elsewhere.

Biomolecular Data

Mutational profile	Mutation: CDKN2A, Simple, p.Arg80Ter (c.238C>T) (p.Pro94Leu, c.281C>T), Homozygous; Mutation: TP53, Simple, p.Gly262_Ser269delGlyAsnLeuLeuGlyArgAsnSer (c.784_807del24), Unspecified

Handling

Culture Medium	IMDM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 25 mM HEPES, w: 1.0 mM Sodium pyruvate, w: 3.024 g/L NaHCO3 (Cytion article number 820800a)
Supplements	Supplement the medium with 20% FBS
Dissociation Reagent	Accutase
Doubling time	34 hours
Subculturing	Collect the cells into 15ml tube and centrifue, aspirate the culture medium, resuspend the pellets, dispense the cells 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.

Quality Control & Molecular Analysis

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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.