SKW-3

300343

GENERAL INFORMATION

Description

The SKW-3 cell line, originally believed to be derived from the peripheral blood of a 61-year-old male diagnosed with chronic lymphocytic leukemia (CLL), represents a significant point of interest in cancer research, particularly in the study of B-cell leukemias. Over time, critical reassessments using Short Tandem Repeat (STR) profiling have illuminated an important issue-SKW-3 cells are not a pure line from the CLL patient, but are instead contaminated, now identified as a derivative of the KE-37 cell line. This revelation has profound implications for past research and future studies, emphasizing the need for rigorous cell line authentication to ensure experimental accuracy.
KE-37, the true origin of the SKW-3 cells, is a B-cell line established from a patient with acute lymphoblastic leukemia (ALL). This shift in origin from CLL to ALL, due to the contamination, drastically alters the biological context and utility of the SKW-3 line. For researchers, this means that any findings or data previously attributed to CLL-specific mechanisms when using SKW-3 must be critically evaluated and potentially revised. The reclassification to a derivative of KE-37 necessitates a shift in the application of SKW-3 cells towards studies more relevant to ALL and its underlying mechanisms, rather than CLL.

Tissue	Hematopoietic
Disease	T cell leukemia (CLL)

Synonyms

- SKW3

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Suspension
Biosafety level	1

CHARACTERISTICS

Morphology	Round cells
Cell type	T Lymphocyte
Doubling time	30 hours

IDENTIFIERS

Citation

SKW-3 (Cytion catalog number 300343)

NCBI TaxID	9606
Cellosaurus	CVCL_2197

EXPRESSION AND SUSCEPTIBILITY

Antigen expression

CD2+, CD3-, CD4+, CD8, Thy-1-like antigen

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Products

LECT2 (chemotactic protein)

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% heat-inactivated 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.

Post-thaw recovery	1 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 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	27 years
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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