D341Med

305136

GENERAL INFORMATION

Description

The D341 Med cell line was established in 1988 by Friedman et al. from tumor tissue extracted from a 3-year-old boy diagnosed with medulloblastoma. Medulloblastoma is a highly malignant pediatric brain tumor predominantly occurring in the cerebellum. This cell line is crucial for research due to its origin from a common type of childhood brain cancer, providing insights into the tumor biology and genetics specific to pediatric cases. D341 Med has been extensively utilized in studies aimed at understanding the molecular and cellular mechanisms of medulloblastoma, including investigations into the genetic mutations and signaling pathways that contribute to tumorigenesis and treatment resistance.

In addition to its role in basic research, the D341 Med cell line has been instrumental in preclinical studies assessing new therapeutic approaches for medulloblastoma. Its genetic profile, which reflects common alterations seen in human tumors, makes it an excellent model for evaluating the efficacy of potential drugs and novel therapeutic strategies. The use of D341 Med in these studies helps to bridge the gap between laboratory research and clinical application, supporting the development of targeted therapies that could offer improved outcomes for children affected by this devastating disease.

Tissue	Brain, cerebellum
Disease	Medulloblastoma

Synonyms

- D-341 Med
- D-341 MED
- D-341MED
- D341_Med
- D341Med
- D341MED
- D341MD
- D-341
- D341
- Med 341
- H341

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Suspension
Biosafety level	1

CHARACTERISTICS

Morphology	Lymphoblast
Tumourigenic	Yes
Doubling time	37 hours

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IDENTIFIERS

Citation

D341Med (Cytion catalog number 305136)

NCBI TaxID	9606
Cellosaurus	CVCL_0018

EXPRESSION AND SUSCEPTIBILITY

Protein expression

Glutamine synthetase positive, neuron specific enolase positive, glial fibrillary acidic proteins negative, S100 (S-100) protein negative, neuroectodermal antigen positive, recognized by the UJ13A monoclonal antibody

HANDLING AND CULTURE

Culture medium

EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS (Cytion article number 820100a)

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

Supplements

Supplement the medium with 10% FBS and 1% NEAA

Subculturing

Gently homogenize the cell suspension in the flask by pipetting up and down, then take a representative sample to determine the cell density per ml. Dilute the suspension to achieve a cell concentration of 1 x 10^5 cells/ml with fresh culture medium, and aliquot the adjusted suspension into new flasks for further cultivation.

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	3,5 years
Ethnicity	European

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