Product sheet

Pfeiffer Cells | 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.
Organism	Human
Tissue	Pleural effusion
Disease	Diffuse large B-cell lymphoma
Synonyms	PFEIFFER

Characteristics

Age	Adult
Gender	Male
Ethnicity	Caucasian
Morphology	lymphoblast
Cell type	B-cell

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Growth properties	Suspension

Regulatory Data

Citation	Pfeiffer (Cytion catalog number 305850)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_3326

Biomolecular Data

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

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
Dissociation Reagent	None
Doubling time	24-30 hours
Seeding density	2 to 10 x 10^5 /ml
Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium. 7. Follow the procedure described under Post-Thaw Recovery
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