

BJAB Cells | 302006

Renseignements généraux

Description

The BJAB cell line was established in 1973 from a 5-year-old African girl diagnosed with Epstein-Barr virus (EBV)-negative Burkitt's lymphoma. This specific origin is crucial for research as it provides a distinct model for studying Burkitt's lymphoma in the absence of EBV influence, which is common in many other lymphoma cell lines. The EBV-negative status of BJAB cells allows researchers to investigate the genetic and environmental factors contributing to lymphomagenesis without the confounding effects of the virus.

BJAB cells are often used in oncological research, especially for exploring the pathophysiology of Burkitt's lymphoma, and for testing therapeutic strategies against it. The cell line displays many of the hallmark features of Burkitt's lymphoma, including high proliferation rates and a characteristic immunophenotype. Its genetic stability and the robustness with which it can be cultured make it a valuable tool for in vitro experiments aimed at understanding lymphoma biology and assessing the efficacy of anti-cancer drugs.

Organism Human

Tissue Blood

Disease Burkitt lymphoma

Applications Analysis of B cell surface antigens, testing of cytotoxic drugs, mutational analysis, analysis of apoptotic mechanisms, HLA-typing

Synonyms BJAb, BJA-B, BJAB-1, BJA-B1, BJA-B-1

Caractéristiques

Age 5 years

Gender Female

Ethnicity African

Morphology Round cells

Cell type B lymphoblast

Growth properties Suspension

Données réglementaires

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Citation BJAB (Cytion catalog number 302006)

Biosafety level 1

NCBI_TaxID 9606

CellosaurusAccession CVCL_5711

Données biomoléculaires

Antigen expression CD10+, CD19+, CD20+, CD21(+), CD22+, CD23-, CD24-, CD32+, CD37+, CD38+, CD39-, CD40+, CD54+, CD72+, CD73-, CD75+, CD77+, CD81, CD82+, CD83+, CD84+, CD86+

Karyotype 46, hypodiploid

Manipulation

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 20% FBS, 10 mM HEPES

Subculturing Maintain cultures by periodically adding or replacing the medium. Initiate cultures with a density of 5×10^5 cells/ml and keep the cell concentration within the range of 3×10^5 to 1×10^6 cells/ml for optimal growth.

Seeding density 3×10^5 cells/ml

Fluid renewal Every 3 to 5 days

Post-Thaw Recovery Allow the cells to recover from the freezing process for at least 48 hours.

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.

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**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.
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.

**Incubation
Atmosphere**

37°C, 5% CO₂, 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.

Contrôle de la qualité et analyse moléculaire

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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.