Product sheet

WEHI-3B Cells | 400376

General information

Description	The WEHI-3B cell line is a murine leukemia cell line that is extensively utilized as a model for studying myelomonocytic differentiation and the pathophysiology of leukemia. Originally derived from BALB/c mice, these cells exhibit characteristics of myeloid progenitor cells and have been instrumental in the research of hematopoietic differentiation and regulation. The WEHI-3B line is particularly important for studies related to the influence of growth factors on leukemic cells and has been used to evaluate the hematopoietic activity of various substances including colony-stimulating factors. This cell line is not only significant for its use in leukemia research but also serves as a tool in the study of macrophage and granulocyte function, thanks to its ability to differentiate into these cell types under certain experimental conditions. Studies using WEHI-3B cells have contributed to a better understanding of the molecular pathways involved in cell differentiation and the impact of genetic alterations on leukemia progression. Furthermore, the WEHI-3B cell line is used in testing the biological activity of monocytic colony-stimulating factor (M-CSF) and granulocyte-macrophage colony-stimulating factor (GM-CSF), highlighting its versatility and utility in hematological research contexts.
Organism	Mouse
Tissue	Peripheral blood
Disease	Leukemia
Synonyms	WEHI-3b, Wehi-3B, WEHI 3B, WEHI3B

Characteristics

Breed/Subspecies	BALB/c
Cell type	Myelomonocyte
Growth properties	Suspension

Regulatory Data

Citation	WEHI-3B (Cytion catalog number 400376)
Biosafety level	2
NCBI_TaxID	10090

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CellosaurusAccession	CVCL_2239

Biomolecular Data

Receptors expressed	Immunoglobulin (Fc), complement (C3)
Viruses	Ectromelia virus (mousepox) negative
Products	Lysozyme, granulocyte colony stimulating activity (G-CSA), interleukin-3 (interleukin 3, IL-3)

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
Subculturing	Cultures can be maintained by addition or replacement of fresh medium. Start cultures at 5 x 10^5 cells/ml and maintain between 3 x 10^5 and 1x10^6 cells/ml. Adherent cells can be recovered by scraping.
Seeding density	1 x 10^5 cells/ml
Fluid renewal	2 to 3 times per week
Post-Thaw Recovery	After thawing, allow the cells to recover from the freezing process for at least 24 hours.
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.