L1210

400257

GENERAL INFORMATION

Description

The L1210 cell line is a well-characterized murine lymphocytic leukemia model originally derived from a mouse with lymphoid leukemia. This cell line is widely used in cancer research due to its aggressive growth characteristics and high proliferative capacity. L1210 cells are commonly utilized in studies involving leukemia pathogenesis, chemotherapy drug testing, and the exploration of molecular mechanisms underlying cancer cell survival and proliferation.
L1210 cells exhibit rapid in vitro growth and maintain a suspension culture, making them ideal for in vitro assays and in vivo experiments, particularly in syngeneic mouse models. The cell line's responsiveness to a variety of chemotherapeutic agents has made it a valuable tool for preclinical screening of anti-leukemic drugs. Researchers often employ L1210 cells to study drug resistance mechanisms, evaluate novel therapeutic compounds, and investigate cellular responses to DNA-damaging agents.
Additionally, the L1210 cell line serves as a model to understand the immune response to leukemia, providing insights into how leukemia cells interact with the host's immune system. This includes studies on tumor immunology, cytokine production, and the efficacy of immunotherapeutic approaches. Overall, the L1210 cell line remains a critical resource in leukemia research, contributing to the advancement of cancer biology and therapeutic development.

Tissue	Hematopoietic
Disease	Leukemia

Synonyms

- L 1210
- L-1210
- Leukemic 1210
- Leukemia 1210
- Leukemia L1210

CLASSIFICATION

Organism	Mouse
Sex	Female
Growth properties	Suspension
Biosafety level	1

CHARACTERISTICS

Cell type	Lymphoblast
Tumourigenic	Yes, in nude mice and DBA mouse
Doubling time	10 to 12 hours

IDENTIFIERS

Citation

L1210 (Cytion catalog number 400257)

NCBI TaxID	10090

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Cellosaurus	CVCL_0382

EXPRESSION AND SUSCEPTIBILITY

Viruses

MAP-test negative: Sendai, Ektromelie, Polyoma, K-Virus, Kilham, Reo 3, PVM, LCM, M.pulmonis, MVM, Theiler's GD VII, Toolan's H-1, MHV, LDV, RCV/SDA, M-Adenovirus, B.piliformis.

HANDLING AND CULTURE

Culture medium

DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 10% horse serum

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	0.3 to 1 x 10^6 cells/ml
Fluid renewal	Every 3 to 4 days
Post-thaw recovery	Fast

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

Breed / subspecies	DBA/2
Donor age	8 months

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.

Disclaimer

Our cells are provided for in vitro laboratory research purposes exclusively and are not intended for clinical or diagnostic use, nor are they to be administered to humans or used for veterinary purposes. Users must adhere to all applicable guidelines and regulations for the handling and use of these cells in a research setting.

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