EB3

300373

GENERAL INFORMATION

Description

The EB3 cell line is a human Burkitt lymphoma model that was originally derived from a young child with a maxillary tumor in Uganda. It is one of several established Burkitt lymphoma cell lines created during early investigations into the immunological and biological characteristics of this malignancy. Notably, EB3 cells express strong membrane immunofluorescence reactivity when probed with serum from Burkitt lymphoma patients in remission following chemotherapy, suggesting the presence of tumor-associated antigens on their surface. This reactivity is likely mediated by IgG-class antibodies, as shown using fluorescein-conjugated anti-IgG reagents. EB3 was found to react strongly alongside other Burkitt-derived lines such as Jijoye, B35M, and SL1, whereas certain other Burkitt lines, like Raji, did not show similar reactivity under the same conditions.

EB3 cells were among those used in early comparative studies to distinguish between tumor-specific and isoantigenic responses in Burkitt lymphoma. These investigations demonstrated that sera from some patients—particularly those in complete remission—could selectively recognize Burkitt lymphoma cells over normal bone marrow or lymphocytes from the same donor, indicating tumor-specific immunogenic markers. Additionally, EB3 cells displayed morphological and immunophenotypic features consistent with large lymphoblast-like Burkitt lymphoma cells, which tend to exhibit bright granular membrane staining when exposed to reactive serum. This historic immunological profiling of EB3 helped to establish the groundwork for later studies exploring tumor-specific antigens in lymphoid malignancies.

Tissue	Bone
Disease	Burkitt lymphoma
Metastatic site	Bone

Applications

3D cell culture, Immunology

Synonyms

- EB-3
- Epstein-Barr-3
- GM04679

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Suspension
Biosafety level	2

CHARACTERISTICS

Morphology	Lymphoblast
Cell type	B lymphocyte

IDENTIFIERS

Citation

EB3 (Cytion catalog number 300373)

Cytion GmbH
Nikola-Tesla-Str. 3
69124 Heidelberg
Tel: +49 (0)6221 405780
info@cytion.com
cytion.com

Registered office Heidelberg
VAT ID: DE283292917
Local court Mannheim - HRB 714394
CEO / Geschäftsführer: Jonathan Steubing

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

NCBI TaxID	9606
Cellosaurus	CVCL_1185

EXPRESSION AND SUSCEPTIBILITY

Surface antigens

HLA A3, Aw32, Cw2

Isoenzymes

G6PD, A

Viruses

EBV (EBNA pos)

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 10% 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.

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 years
Ethnicity	African

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