# Product sheet

## WEHI-3 Cells | 400381

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| **Description** | The WEHI-3 cell line is a murine leukemia cell line, specifically derived from the BALB/c strain. It was originally established from a spontaneous myelomonocytic leukemia found in a mouse. This cell line is extensively used as a model to study myeloid differentiation and the immune response, particularly the mechanisms underlying leukemia progression and the response of leukemic cells to various treatments. WEHI-3 cells are capable of producing interleukin-3 (IL-3) and are often used in research as a source of this cytokine.<br><br>In laboratory settings, WEHI-3 cells have been employed to assess the differentiation potential of various compounds and the biological activities that modulate the hematopoietic system. These cells have proven instrumental in understanding how alterations in gene expression affect myeloid cells, serving as a critical tool in the development of therapeutic strategies against myeloid leukemias. The cell line is also used in vivo to establish murine models of disease through transplantation into susceptible mouse strains, enabling studies of tumor progression and the efficacy of anti-cancer agents. |
| **Organism** | Mouse |
| **Tissue** | Peripheral blood |
| **Disease** | Leukemia |
| **Synonyms** | WEHI 3, WEHI3, Wehi-3 |

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| **Breed/Subspecies** | BALB/c |
| **Morphology** | Macrophage-like |
| **Cell type** | Myelomonocyte |
| **Growth properties** | Suspension |

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| **Citation** | WEHI-3 (Cytion catalog number 400381) |
| **Biosafety level** | 2 |
| **NCBI_TaxID** | 10090 |

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| **CellosaurusAccession** | CVCL_3622 |

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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) |

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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. |
| **Fluid renewal** | 2 to 3 times per week |
| **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.

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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. |