# SNU-5

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.

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| **Tissue** | Gastric |
| **Disease** | Adenocarcinoma |
| **Metastatic site** | Ascites |

### Applications

3D cell culture, Cancer research

### Synonyms

- SNU5
- NCI-SNU-5

## CLASSIFICATION

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| **Organism** | Human |
| **Sex** | Female |
| **Growth properties** | Suspension |
| **GMO status** | GMO-S1 |

### GMO status details

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.

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| **Biosafety level** | 1 |

## CHARACTERISTICS

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| **Morphology** | Lymphoblast-like |
| **Cell type** | Lymphoblast |
| **Doubling time** | 34 hours |

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## IDENTIFIERS

### Citation

SNU-5 (Cytion catalog number 305633)

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| **NCBI TaxID** | 9606 |
| **Cellosaurus** | CVCL_0078 |

## EXPRESSION AND SUSCEPTIBILITY

### 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 AND CULTURE

### 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)

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| **Incubation atmosphere** | 37°C, 5% $CO_2$, humidified atmosphere. |

### Supplements

Supplement the medium with 20% FBS

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| **Dissociation reagent** | Accutase |

### Subculturing

Collect the cells into 15ml tube and centrifue, aspirate the culture medium, resuspend the pellets, dispense the cells into the culture flask

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| **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.

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| **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

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| **Donor age** | 33 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.

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| **Material Transfer Agreement required** | Yes |