

# Human Lung Squamous Cancer Cell Line, #HCC1588

SKU: CDS10413 | Category: Cell Lines — Cancer Cell Lines

**Validation & Biomarker Data Guide** · Lineage classification: Tumor-derived cell line (general)

## 1. Product Overview

Human Lung Squamous Cancer Cell Line, #HCC1588 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: Lung Squamous | 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 tumor-derived cell line (general) products is shown below. Actual per-lot Certificates of Analysis should be consulted for verified identity data.

| Marker                      | Expected Result | Range           |
|-----------------------------|-----------------|-----------------|
| Pan-cytokeratin or Vimentin | Positive        | 60–95% positive |

| Marker                      | Expected Result | Range             |
|-----------------------------|-----------------|-------------------|
| (lineage-dependent)         |                 |                   |
| Ki-67 (proliferation index) | Positive        | 20–60% positive   |
| CD45                        | Negative / low  | ≤10% (background) |

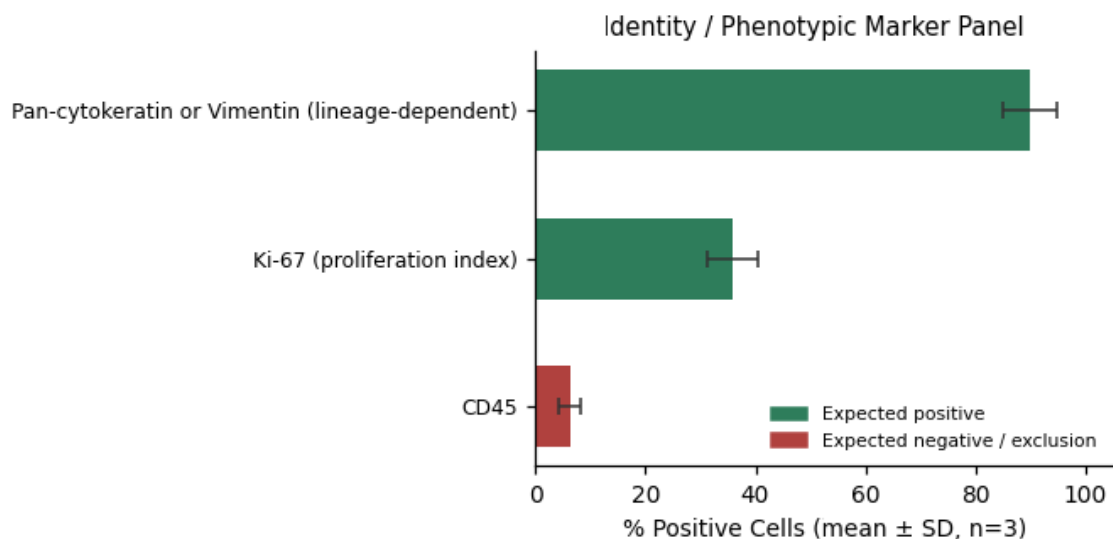


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

#### 4. Growth Kinetics & Viability

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

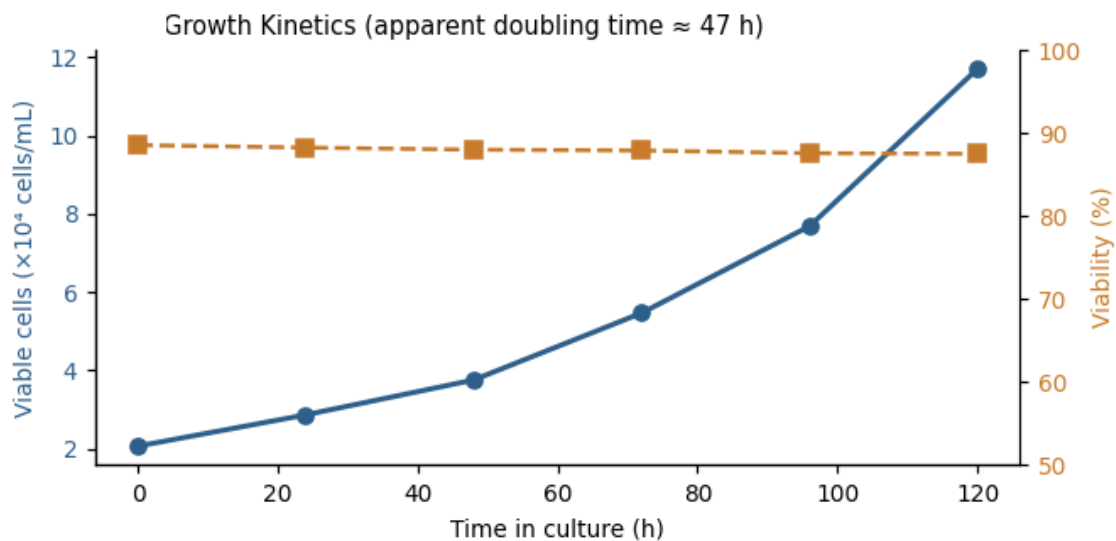


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

## 5. Functional Validation Assay

**Proliferation / drug-sensitivity assay:** MTT/CellTiter-Glo viability assay across a reference cytotoxic compound dose range to generate an IC<sub>50</sub> curve confirming assay-ready drug responsiveness.

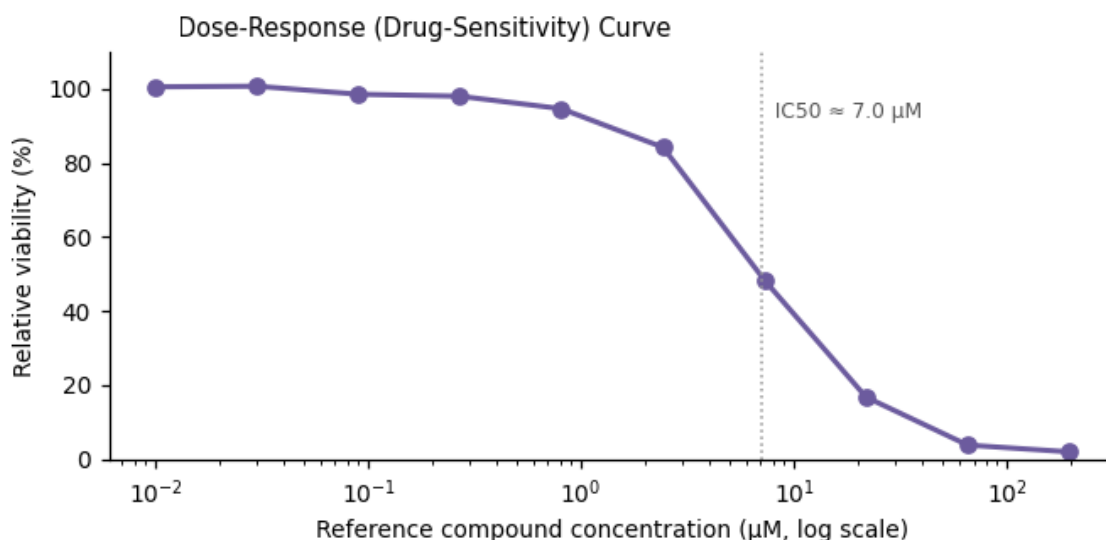


Figure 3. Functional assay readout — IC<sub>50</sub> ≈ 7.0 μM.

## 6. QC Acceptance Criteria

| Acceptance Criterion                                                    | Result                    |
|-------------------------------------------------------------------------|---------------------------|
| Authenticated by STR profiling                                          | PASS                      |
| Morphology consistent with reference image by phase-contrast microscopy | PASS                      |
| IC <sub>50</sub> within historical reference range for line             | PASS                      |
| Apparent population doubling time                                       | ≈ 47 hours                |
| Functional assay outcome                                                | IC <sub>50</sub> ≈ 7.0 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.