# Human Acute Lymphoblastic Leukemia Cell Line, #CCRF-CEM

*SKU: CDS10041 | Category: Cell Lines — Cancer Cell Lines*

**Validation & Biomarker Data Guide · Lineage classification: Leukemia / lymphoma cell line**

## 1. Product Overview

Human Acute Lymphoblastic Leukemia Cell Line, #CCRF-CEM is an established tumor-derived cell line for in vitro oncology research. It is suitable for studies of tumor cell biology, proliferation and viability, signaling, biomarkers, drug response, cytotoxicity and cell-based assay development. The model can be incorporated into screening and mechanistic workflows under validated culture conditions. For research use only.

Primary tissue / source: Lymph | Growth type: Suspension Cells | Tumorigenic status: Tumor Cells | Pack size: 1 x 1 million cells

## 2. Typical Applications

- 1. Cancer Biology Research
- Mechanistic Studies
- Gene Function Studies
- Signal Transduction
- 2. Drug Discovery and Development
- Screening of Anticancer Compounds
- IC50/EC50 Studies
- Mechanism of Action
- Combination Therapies
- 3. Assay Development
- ELISA and Immunoassays
- Flow Cytometry Assays

## 3. Identity & Phenotypic Marker Panel

A representative identity panel for leukemia / lymphoma cell line products is shown below. Actual per-lot Certificates of Analysis should be consulted for verified identity data.

| Marker | Expected Result | Range |
|---|---|---|
| **CD45** | Positive | 85–99% positive |

| Marker | Expected Result | Range |
|---|---|---|
| **Lineage marker (CD3/CD19/CD33, line-dependent)** | Positive | 50–95% positive |
| **Pan-cytokeratin** | Negative / low | ≤5% (background) |

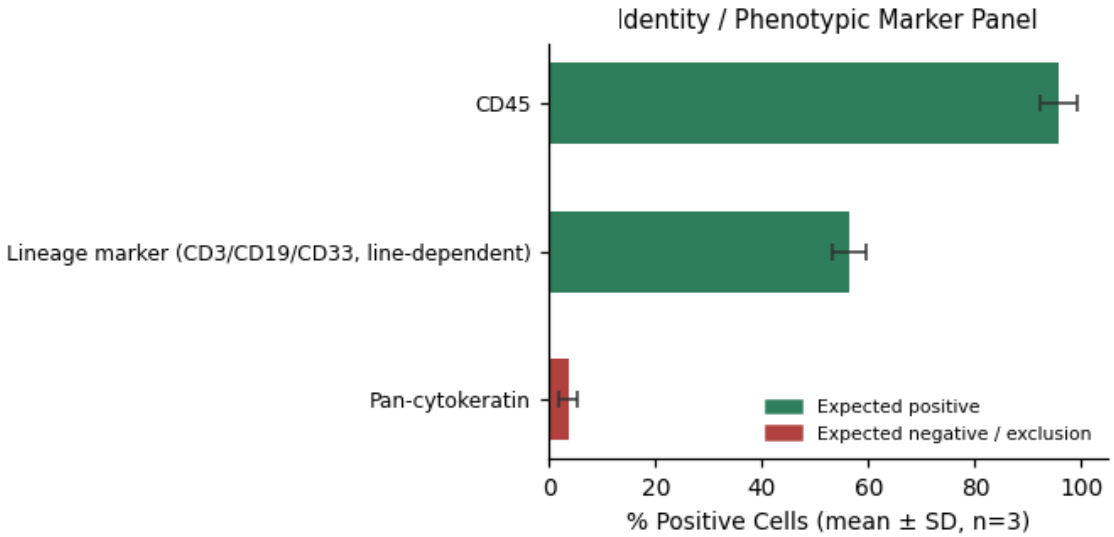



*Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).*

## 4. Growth Kinetics & Viability

Growth and viability trends over 120 hours in standard culture conditions.

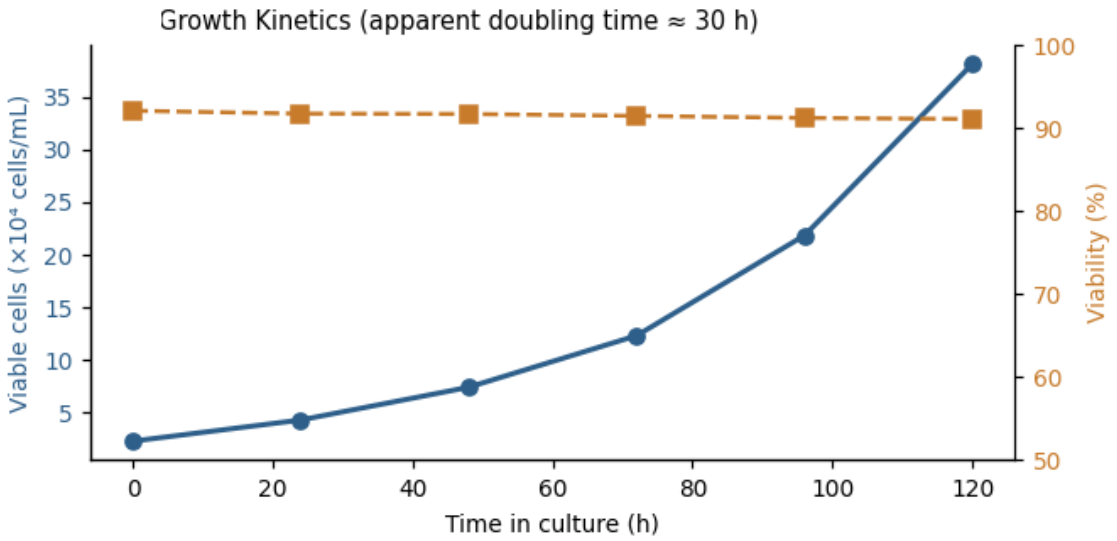



*Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).*

## 5. Functional Validation Assay

**Proliferation / drug-sensitivity assay:** MTT/CellTiter-Glo or trypan-blue growth assay with a reference chemotherapeutic (e.g. doxorubicin) to generate an IC50 curve.

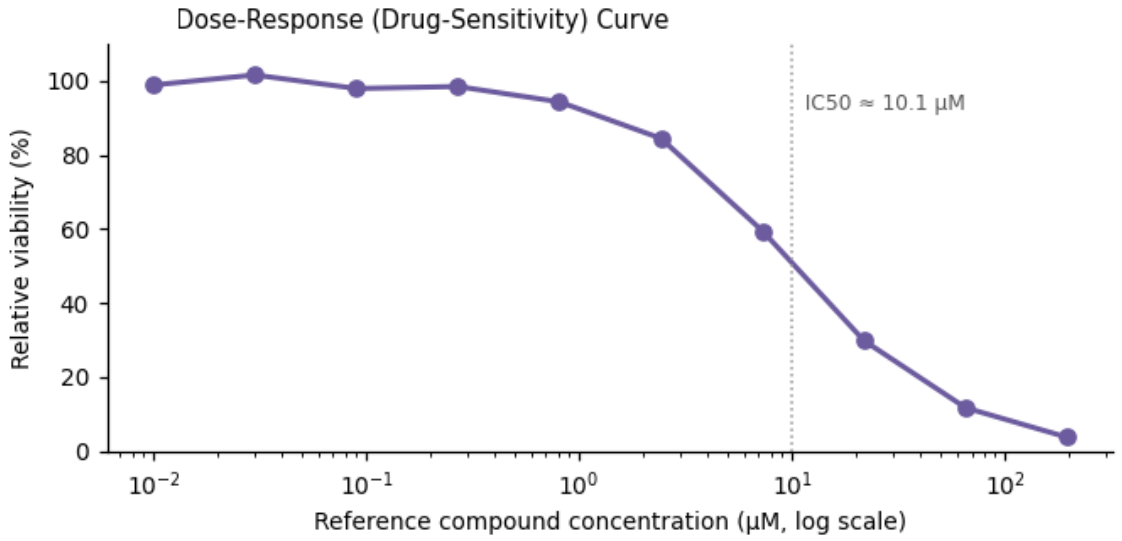



*Figure 3. Functional assay readout — IC50 ≈ 10.1 µM.*

## 6. QC Acceptance Criteria

| Acceptance Criterion | Result |
|---|---|
| **Authenticated by STR profiling** | PASS |
| **≥85% CD45+ by flow cytometry** | PASS |
| **IC50 within historical reference range for line** | PASS |
| **Apparent population doubling time** | ≈ 30 hours |
| **Functional assay outcome** | IC50 ≈ 10.1 µM |

## 7. Handling & Culture Notes

- Refer to the product-specific Certificate of Analysis and datasheet for validated culture medium, seeding density, and passaging recommendations.
- As with any primary cell or cell line, confirm mycoplasma-negative status, expected morphology by phase-contrast microscopy, and viability by trypan blue or equivalent dye-exclusion assay at each passage before use in downstream assays.