Product sheet

L1210 Cells | 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.
Organism	Mouse
Tissue	Hematopoietic
Disease	Leukemia
Synonyms	L 1210, L-1210, Leukemic 1210, Leukemia 1210, Leukemia L1210

Characteristics

Breed/Subspecies	DBA/2
Age	8 months
Gender	Female
Cell type	Lymphoblast
Growth properties	Suspension

Regulatory Data

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Citation	L1210 (Cytion catalog number 400257)
Biosafety level	1
NCBI_TaxID	10090
CellosaurusAccession	CVCL_0382

Biomolecular Data

Tumorigenic	Yes, in nude mice and DBA mouse
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

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)
Supplements	Supplement the medium with 10% horse serum
Doubling time	10 to 12 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.
Seeding density	0.3 to 1 x 10^6 cells/ml
Fluid renewal	Every 3 to 4 days
Post-Thaw Recovery	Fast
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.
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.