Product sheet

SNU-668 Cells | 305635

General information

Description	The SNU-668 cell line is a human gastric carcinoma model originally derived from the poorly differentiated adenocarcinoma tissue of the stomach. This cell line has been widely used in studies of gastric cancer pathogenesis, signaling mechanisms, and drug responsiveness. Genomic characterization reveals that SNU-668 carries frequent mutations and chromosomal aberrations commonly observed in diffuse-type gastric cancers. Notably, it shows alterations in key oncogenic pathways such as TP53 mutation and possible activation of PI3K/AKT signaling, which may contribute to its tumorigenic properties and therapy resistance. SNU-668 has also been included in comprehensive multi-omics profiling projects such as the Cancer Cell Line Encyclopedia (CCLE), where it was assessed for transcriptomic, genomic, methylation, and proteomic signatures. The cell line exhibits distinct DNA methylation patterns and global histone modification profiles, which may play roles in epigenetic regulation of gene expression. Additionally, analysis of dependency maps has suggested lineage-specific vulnerabilities that could inform targeted therapy strategies for diffuse gastric carcinomas. As a model for stomach cancer with Asian ethnic background origin, SNU-668 continues to be an important tool in the preclinical evaluation of molecularly guided therapeutics.
Organism	Human
Tissue	Gastric
Disease	signet ring cell adenocarcinoma
Metastatic site	Ascites
Synonyms	SNU668, NCI-SNU-668

Characteristics

Age	63 years
Gender	Male
Ethnicity	Korean
Morphology	Epithelial-like
Cell type	Epithelial
Growth properties	Adherent, monolayer

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Regulatory Data

Citation	SNU-668 (Cytion catalog number 305635)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_5081

Biomolecular Data

Mutational profile	Mutation: KRAS, Simple, p.Gln61Lys (c.181C>A), Homozygous; Mutation: TP53, Simple, p.Ser215Asn (c.644G>A), Homozygous

Handling

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% heat inactivated FBS
Dissociation Reagent	Accutase
Doubling time	26 hours
Subculturing	Remove medium, add fresh 0.25 % trypsin 0.02 % EDTA solution, stand culture flask at 37''''C for 3 to 5 minutes, add culture medium and collect the cells, transfer the medium into 15ml tube, centrifuge, aspirate the medium, resuspend the pellets with culture medium and dispense 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.