GPH1 Guinea Pig Cardiomyocyte

SKU: CDS4090 | Category: Cell Lines — Other Established Cell Lines

Validation & Biomarker Data Guide · Lineage classification: Cardiomyocyte

1. Product Overview

GPH1 Guinea Pig Cardiomyocyte is an established cell line for controlled in vitro research. It can support cell biology, growth and viability studies, signaling and pathway research, drug-response testing, screening and assay development under validated culture conditions. The model provides a reproducible cellular system for basic and translational research. For research use only.

Growth type: Adherent Cells | Tumorigenic status: Normal 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 cardiomyocyte products is shown below. Actual per-lot Certificates of Analysis should be consulted for verified identity data.

Marker	Expected Result	Range
cTnT (cardiac troponin T)	Positive	70–96% positive
α-actinin (sarcomeric)	Positive	65–93% positive
Connexin-43	Positive	55–88% positive
CD31	Negative / low	≤5% (background)

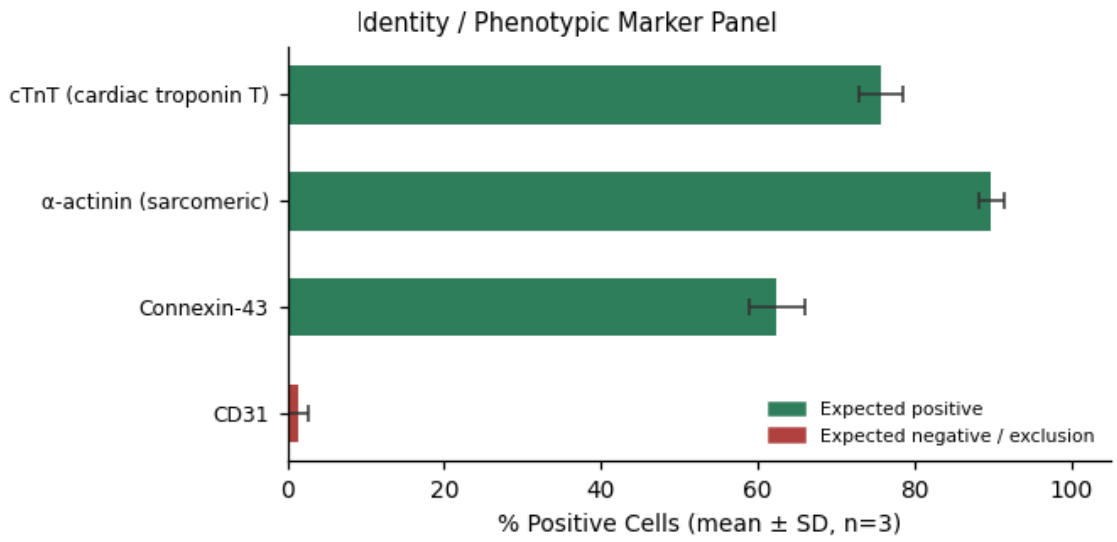

Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

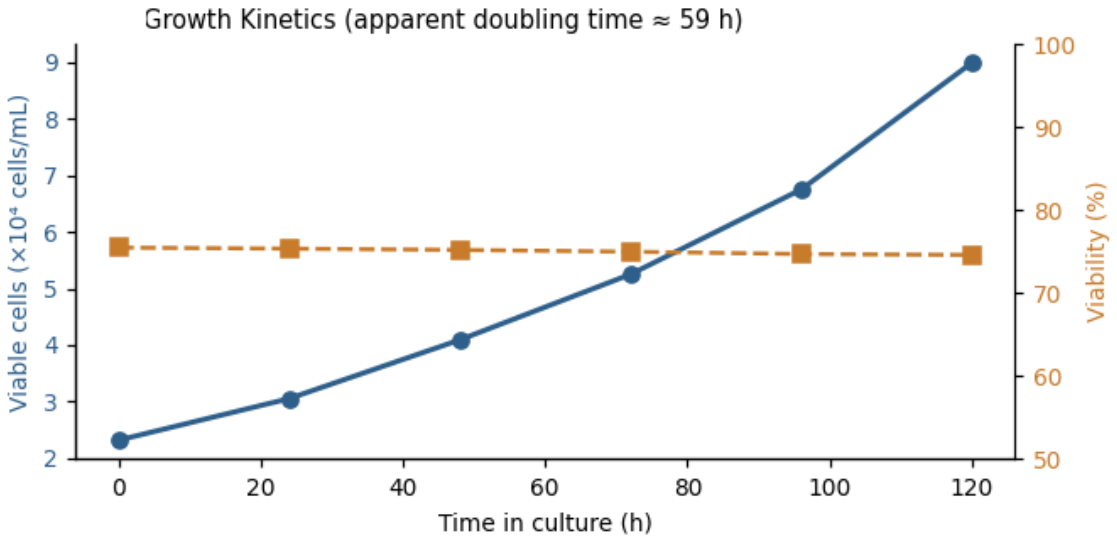

Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Contractility / calcium-transient assay: Video-based beating/contractility analysis and calcium-transient imaging (Fluo-4) to confirm spontaneous rhythmic contraction and excitation-contraction coupling.

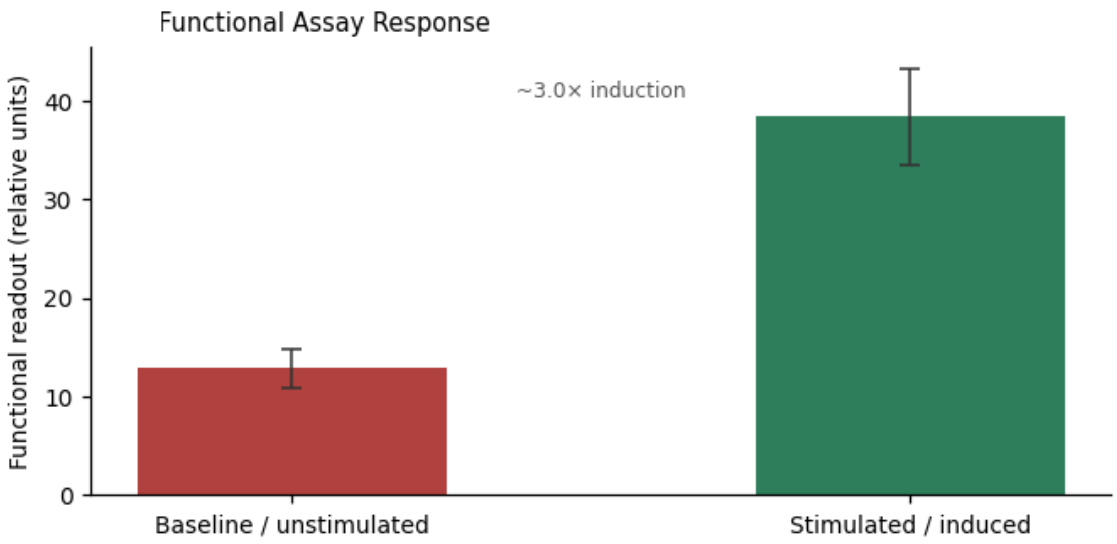

Figure 3. Functional assay readout — ~3.0× induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
≥70% cTnT+ by flow cytometry/ICC	PASS
Spontaneous synchronous beating observed by video microscopy	PASS
Apparent population doubling time	≈ 59 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.