**Product sheet**

# EB3 Cells | 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.<br><br>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. |
| **Organism** | Human |
| **Tissue** | Bone |
| **Disease** | Burkitt lymphoma |
| **Metastatic site** | Bone |
| **Applications** | 3D cell culture, Immunology |
| **Synonyms** | EB-3, Epstein-Barr-3, GM04679 |

## Characteristics

| | |
|---|---|
| **Age** | 3 years |
| **Gender** | Male |
| **Ethnicity** | African |
| **Morphology** | Lymphoblast |

# EB3 Cells | 300373

| | |
|---|---|
| **Cell type** | B lymphocyte |
| **Growth properties** | Suspension |

## Regulatory Data

| | |
|---|---|
| **Citation** | EB3 (Cytion catalog number 300373) |
| **Biosafety level** | 2 |
| **NCBI_TaxID** | 9606 |
| **CellosaurusAccession** | CVCL_1185 |

## Biomolecular Data

| | |
|---|---|
| **Surface antigens** | HLA A3, Aw32, Cw2 |
| **Isoenzymes** | G6PD, A |
| **Viruses** | EBV (EBNA pos) |

## Handling

| | |
|---|---|
| **Culture Medium** | RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a) |
| **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. |
| **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. |

## EB3 Cells | 300373

| | |
|---|---|
| **Thawing and Culturing Cells** | 1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.<br>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.<br>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.<br>4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.<br>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.<br>6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.<br>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.<br>8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes. |
| **Incubation Atmosphere** | 37°C, 5% $CO_2$, humidified atmosphere. |
| **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. |
| **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. |

## Quality Control & Molecular Analysis

| | |
|---|---|
| **Sterility** | Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods.<br><br>To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections. |