Product sheet

Jiyoye Cells | 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.
Organism	Human
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

Characteristics

Age	7 years
Gender	Male
Ethnicity	African
Cell type	B lymphocyte

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Growth properties	Suspension

Regulatory Data

Citation	Jiyoye (Cytion catalog number 300366)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1317

Biomolecular Data

Antigen expression	CD10+, CD19+
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 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)
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.