

Primary Rat Skeletal Muscle Myoblasts (SMM)

SKU: CDS11811 | Category: Primary Cells — Rat

Validation & Biomarker Data Guide · Lineage classification: Skeletal myoblast

1. Product Overview

Primary Rat Skeletal Muscle Myoblasts (SMM) is a primary cell product from rat Skeletal Muscle for physiologically relevant in vitro studies. The product is particularly relevant to Skeletal cell series and Skeletal, articular and cutaneous systems 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: Skeletal Muscle | Growth type: Adherent Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 0.5 million cells

2. Typical Applications

- Skeletal cell series
- Skeletal, articular and cutaneous systems

3. Identity & Phenotypic Marker Panel

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

Marker	Expected Result	Range
Desmin	Positive	80–97% positive
MyoD	Positive	65–92% positive
Pax7	Positive	50–85% positive
CD31	Negative / low	≤3% (background)
Pan-cytokeratin	Negative / low	≤4% (background)

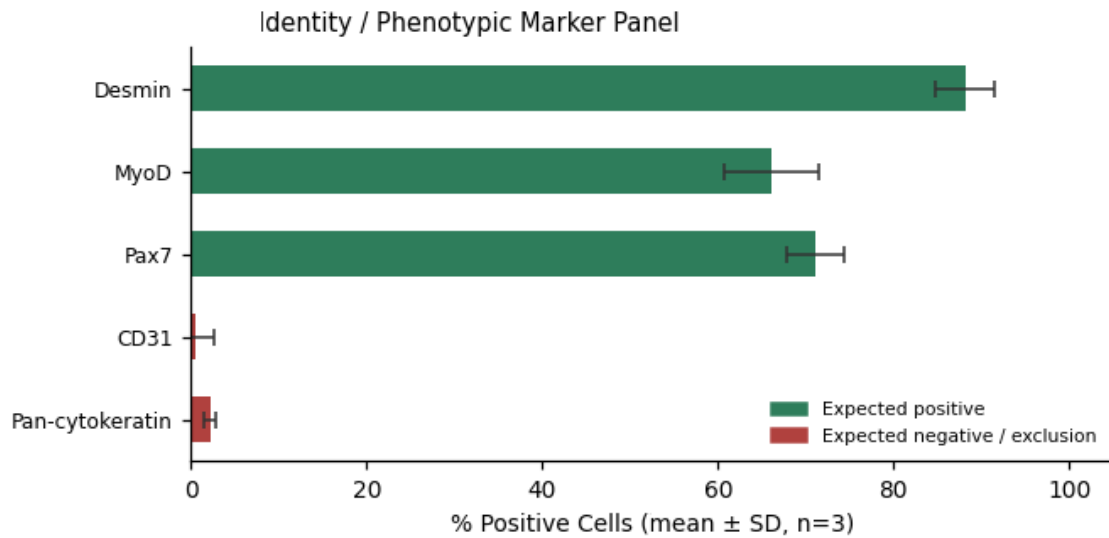


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

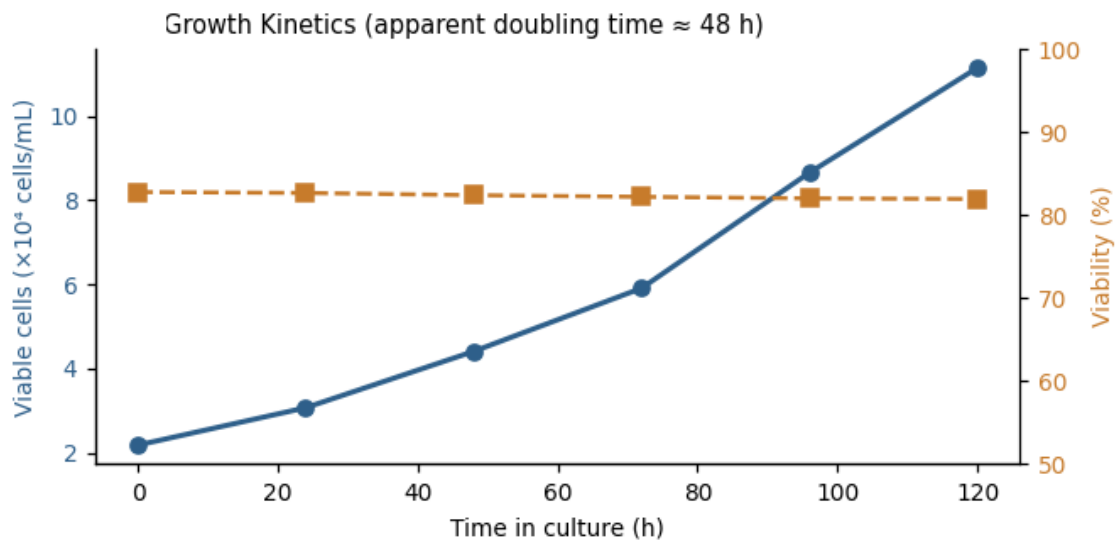


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Myotube fusion assay: Low-serum induction of myoblast fusion into multinucleated myotubes, quantified by fusion index (myosin heavy chain IHC / nuclei count).

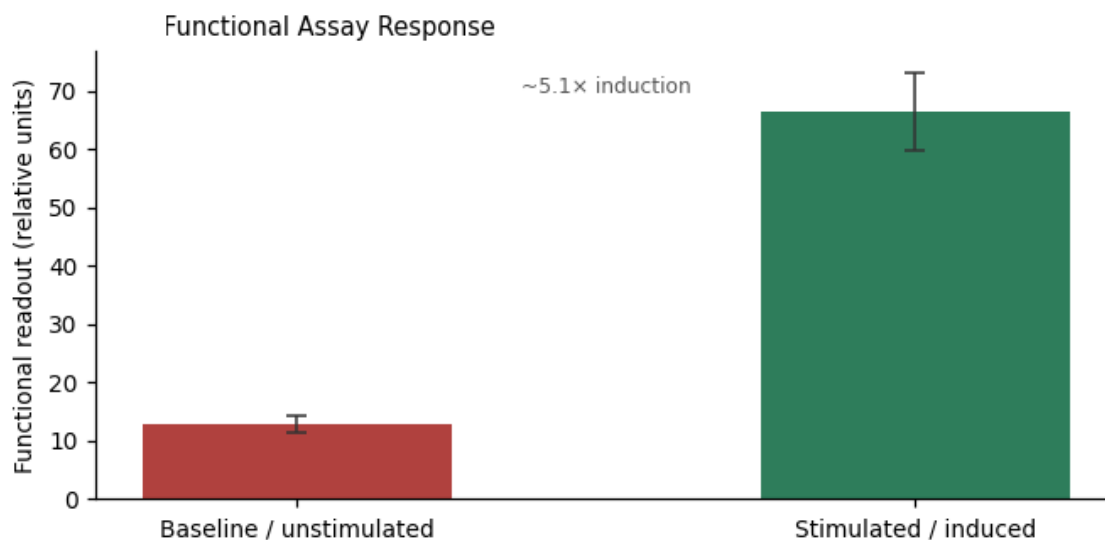


Figure 3. Functional assay readout — ~5.1x induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
≥80% Desmin+ by ICC	PASS
Fusion index ≥40% after differentiation induction	PASS
Apparent population doubling time	≈ 48 hours
Functional assay outcome	~5.1x 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.