Product sheet

SNU-16 Cells | 305273

Description	The SNU-16 cell line is derived from a poorly differentiated gastric carcinoma of a human adult. This cell line is extensively used in gastric cancer research, offering a model to study the molecular and cellular mechanisms involved in the development and progression of gastric adenocarcinoma. SNU-16 cells are particularly valuable for investigating genetic alterations, signal transduction pathways, and the tumor microenvironment associated with this aggressive form of stomach cancer. SNU-16 cells exhibit an epithelial morphology and are characterized by the expression of gastric carcinoma markers, including carcinoembryonic antigen (CEA) and various cytokeratins. They are known to possess amplification of the c-MET gene and overexpression of the MET receptor, which plays a significant role in cell growth, survival, and metastasis. Researchers use SNU-16 cells to explore the role of the MET signaling pathway in gastric cancer and to evaluate the efficacy of MET inhibitors and other targeted therapies. Additionally, SNU-16 cells are utilized in drug resistance studies, high-throughput screening assays, and preclinical testing of new chemotherapeutic agents. The relevance of the SNU-16 cell line in gastric cancer research underscores its importance in advancing our understanding of the disease and developing more effective treatment strategies for gastric cancer patients.
Organism	Human
Tissue	Stomach
Disease	Adenocarcinoma
Metastatic site	Ascites
Synonyms	SNU16, NCI-SNU-16

Age	33 years
Gender	Female
Ethnicity	East Asian
Morphology	Epithelial
Growth properties	Suspension, multicellular aggregates

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Citation	SNU-16 (Cytion catalog number 305273)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_0076

Surface antigens	Blood Type A, Rh +, carcinoembryonic antigen (CEA) and TAG 72
Oncogenes	Myc +, erb-B2 +
Tumorigenic	Yes, in semisolid medium
Mutational profile	Mutation: MSH6, p.Lys1358fs*2 (c.4065_4066insTTGA), heterozygous; Mutation: TP53, p.Tyr205Phe (c.614A>T), 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
Subculturing	Suspension cells: Remove cells from substrate by pipetting with fresh medium. To obtain single cells, pass the suspension several times through a 22 gauge needle and dispense into new flasks.
Fluid renewal	2 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.

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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.

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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.