Product sheet

SKW-3 Cells | 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.
Organism	Human
Tissue	Hematopoietic
Disease	T cell leukemia (CLL)
Synonyms	SKW3

Characteristics

Age	27 years
Gender	Male
Ethnicity	Caucasian
Morphology	Round cells
Cell type	T Lymphocyte
Growth properties	Suspension

Regulatory Data

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Citation	SKW-3 (Cytion catalog number 300343)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_2197

Biomolecular Data

Antigen expression	CD2+, CD3-, CD4+, CD8, Thy-1-like antigen
Products	LECT2 (chemotactic protein)

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% heat-inactivated FBS
Doubling time	30 hours
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
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.
Flask Coating	None
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

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.