

# CAL-148 Human Breast Carcinoma Cell Line

SKU: CDS2338 | Category: Cell Lines — Cancer Cell Lines

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

## 1. Product Overview

CAL-148 Human Breast Carcinoma Cell Line 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.

Growth type: Adherent Cells | Tumorigenic status: Tumor Cells | Pack size: 1 x 1 million cells

## 2. Typical Applications

- Cell-based assay development, pathway and mechanism studies, biomarker characterization, and comparative functional testing consistent with this lineage.

## 3. Identity & Phenotypic Marker Panel

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

| Marker                      | Expected Result | Range             |
|-----------------------------|-----------------|-------------------|
| Pan-cytokeratin             | Positive        | 80–98% positive   |
| E-cadherin                  | Positive        | 55–90% positive   |
| ER/PR/HER2 (line-dependent) | Positive        | 0–90% positive    |
| Vimentin                    | Negative / low  | ≤30% (background) |

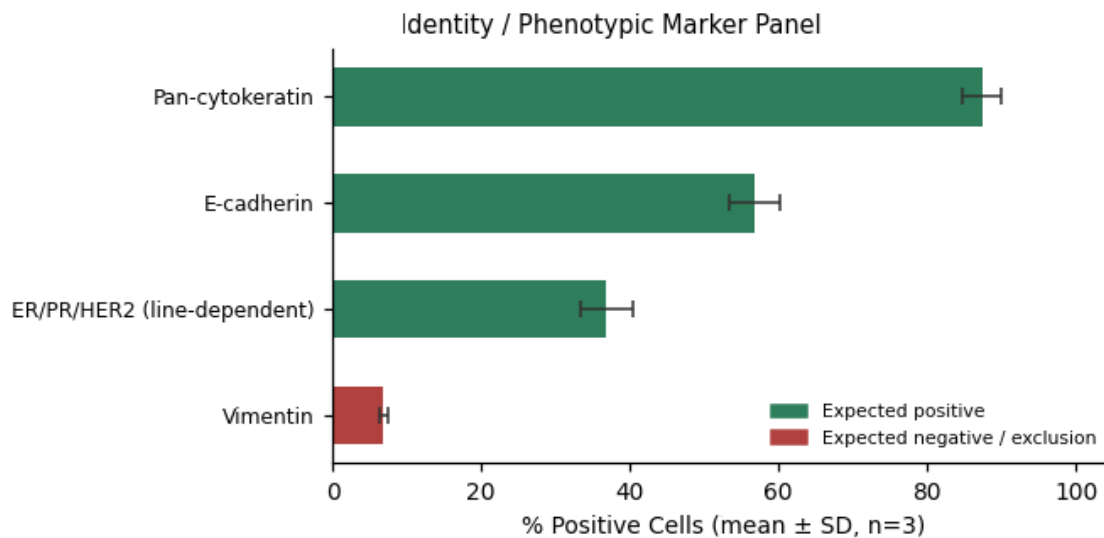


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

#### 4. Growth Kinetics & Viability

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

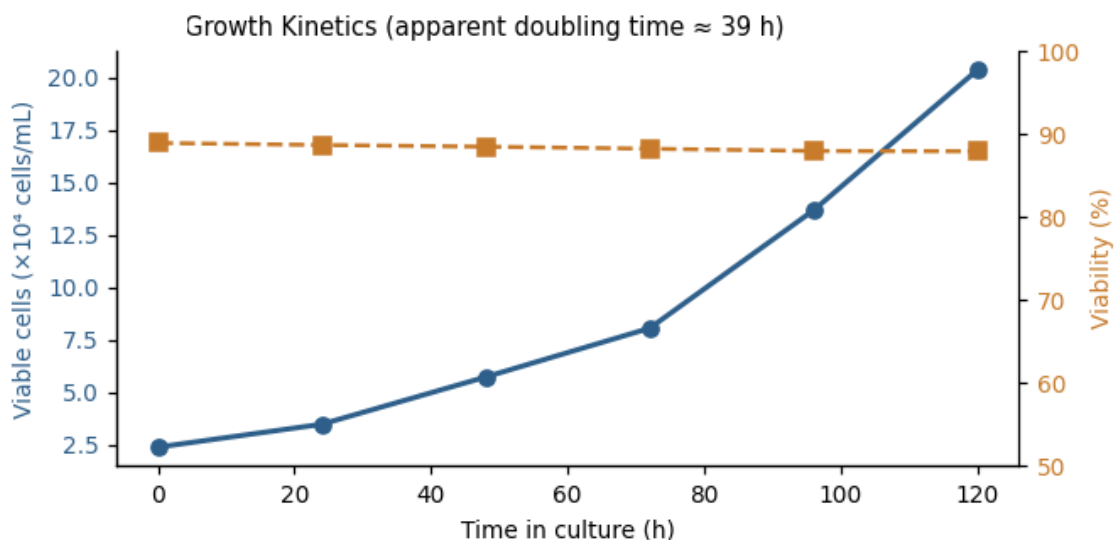


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

#### 5. Functional Validation Assay

**Proliferation / drug-sensitivity assay:** MTT/CellTiter-Glo viability assay with a reference chemotherapeutic (e.g. paclitaxel) or targeted agent to generate a dose-response (IC<sub>50</sub>) curve appropriate to receptor status.

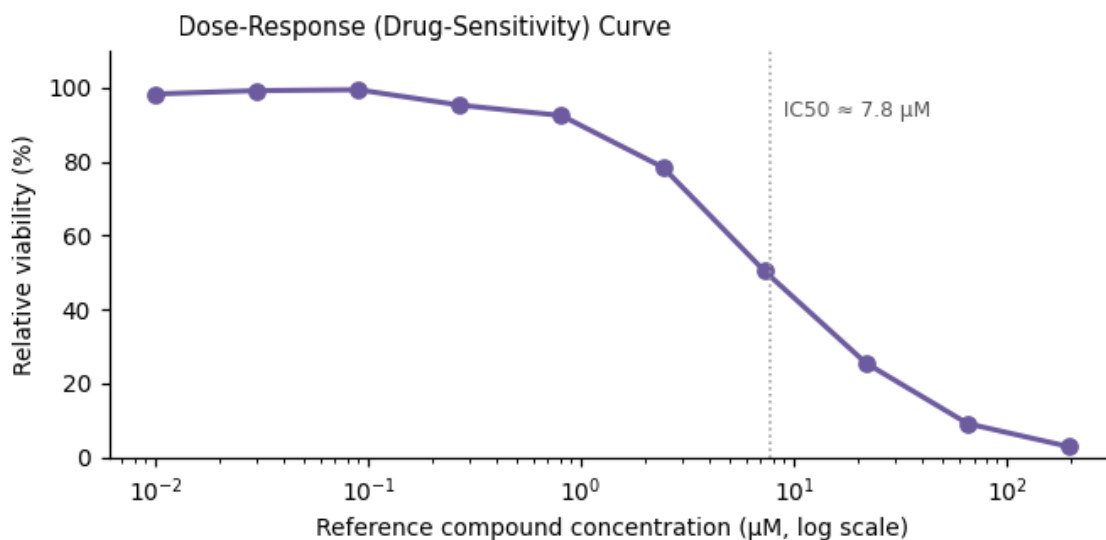


Figure 3. Functional assay readout —  $\text{IC}_{50} \approx 7.8 \mu\text{M}$ .

## 6. QC Acceptance Criteria

| Acceptance Criterion                                              | Result                                   |
|-------------------------------------------------------------------|------------------------------------------|
| Authenticated by STR profiling                                    | PASS                                     |
| Receptor status (ER/PR/HER2) consistent with line reference sheet | PASS                                     |
| $\text{IC}_{50}$ within historical reference range for line       | PASS                                     |
| Apparent population doubling time                                 | $\approx 39$ hours                       |
| Functional assay outcome                                          | $\text{IC}_{50} \approx 7.8 \mu\text{M}$ |

## 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.