Pfeiffer

305850

GENERAL INFORMATION

Description

Pfeiffer is a human diffuse large B-cell lymphoma (DLBCL) cell line derived from the malignant lymphoid tissue of an adult patient. It represents a mature B-cell neoplasm and grows in suspension as single cells and small aggregates under standard culture conditions. Morphologically, Pfeiffer cells display features typical of large transformed B lymphocytes, including a high nuclear-to-cytoplasmic ratio, prominent nucleoli, and dispersed chromatin. The cell line expresses B-cell-associated surface markers, including CD19, CD20, CD22, and surface immunoglobulin, consistent with its origin from germinal center or post-germinal center B cells.
At the molecular level, Pfeiffer cells harbor genetic alterations characteristic of aggressive B-cell lymphomas. These commonly include abnormalities affecting key oncogenic pathways such as BCL6 deregulation and alterations in signaling cascades involved in proliferation and survival, including NF-κB and PI3K/AKT pathways. Like many DLBCL models, Pfeiffer exhibits complex karyotypic changes and somatic mutations in genes frequently implicated in lymphomagenesis. The cell line has been included in large-scale genomic and pharmacogenomic profiling efforts, supporting its use as a representative model for studying the genetic heterogeneity and therapeutic vulnerabilities of DLBCL.
Functionally, Pfeiffer is widely used to investigate mechanisms of B-cell receptor signaling, antibody-dependent cellular cytotoxicity (ADCC), and responses to targeted agents such as anti-CD20 monoclonal antibodies, kinase inhibitors, and epigenetic modulators. Its robust CD20 expression makes it a suitable in vitro model for evaluating rituximab-mediated immune effector functions. Consequently, Pfeiffer serves as a valuable experimental system for dissecting molecular drivers of aggressive B-cell lymphoma and for preclinical testing of novel immunotherapeutic and small-molecule strategies.

Tissue	Pleural effusion
Disease	Diffuse large B-cell lymphoma

Synonyms

- PFEIFFER

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Suspension
Biosafety level	1

CHARACTERISTICS

Morphology	lymphoblast
Cell type	B-cell
Doubling time	24-30 hours

IDENTIFIERS

Citation

Pfeiffer (Cytion catalog number 305850)

NCBI TaxID	9606
Cellosaurus	CVCL_3326

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Banking information
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EXPRESSION AND SUSCEPTIBILITY

Antigen expression

CD10; Homo sapiens
CD19; Homo sapiens
CD20; Homo sapiens
CD38; Homo sapiens
CD10 +, CD19 +, CD20 +, CD38 +, CD23 -, CD39 -

Mutational profile

Mutation: p.Arg1171Cys, Heterozygous

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

Dissociation reagent	None
Seeding density	2 to 10 x 10^5 /ml

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 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium.
Follow the procedure described under Post-Thaw Recovery

QUALITY CONTROL AND CRYOPRESERVATION

Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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	Adult
Ethnicity	Caucasian

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

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