Primary Canine Epididymal Smooth Muscle Cells (EpSMC)

SKU: CDS12066 | Category: Primary Cells — Dog

Validation & Biomarker Data Guide · Lineage classification: Smooth muscle cell

1. Product Overview

Primary Canine Epididymal Smooth Muscle Cells (EpSMC) is a primary cell product from canine Epididymis for physiologically relevant in vitro studies. The product is particularly relevant to Male reproductive cell series and Smooth muscle 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: Epididymis | Growth type: Adherent Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 0.5 million cells

2. Typical Applications

- Male reproductive cell series
- Smooth muscle cells
- Reproductive system

3. Identity & Phenotypic Marker Panel

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

Marker	Expected Result	Range
α-Smooth muscle actin	Positive	80–98% positive
Calponin	Positive	70–95% positive
SM22α	Positive	70–93% positive
CD31	Negative / low	≤3% (background)
Pan-cytokeratin	Negative / low	≤4% (background)

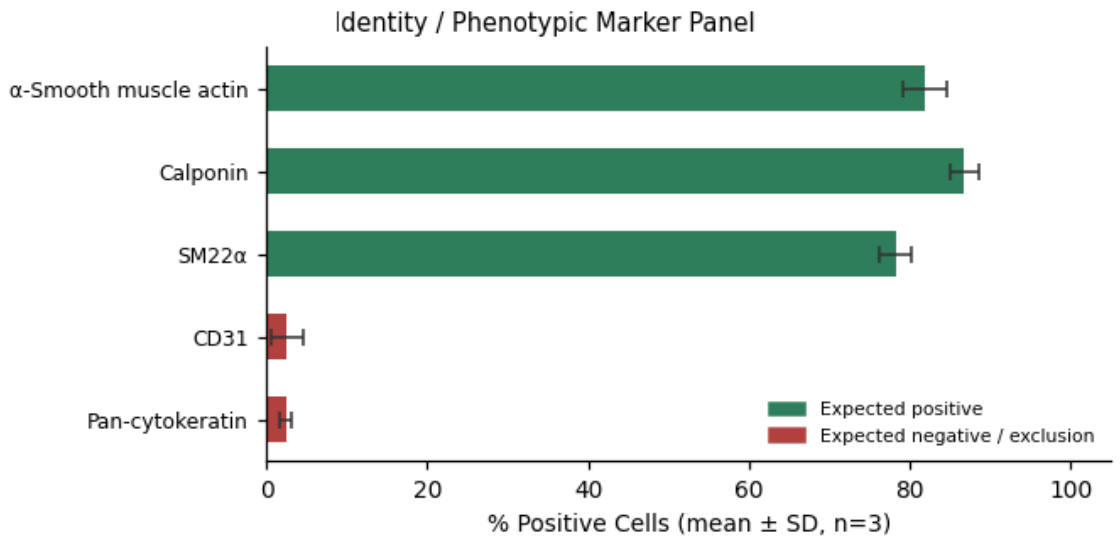


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

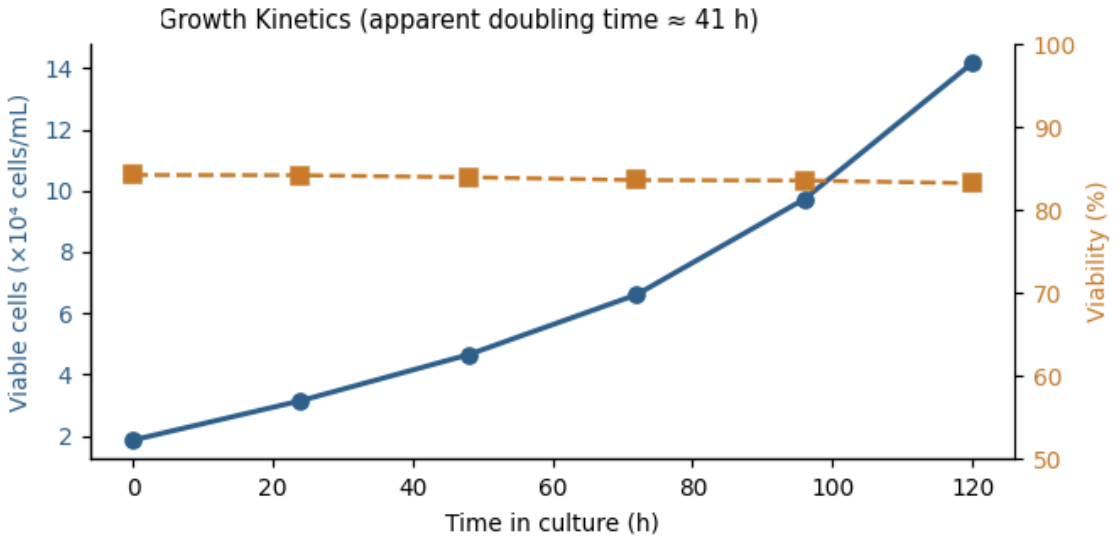


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Contractility assay: Collagen gel or traction-force contraction assay in response to agonist (e.g. carbachol/endothelin-1) to confirm contractile phenotype.

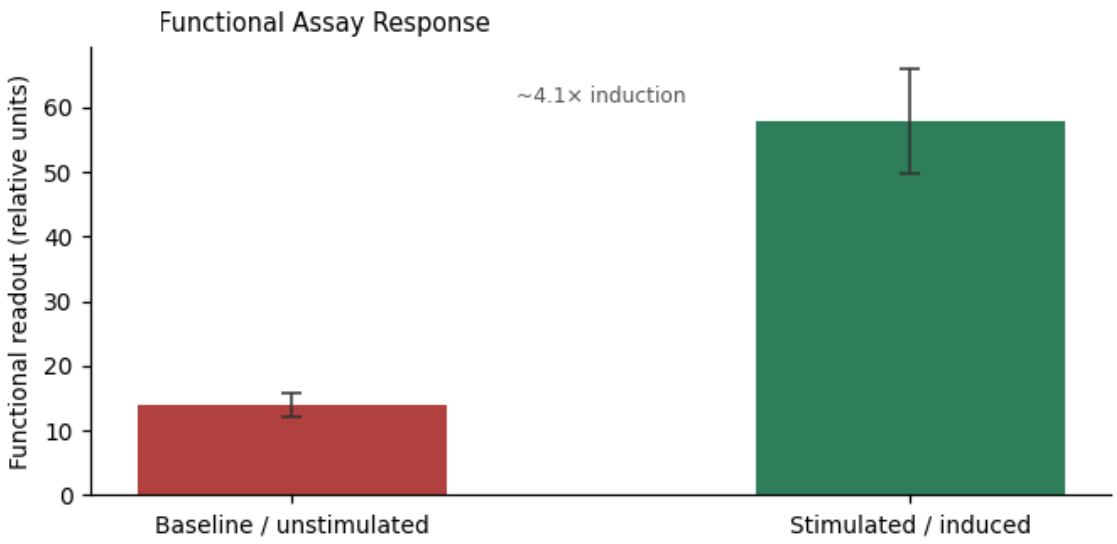


Figure 3. Functional assay readout — ~4.1× induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
≥80% α-SMA+ by ICC	PASS
Demonstrable contractile response to agonist stimulation	PASS
Apparent population doubling time	≈ 41 hours
Functional assay outcome	~4.1× 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.