

SW1088 Cells | 305879

General information

Description

The SW1088 cell line is a human glioma-derived line established from a tumor biopsy of the cerebral cortex. It is classified histologically as an astrocytoma and was originally reported in a study of tumorigenic human cell lines capable of forming tumors in nude mice. In that context, SW1088 was shown to form solid tumors when inoculated subcutaneously into immunodeficient hosts, although tumor development required longer latency periods compared to more aggressive glioblastoma cell lines. This suggests a relatively less proliferative or less aggressive phenotype in vivo.

SW1088 cells exhibit characteristics consistent with astrocytic origin and are commonly used in neuro-oncology research to model lower-grade gliomas. Their slower in vivo tumorigenicity compared to high-grade glioblastoma models such as U87MG or U251 reflects biological features relevant to astrocytoma pathology. Genomic and transcriptomic profiling of SW1088 has contributed to understanding molecular differences among glioma subtypes. However, these cells may not fully recapitulate the high-grade glioma phenotype due to their lower proliferation and reduced capacity for rapid tumor formation, making them a more suitable model for studying earlier-stage or less aggressive gliomas.

Organism Human

Tissue Brain

Disease Astrocytoma

Synonyms SW-1088, SW 1088

Characteristics

Age 72 years

Gender Male

Ethnicity Caucasian

Morphology Fibroblast

Growth properties Adherent

Regulatory Data

Citation SW 1088 (Cytion catalog number 305879)

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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 $300 \times g$ 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.