CA46

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.

Tissue	Lymphoblast
Disease	Burkitt lymphoma

Synonyms

- CA-46
- CA 46

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Suspension
Biosafety level	1

CHARACTERISTICS

Morphology	Lymphoblast

IDENTIFIERS

Citation

CA46 (Cytion catalog number 305082)

NCBI TaxID	9606
Cellosaurus	CVCL_1101

EXPRESSION AND SUSCEPTIBILITY

Receptors expressed

Complement

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Banking information
Sparkasse Heidelberg
IBAN: DE35 6725 0020 0009 2076 86
BIC: SOLADES1HDB

Protein expression

Immunoglobulin(Surface And Secreted)

Antigen expression

HLA B27(the patient was HLA A2, A11, B17, B27)

Viruses

EBV negative

HANDLING AND CULTURE

Culture medium

RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)

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

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.

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.

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

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