Product sheet

CA46 Cells | 305082

General information

Description	The CA46 cell line is a human cell line derived from a Burkitt's lymphoma, which is a type of non-Hodgkin's lymphoma. This cell line exhibits characteristics typical of a transformed B lymphocyte lineage and was originally established from the malignant cells of a 39-year-old male. CA46 cells are noteworthy for their study in oncology research, particularly in understanding the Epstein-Barr virus (EBV) negative Burkitt?s lymphoma pathogenesis and the underlying molecular biology of B-cell differentiation and transformation. Scientifically, CA46 cells have been instrumental in the study of gene expression related to B-cell development and malignancy. They are EBV-negative, which allows researchers to investigate tumor characteristics and behaviors without the influence of EBV, a common confounder in many lymphoid malignancies. The cell line also provides a useful tool for examining the efficacy of therapeutic agents and the mechanisms of drug resistance in lymphoma, contributing to the development of targeted therapies in hematologic cancers. In research settings, CA46 cells have been used to assess cytotoxic responses to chemotherapeutic agents and to explore signal transduction pathways involved in B-cell proliferation and apoptosis. Their genomic stability and susceptibility to genetic manipulation further enable their use in molecular biology and genetic studies related to cancer research and therapy development.
Organism	Human
Tissue	Lymphoblast
Disease	Burkitt lymphoma
Synonyms	CA-46, CA 46

Characteristics

Gender	Male
Morphology	Lymphoblast
Growth properties	Suspension

Identifiers / Biosafety / Citation

Citation	CA46 (Cytion catalog number 305082)
Biosafety level	1

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Expression / Mutation

Receptors expressed	Complement
Protein expression	Immunoglobulin(Surface And Secreted)
Antigen expression	HLA B27(the patient was HLA A2, A11, B17, B27)
Viruses	EBV negative

Handling

Culture Medium	RPMI 1640, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Medium supplements	Supplement the medium with 20% heat-inactivated FBS
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	1:2 to 1:4
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.