Product sheet

BJAB Cells | 302006

General information

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

Characteristics

Age	5 years
Gender	Female
Ethnicity	African
Morphology	Round cells
Cell type	B lymphoblast
Growth properties	Suspension

Regulatory Data

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Citation	BJAB (Cytion catalog number 302006)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_5711

Biomolecular Data

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

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 20% FBS, 10 mM HEPES
Subculturing	Maintain cultures by periodically adding or replacing the medium. Initiate cultures with a density of 5 x 10^5 cells/ml and keep the cell concentration within the range of 3 x 10^5 to 1 x 10^6 cells/ml for optimal growth.
Seeding density	3 x 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.

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% 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

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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.