Product sheet

SF126 Cells | 300608

General information

Description	The SF126 cell line is a human glioblastoma cell line, widely utilized in research on brain tumors, particularly in studies exploring the molecular mechanisms of glioblastoma and its response to various treatments. Derived from a patient with glioblastoma multiforme, SF126 cells are known for their aggressive growth and invasive behavior, typical of glioblastomas, making them a crucial model for investigating therapeutic strategies and understanding tumor biology. One of the notable features of SF126 is its use in exploring both apoptosis (programmed cell death) and autophagy, as these processes are central to cancer cell survival and resistance to treatment. SF126 has been extensively studied for its interactions with p53, a tumor suppressor gene frequently mutated in cancers. In SF126, researchers have investigated the effects of wild-type and mutant p53 on cell death mechanisms. It was found that p53 induces both apoptosis and autophagy, with autophagic cell death playing a significant role in p53-dependent cell death. This has implications for therapies targeting autophagic pathways, which may enhance the efficacy of treatments aimed at inducing tumor cell death. Additionally, studies have shown that manipulating autophagy can influence the overall tumor response to p53 activation, offering potential therapeutic angles for glioblastoma treatment. Further research on SF126 has explored its binding properties with opioid peptides, such as β-endorphins, revealing specific binding sites for these molecules. This has provided insights into how glioblastoma cells might interact with endogenous hormones and signaling molecules in the brain, further underscoring the complexity of glioblastoma biology and potential novel therapeutic targets.
Organism	Human
Tissue	Brain, left frontal lobe
Disease	Glioblastoma
Applications	cell biology studies of gliomas
Synonyms	SF-126, SF 126

Characteristics

Age	50 years
Gender	Female
Ethnicity	European
Growth properties	Adherent

SF126 Cells | 300608

Identifiers / Biosafety / Citation

Citation	SF126 (Cytion catalog number 300608)
Biosafety level	1

Expression / Mutation

Tumorigenic	No (tested in athymic mice)
Products	procollagen III, forms collagen fibers in vitro (interstitial collagen synthesis)
Ploidy status	Aneuploid

Handling

Culture Medium	EMEM, w: 2 mM L-Glutamine, w: 1.5 g/L NaHCO3, w: EBSS, w: 1 mM Sodium pyruvate, w: NEAA (Cytion article number 820100c)
Medium supplements	Supplement the medium with 10% FBS
Passaging solution	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	CM-1 (Cytion catalog number 800100)

Handling of cryopreserved cultures

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.

Quality control / Genetic profile / HLA

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.