Human Acute T-Cell Leukemia Cell Line, #J.GAMMA1

SKU: CDS10114 | Category: Cell Lines — Cancer Cell Lines

Validation & Biomarker Data Guide · Lineage classification: T lymphocyte

1. Product Overview

Human Acute T-Cell Leukemia Cell Line, #J.GAMMA1 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: T-Cell | Growth type: Adherent 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 t lymphocyte products is shown below. Actual per-lot Certificates of Analysis should be consulted for verified identity data.

Marker	Expected Result	Range
CD3	Positive	85–98% positive

Marker	Expected Result	Range
CD2	Positive	80–97% positive
TCR-αβ	Positive	75–95% positive
CD19	Negative / low	≤5% (background)
CD14	Negative / low	≤4% (background)

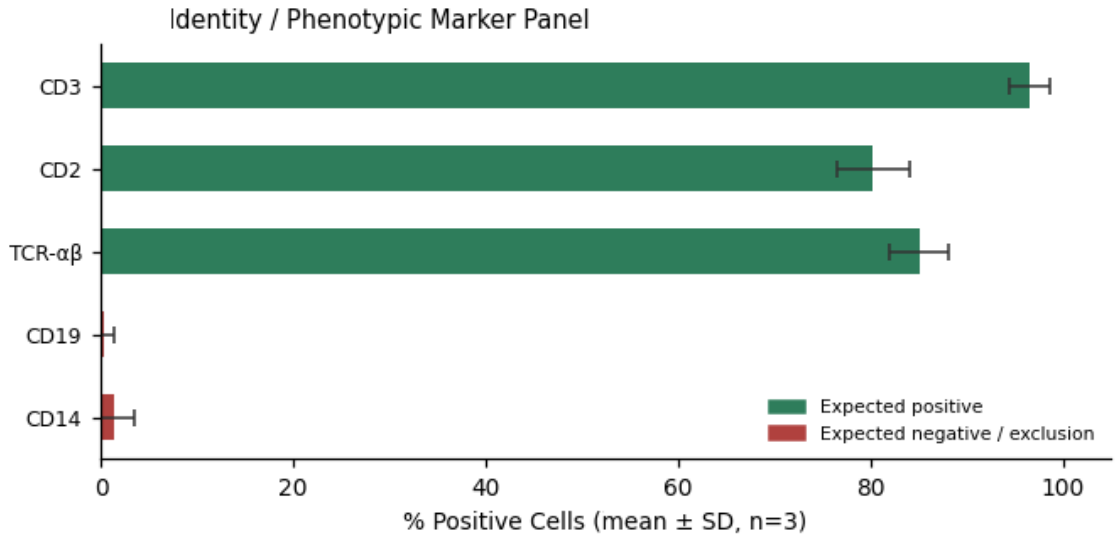


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

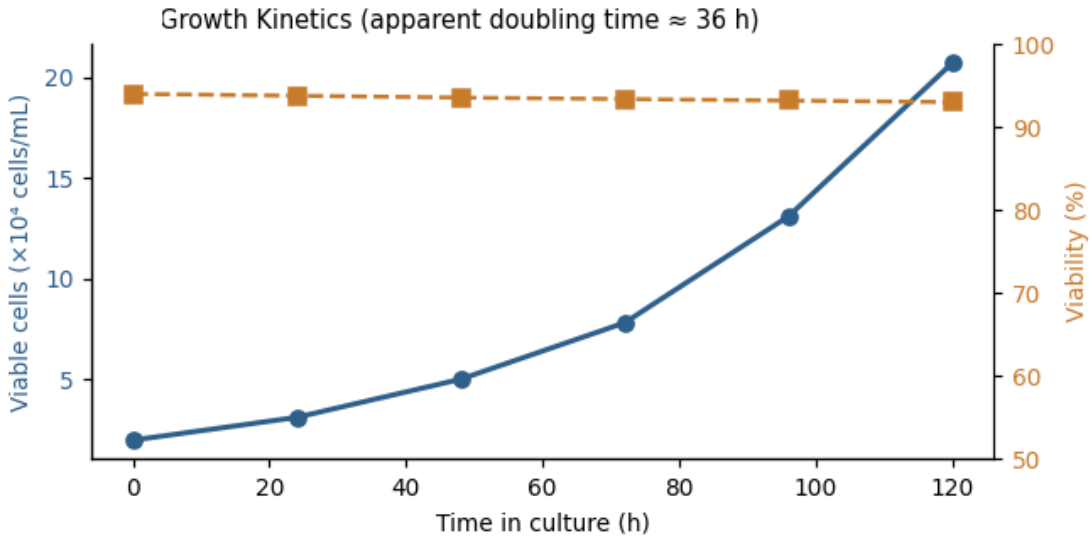


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

T-cell activation / proliferation assay: Anti-CD3/CD28 bead or PHA stimulation followed by CFSE dilution or 3H-thymidine incorporation to confirm proliferative competence, with IFN-γ/IL-2 secretion measured by ELISA.

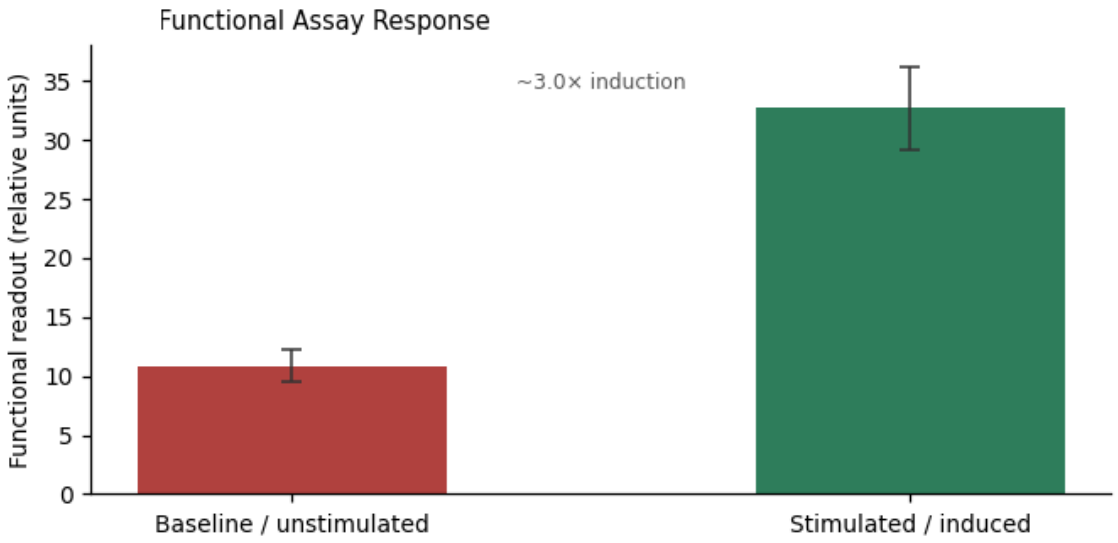


Figure 3. Functional assay readout — ~3.0× induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
≥85% CD3+ by flow cytometry	PASS
≥70% viability on thaw (trypan blue / 7-AAD)	PASS
Negative for mycoplasma by PCR	PASS
STR profile matches reference donor/line record	PASS
Apparent population doubling time	≈ 36 hours
Functional assay outcome	~3.0× induction over baseline

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.