Product sheet

SNU-601 Cells | 305282

Description	The SNU-601 cell line is derived from a poorly differentiated human gastric carcinoma and is widely utilized in gastric cancer research. This cell line serves as an important model for investigating the molecular and cellular mechanisms underlying gastric adenocarcinoma, which is a prevalent and often aggressive form of stomach cancer. SNU-601 cells are valuable for studying the genetic and epigenetic alterations associated with gastric cancer, as well as for testing the efficacy of potential therapeutic agents. SNU-601 cells exhibit an epithelial morphology and express markers characteristic of gastric carcinoma, including cytokeratins and carcinoembryonic antigen (CEA). They harbor genetic alterations commonly found in gastric cancer, such as mutations in oncogenes and tumor suppressor genes like TP53. Researchers use SNU-601 cells to explore key signaling pathways involved in gastric cancer progression, such as the PI3K/Akt, Wnt/β-catenin, and MAPK pathways. These cells are also employed in high-throughput drug screening assays and preclinical testing of chemotherapeutic agents, targeted therapies, and combination treatments. Additionally, SNU-601 cells are utilized to study mechanisms of drug resistance and to develop strategies to overcome it. The relevance of the SNU-601 cell line in gastric cancer research underscores its importance in advancing our understanding of this malignancy and in developing more effective treatments for gastric cancer patients.
Organism	Human
Tissue	Stomach
Disease	Gastric signet ring cell adenocarcinoma
Metastatic site	Ascites
Synonyms	SNU601, NCI-SNU-601

Age	34 years
Gender	Male
Ethnicity	East Asian
Morphology	Epithelial
Growth properties	Adherent

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Citation	SNU-601 (Cytion catalog number 305282)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_0101

Mutational profile	Mutation: KRAS, p.Gly12Asp (c.35G>A), heterozygous; Mutation: PIK3CA, p.Glu542Lys (c.1624G>A), heterozygous; Mutation: TP53, p.Arg273His (c.818G>A), homozygous

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, 25 mM HEPES
Dissociation Reagent	Accutase
Subculturing	Remove the old medium from the adherent cells and wash them with PBS that lacks calcium and magnesium. For T25 flasks, use 3-5 ml of PBS, and for T75 flasks, use 5-10 ml. Then, cover the cells completely with Accutase, using 1-2 ml for T25 flasks and 2.5 ml for T75 flasks. Let the cells incubate at room temperature for 8-10 minutes to detach them. After incubation, gently mix the cells with 10 ml of medium to resuspend them, then centrifuge at 300xg for 3 minutes. Discard the supernatant, resuspend the cells in fresh medium, and transfer them into new flasks that already contain fresh medium.
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.

SNU-601 Cells | 305282

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.

SNU-601 Cells | 305282

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.