**Product sheet**

# WEHI-3B Cells | 400376

## General information

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| **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.<br><br>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

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

## Regulatory Data

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

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| **CellosaurusAccession** | CVCL_2239 |

## Biomolecular Data

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| **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

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| **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 1x$10^6$ 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. |

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| **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.<br>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.<br>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.<br>4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.<br>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.<br>6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.<br>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.<br>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

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| **Sterility** | Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods.<br><br>To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections. |