Product sheet

D341Med Cells | 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.
Organism	Human
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

Characteristics

Age	3,5 years
Gender	Male
Ethnicity	European
Morphology	Lymphoblast
Growth properties	Suspension

Identifiers / Biosafety / Citation

Citation	D341Med (Cytion catalog number 305136)

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Biosafety level	1

Expression / Mutation

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
Tumorigenic	Yes

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
Doubling time	37 hours
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.
Split ratio	1:3 to 1:5
Fluid renewal	2 to 3 times per week
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.

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STR profile

Amelogenin: x,y
CSF1PO: 9,10,11
D13S317: 11,13
D16S539: 12,14
D5S818: 11,12
D7S820: 9,13
TH01: 6,9.3
TPOX: 8,11
vWA: 17,18
D3S1358: 16,18
D21S11: 30,31
D18S51: 12,17
Penta E: 8,15
Penta D: 9,13
D8S1179: 14
FGA: 19,23
D6S1043: 12,19
D2S1338: 17
D12S391: 17,18,24
D19S433: 13