

Primary Rat Mammary Epithelial Cells (MEC)

SKU: CDS11961 | Category: Primary Cells — Rat

Validation & Biomarker Data Guide · Lineage classification: Mammary epithelial cell

1. Product Overview

Primary Rat Mammary Epithelial Cells (MEC) is a primary cell product from rat Mammary gland for physiologically relevant in vitro studies. The product is particularly relevant to Endocrine cell series and Epithelial cells research. It can support research in cell physiology, signaling, metabolism, toxicology, drug response and cell-based assay development where a primary-cell model is preferred. Culture and passage conditions should follow the product-specific protocol. For research use only.

Primary tissue / source: Mammary gland | Growth type: Adherent Cells | Tumorigenic status: Normal Cells
| Pack size: 1 x 0.5 million cells

2. Typical Applications

- Endocrine cell series
- Epithelial cells
- Endocrine system

3. Identity & Phenotypic Marker Panel

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

Marker	Expected Result	Range
Cytokeratin 8/18	Positive	80–97% positive
E-cadherin	Positive	75–96% positive
Vimentin	Negative / low	≤20% (background)
CD45	Negative / low	≤3% (background)

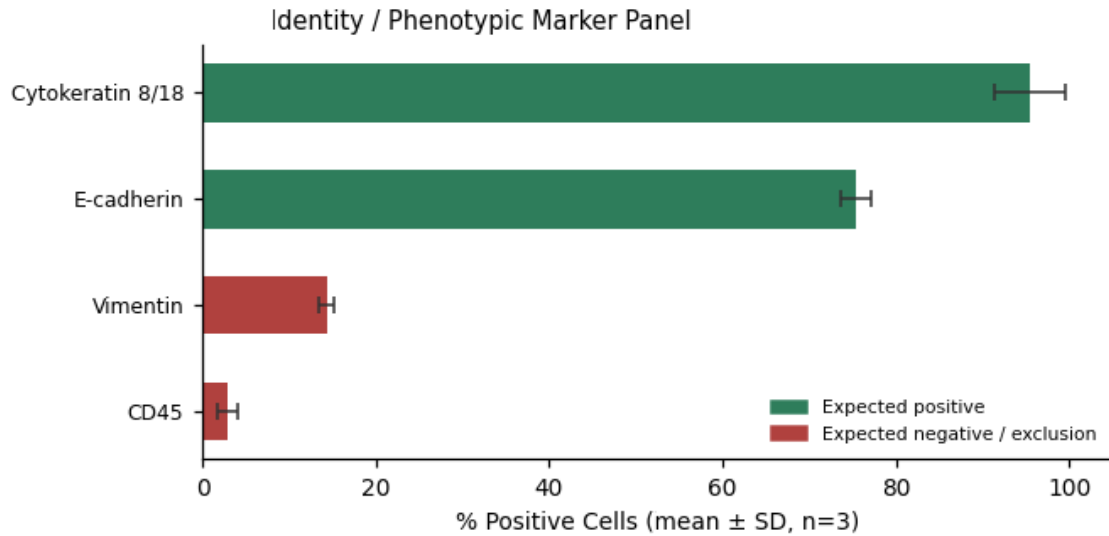


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

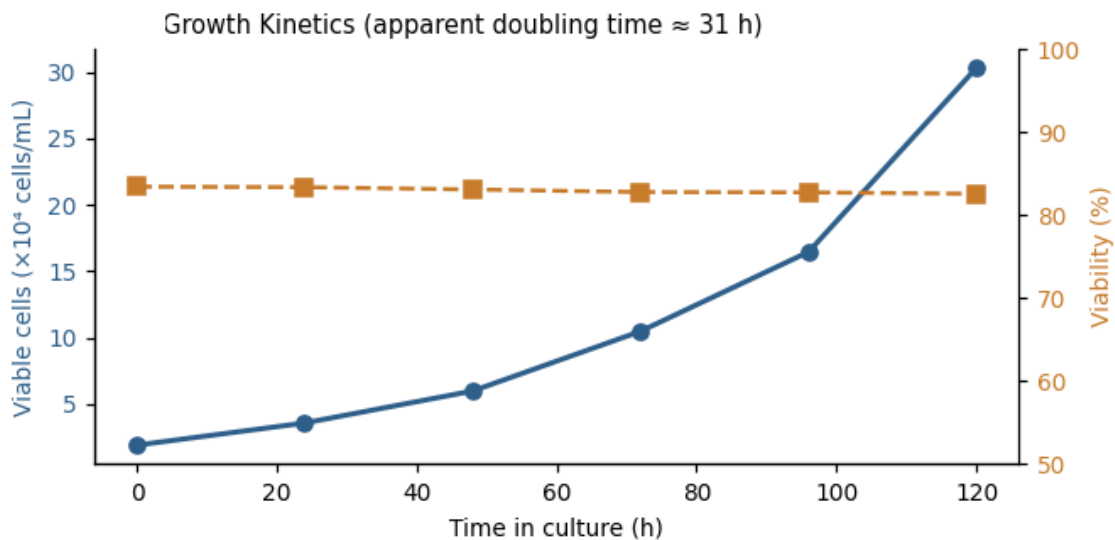


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

3D acinar morphogenesis assay: Matrigel 3D culture assessed for polarized acinar structure formation with lumen clearance, confirming normal epithelial architecture.

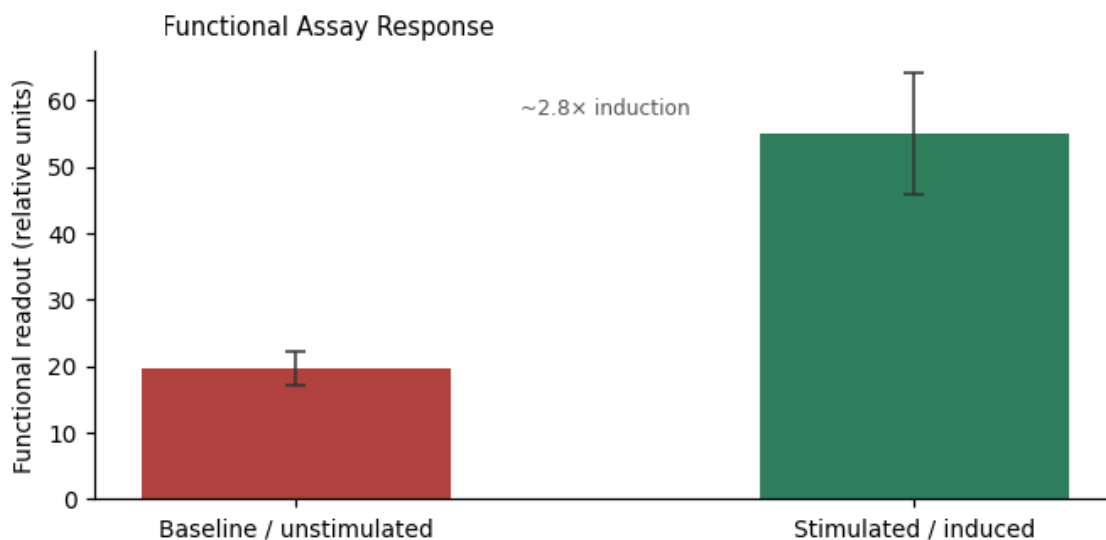


Figure 3. Functional assay readout — ~2.8× induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
≥80% CK8/18+ by ICC	PASS
Polarized acinar structures observed in 3D culture	PASS
Apparent population doubling time	≈ 31 hours
Functional assay outcome	~2.8× 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.