Product sheet

CCF-STTG1 Cells | 300388

General information

Description	The CCF-STTG1 cell line is a human astrocytoma cell line derived from a cerebral tumor. This cell line is of particular interest in cancer research due to its origin from a malignant astrocytoma, which is a type of brain tumor derived from astrocytes cells that support nerve cells. The CCF-STTG1 cells exhibit a robust capacity for proliferation and maintain several characteristics typical of astrocytes, making them a valuable model for studying the biological and molecular mechanisms of tumorigenesis in the central nervous system. CCF-STTG1 cells are used extensively in oncological studies, particularly in those examining the genetic and epigenetic alterations that contribute to brain tumor pathology. These cells are useful in assays for drug screening and resistance, gene expression analysis, and for studying the effects of cancer therapeutics on cell viability, proliferation, and apoptosis. Researchers also utilize this cell line to explore the complex signaling pathways involved in cancer progression and to test novel therapeutic targets for glioblastoma and other astrocytomas.
Organism	Human
Tissue	Brain
Disease	Astrocytoma, grade IV
Synonyms	CCFSTTG1, STTG1

Characteristics

Age	68 years
Gender	Female
Ethnicity	Caucasian
Morphology	Long, bright cells
Growth properties	Adherent

Regulatory Data

Citation	CCF-STTG1 (Cytion catalog number 300388)
Biosafety level	1

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NCBI_TaxID	9606
CellosaurusAccession	CVCL_1118

Biomolecular Data

Antigen expression	HLA DR (on approx. 25% of cells)

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% FBS
Dissociation Reagent	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.
Seeding density	2 x 10^4 cells/cm^2 will result in a confluent monolayer within 4 days.
Fluid renewal	2 to 3 times per week
Post-Thaw Recovery	After thawing, plate the cells at 5 x 10^4 cells/cm^2 and allow the cells to recover from the freezing process and to adhere for at least 24 hours.
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.

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.