Product sheet

SNB-19 Cells | 305492

General information

Description	The SNB-19 cell line is a human glioblastoma multiforme (GBM) model derived from a high-grade glioma tumor. It is one of the widely studied glioma cell lines and is used for exploring the biology of aggressive brain tumors, especially glioblastoma. SNB-19 cells exhibit epithelial morphology and are adherent in culture. They have been extensively used in studies of tumor proliferation, invasion, and response to therapy, particularly for investigating glioblastoma's resistance mechanisms to conventional treatments. Genomic profiling of SNB-19 cells has revealed important genetic alterations commonly associated with GBM, including mutations in tumor suppressor genes and oncogenes such as TP53, EGFR, and PTEN. These cells also demonstrate chromosomal abnormalities, including amplification of oncogenic drivers and deletions in tumor suppressor loci. The genetic landscape of SNB-19 provides an important model for studying the molecular pathways driving GBM pathogenesis and for identifying potential targets for therapy. SNB-19 has been used extensively to evaluate the efficacy of novel chemotherapeutics and targeted agents. The cell line is also employed in assays studying glioblastoma's invasive and migratory properties, as it effectively mimics the highly invasive nature of GBM in vitro. Moreover, proteomic analyses of SNB-19 have contributed to understanding protein-level dysregulations and their correlation with genetic alterations in glioblastoma. These characteristics make SNB-19 an essential tool in translational research focused on glioblastoma.
Organism	Human
Tissue	Brain, parietal lobe
Disease	Astrocytoma
Synonyms	SNB.19, SNB19, Surgical Neurology Branch-19

Characteristics

Age	75 years
Gender	Male
Ethnicity	Caucasian
Morphology	Fibroblast-like
Cell type	Fibroblast
Growth properties	Adherent, monolayer

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Regulatory Data

Citation	SNB-19 (Cytion catalog number 305492)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_0535

Biomolecular Data

Mutational profile	Mutation: PTEN, Simple, p.Glu242Valfs*15 (c.723_724dupTG), Homozygous; Mutation: TERT, Simple, c.1-124C>T (c.228C>T) (C228T), Unspecified; Mutation: TP53, Simple, p.Arg273His (c.818G>A), Homozygous

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Supplements	Supplement the medium with 10% FBS
Doubling time	24 hours
Seeding density	1-4 x 10^4 cells/cm2
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.