SNU-216

305630

GENERAL INFORMATION

Description

The SNU-216 cell line is a human gastric carcinoma model derived from a metastatic lymph node of a patient with moderately differentiated adenocarcinoma. This cell line is part of a panel of gastric carcinoma models established to study gastric cancer biology, particularly in the context of tumor antigen expression, genetic mutations, and therapeutic responses. SNU-216 cells exhibit an adherent growth pattern in culture, forming a heterogeneous diffuse monolayer with round-oval cellular morphology and a low nuclear-to-cytoplasmic ratio.
Genetic analyses have revealed significant mutations in the SNU-216 cell line, including alterations in the TP53 gene. Specifically, a mutation in exon 6 has been identified, which likely impacts its tumor suppressor functions. Additionally, tumor antigen studies have shown that SNU-216 expresses high levels of carcinoembryonic antigen (CEA) and tissue polypeptide antigen (TPA), with no detectable alpha-fetoprotein (AFP). These features make the cell line a valuable tool for studying the molecular and genetic characteristics of gastric cancer and for exploring diagnostic and therapeutic applications related to tumor markers.
SNU-216 has also been included in the Cancer Cell Line Encyclopedia (CCLE), providing extensive genomic, transcriptomic, and pharmacological data. The cell line's molecular profile has been utilized to predict sensitivities to targeted therapies and to investigate pathways such as those involving receptor tyrosine kinases and PI3K signaling. Its inclusion in this resource underlines its importance as a preclinical model for gastric cancer research and drug development.

Tissue	Gastric
Disease	tubular adenocarcinoma

Applications

Lymph node

Synonyms

- SNU216
- NCI-SNU-216

CLASSIFICATION

Organism	Human
Sex	Female
Growth properties	Adherent
Biosafety level	1

CHARACTERISTICS

Morphology	Epithelial-like
Cell type	Epithelial
Doubling time	36 hours

IDENTIFIERS

Citation

SNU-216 (Cytion catalog number 305630)

NCBI TaxID	9606

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Cellosaurus	CVCL_3946

EXPRESSION AND SUSCEPTIBILITY

Mutational profile

Mutation: TP53, Simple, p.Val216Met (c.646G>A), Homozygous

HANDLING AND CULTURE

Culture medium

RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 10% heat inactivated FBS

Dissociation reagent	Accutase

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

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.

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

Donor age	46 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.

Material Transfer Agreement required	Yes