Jiyoye

300366

GENERAL INFORMATION

Description

The Jiyoye cell line is an extensively studied model derived from a human Burkitt lymphoma. Burkitt lymphoma is a type of non-Hodgkin lymphoma that predominantly affects B cells, and the Jiyoye cell line retains many of the key characteristics of this malignancy. The cells exhibit the typical chromosomal translocation between the c-MYC gene and immunoglobulin gene loci, which is a hallmark of Burkitt lymphoma. This translocation leads to the overexpression of the c-MYC oncogene, driving the proliferative and aggressive nature of the tumor cells. As such, the Jiyoye cell line is an invaluable tool for studying the molecular and genetic mechanisms underlying lymphomagenesis, especially in the context of MYC-driven cancers.
Jiyoye cells grow in suspension and are characterized by their high proliferation rate, which makes them suitable for a variety of experimental applications, including drug screening, gene expression studies, and apoptosis assays. The cell line is also frequently used in research focusing on Epstein-Barr virus (EBV), as Burkitt lymphoma cells, including Jiyoye, often harbor this virus, which is implicated in the pathogenesis of the disease. This makes Jiyoye particularly useful for investigating the interplay between viral oncogenes and cellular pathways in B cell malignancies.
Given its origin and characteristics, the Jiyoye cell line is a critical model for oncological research, particularly in understanding the pathophysiology of B cell lymphomas.

Tissue	Lymphatic System
Disease	B-cell Non-Hodgkin-Lymphoma
Metastatic site	B-Lymphocyte

Applications

Analysis of B cell surface antigens, testing of cytotoxic drugs, mutational analysis, analysis of apoptotic mechanisms, haplotype standard.

Synonyms

- JIYOYE
- Jijoye
- JIJOYE
- P-2003
- P3 (Jiyoye)
- P-3-Jijoye
- P3-Jiyoye
- P-3J
- P3J
- Jiyoye(P-2003)
- Jiyoye (P-2003)
- JiyoyeP-2003
- OB2
- GM04678

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Suspension
Biosafety level	1

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CHARACTERISTICS

Cell type	B lymphocyte

Karyotype

46, hypodiploid

IDENTIFIERS

Citation

Jiyoye (Cytion catalog number 300366)

NCBI TaxID	9606
Cellosaurus	CVCL_1317

EXPRESSION AND SUSCEPTIBILITY

Antigen expression

CD10+, CD19+

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% FBS

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	2 to 3 times per week
Post-thaw recovery	Fast (48 hours)

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	7 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