

# Primary Rat Bladder Epithelial Cells (BEC)

SKU: CDS12198 | Category: Primary Cells — Rat

**Validation & Biomarker Data Guide** · Lineage classification: Epithelial cell

## 1. Product Overview

Primary Rat Bladder Epithelial Cells (BEC) is a primary cell product from rat Bladder for physiologically relevant in vitro studies. The product is particularly relevant to Urethral 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: Bladder | Growth type: Adherent Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 0.5 million cells

## 2. Typical Applications

- Urethral cell series
- Epithelial cells
- Urinary system

## 3. Identity & Phenotypic Marker Panel

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

| Marker          | Expected Result | Range             |
|-----------------|-----------------|-------------------|
| Pan-cytokeratin | Positive        | 85–99% positive   |
| E-cadherin      | Positive        | 75–97% positive   |
| EpCAM           | Positive        | 70–95% positive   |
| Vimentin        | Negative / low  | ≤15% (background) |
| CD45            | Negative / low  | ≤3% (background)  |

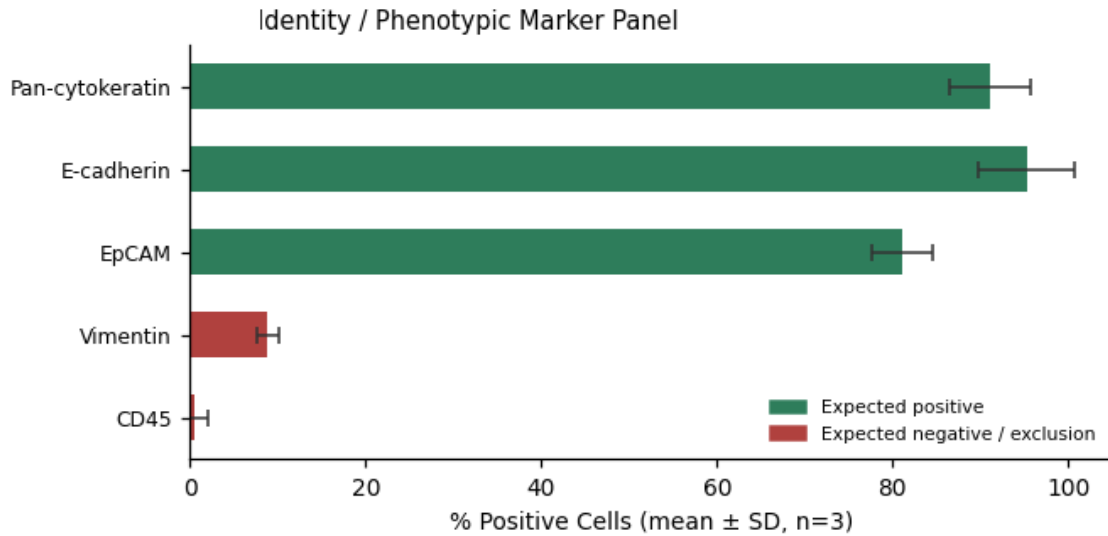


Figure 1. Marker expression profile (mean  $\pm$  SD, n = 3 replicates).

#### 4. Growth Kinetics & Viability

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

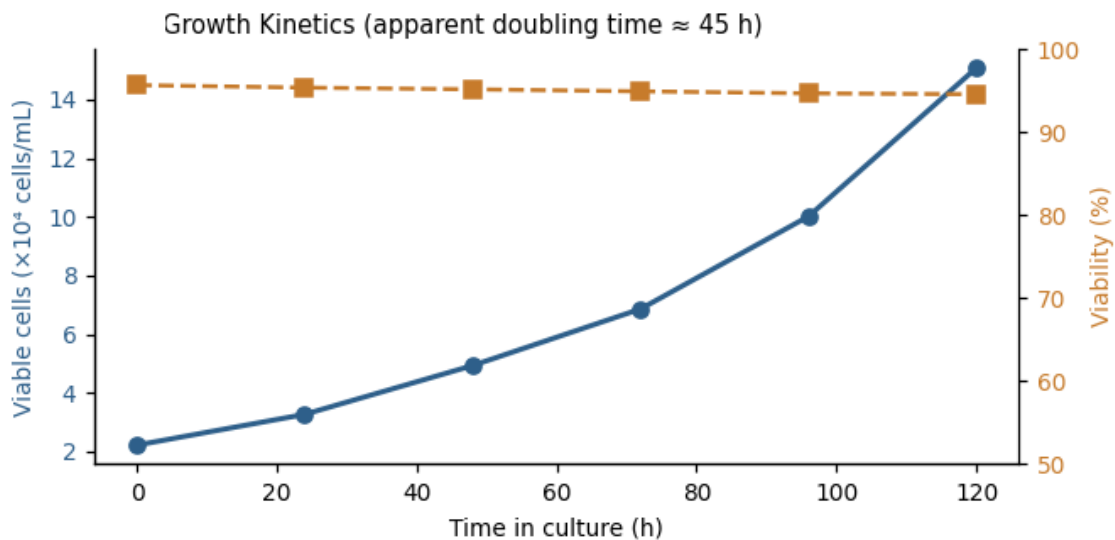


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

#### 5. Functional Validation Assay

**Barrier integrity assay (TEER):** Transepithelial electrical resistance (TEER) measurement across a confluent monolayer on Transwell inserts to confirm tight-junction/barrier formation.

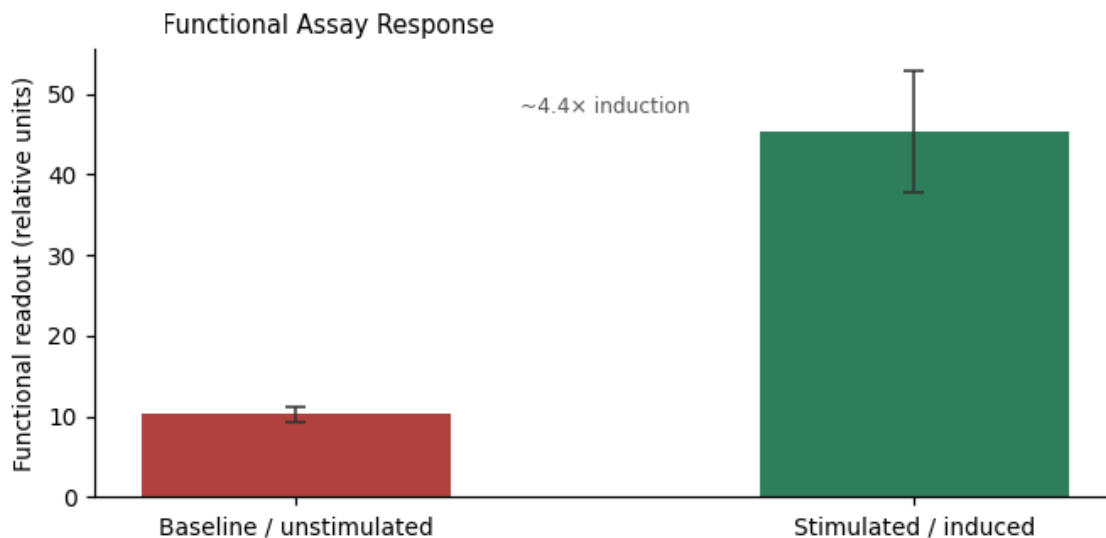


Figure 3. Functional assay readout — ~4.4x induction over baseline.

## 6. QC Acceptance Criteria

| Acceptance Criterion                                       | Result                        |
|------------------------------------------------------------|-------------------------------|
| ≥85% pan-cytokeratin+ by ICC                               | PASS                          |
| TEER value within lineage reference range                  | PASS                          |
| Cobblestone monolayer morphology by phase-contrast imaging | PASS                          |
| Apparent population doubling time                          | ≈ 45 hours                    |
| Functional assay outcome                                   | ~4.4x 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.