# HPB-ALL

302895

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HPB-ALL is a human precursor T-cell acute lymphoblastic leukemia (T-ALL) cell line established from the peripheral blood of a 14-year-old Japanese male patient. The line grows in suspension with lymphocyte-like morphology. HPB-ALL harbors a complex TP53 mutational profile with eight mutations across heterozygous and homozygous states, reflecting the genetic complexity of T-ALL at diagnosis. The line expresses T cell surface markers consistent with T-ALL biology, making it relevant for studies of T lymphoblast leukemia pathogenesis and drug responses.
HPB-ALL is applicable in studies of T-ALL biology, TP53 multi-mutant phenotype, anti-leukemic drug sensitivity (glucocorticoids, vincristine, asparaginase, nelarabine), Notch and JAK-STAT pathway analysis, and comparative studies within the T-ALL cell line panel. It is suitable for in vitro pharmacological assays and xenograft models in immunocompromised hosts for preclinical T-ALL drug evaluation. Doubling time approximately 50 hours.

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| □□ | Peripheral blood |
| □□ | Precursor T-cell acute lymphoblastic leukemia |
| □□ □□ | Peripheral blood (systemic T-ALL) |

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T-ALL biology; TP53 multi-mutant phenotype; anti-leukemic drug sensitivity (glucocorticoids, vincristine, asparaginase, nelarabine); Notch/JAK-STAT pathways; xenograft models; T-ALL panel comparative studies

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- HPB/ALL
- HPBALL
- FCCH1018

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| □□□ | Lymphoblast-like |
| □□ □□ | T-cell |
| □□ □□ | ~50 hours |

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HPB-ALL (Cytion catalog number 302895)

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| **NCBI** □□ □□□□ | 9606 |

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| □□□□□□ | CVCL_1820 |

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Mutation: p.Arg465His, Unspecified; Mutation: p.Ala134Ser, Unspecified; Mutation: p.Leu1574Pro, Heterozygous; Mutation: p.Asp2442fs*39, Heterozygous; Mutation: p.Arg159Ser, Unspecified; Mutation: p.Cys124Ter, Homozygous; Mutation: p.Arg273Cys, Unspecified; Mutation: p.Ser121Ter, Unspecified

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RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)

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Supplement the medium with 10% FBS

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| □□ □□ | dilution |

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Dilute the culture to 2–5 × $10^5$ cells/ml with fresh pre-warmed complete medium twice per week. No enzymatic dissociation required.

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| □□ □□ | 1 : 10 split |
| □□ □□ | 3-5*10^5/ml |
| □□ □□ | Subculture : 2 times/week |

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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 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium.
Follow the procedure described under Post-Thaw Recovery

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| □□□ □□ | As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability. |

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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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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.

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| □□□ □□ | 14 years |
| □□ | Japanese |

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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.

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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.

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