Human Small-Cell Lung Cancer Cell Line, #NCI-H82

SKU: CDS10343 | Category: Cell Lines — Cancer Cell Lines

Validation & Biomarker Data Guide · Lineage classification: Lung carcinoma cell line

1. Product Overview

Human Small-Cell Lung Cancer Cell Line, #NCI-H82 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: Small- Lung | 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 lung carcinoma cell line products is shown below. Actual per-lot Certificates of Analysis should be consulted for verified identity data.

Marker	Expected Result	Range
TTF-1	Positive	40–80% positive

Marker	Expected Result	Range
Pan-cytokeratin	Positive	80–98% positive
CK7	Positive	45–85% positive
Vimentin	Negative / low	≤30% (background)

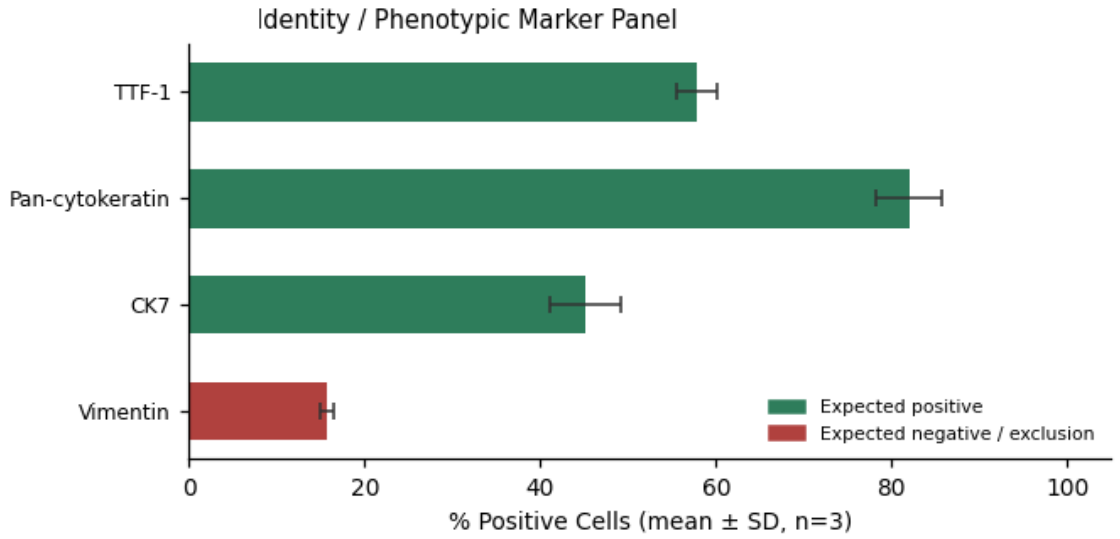


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

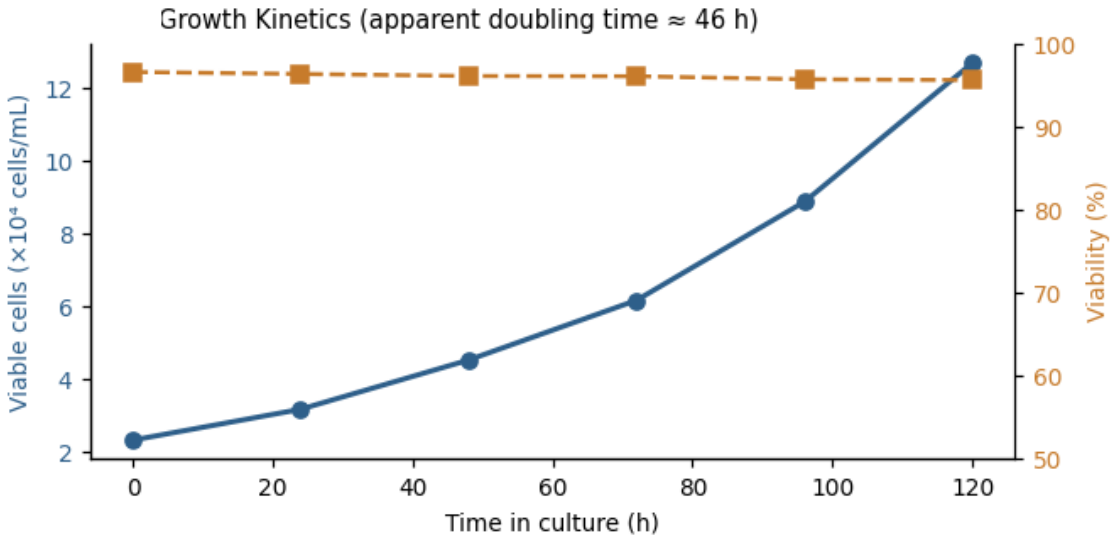


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Proliferation / drug-sensitivity assay: MTT/CellTiter-Glo viability assay across a reference cytotoxic compound (e.g. cisplatin) dose range to generate an IC50 curve confirming assay-ready drug responsiveness.

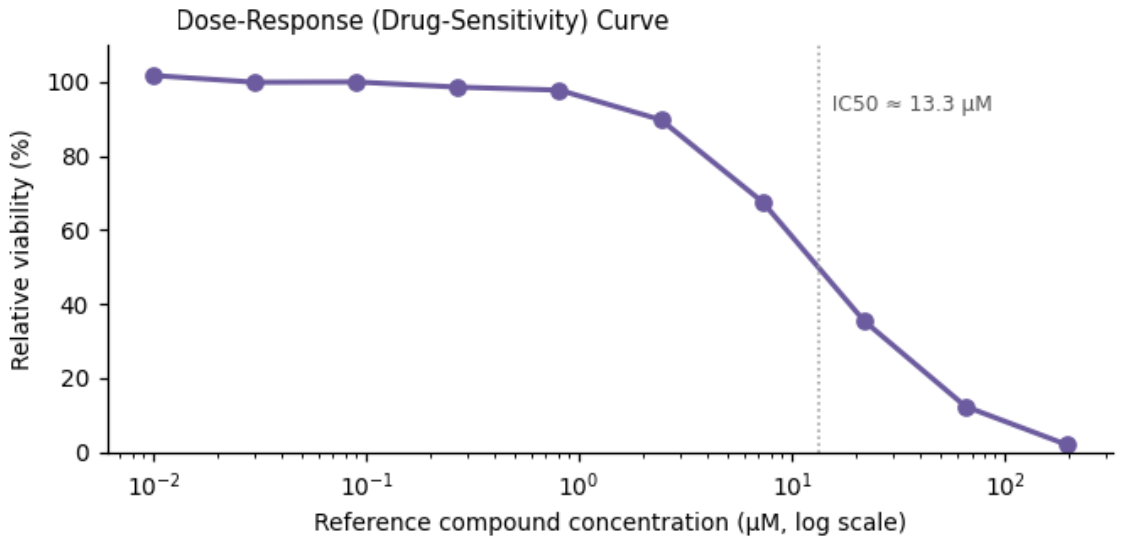


Figure 3. Functional assay readout — IC50 ≈ 13.3 µM.

6. QC Acceptance Criteria

Acceptance Criterion	Result
Authenticated by STR profiling	PASS
≥70% pan-cytokeratin+ by ICC	PASS
IC50 within historical reference range for line	PASS
Apparent population doubling time	≈ 46 hours
Functional assay outcome	IC50 ≈ 13.3 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.