Primary Canine Tendon Cells (TC)

SKU: CDS11937 | Category: Primary Cells — Beagle Dog, 1-2 Weeks

Validation & Biomarker Data Guide · Lineage classification: Tendon cell / tenocyte (incl. tendon stem cells)

1. Product Overview

Primary Canine Tendon Cells (TC) is a primary cell product from canine Muscle tendon for physiologically relevant in vitro studies. The product is particularly relevant to Bone metabolism and Skeletal cell series 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: Muscle tendon | Growth type: Adherent Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 0.5 million cells

2. Typical Applications

- Bone metabolism
- Skeletal cell series
- Skeletal, articular and cutaneous systems

3. Identity & Phenotypic Marker Panel

A representative identity panel for tendon cell / tenocyte (incl. tendon stem cells) products is shown below. Actual per-lot Certificates of Analysis should be consulted for verified identity data.

Marker	Expected Result	Range
Scleraxis (SCX)	Positive	55–88% positive
Tenomodulin (TNMD)	Positive	45–82% positive
Collagen I	Positive	70–96% positive
CD31	Negative / low	≤4% (background)

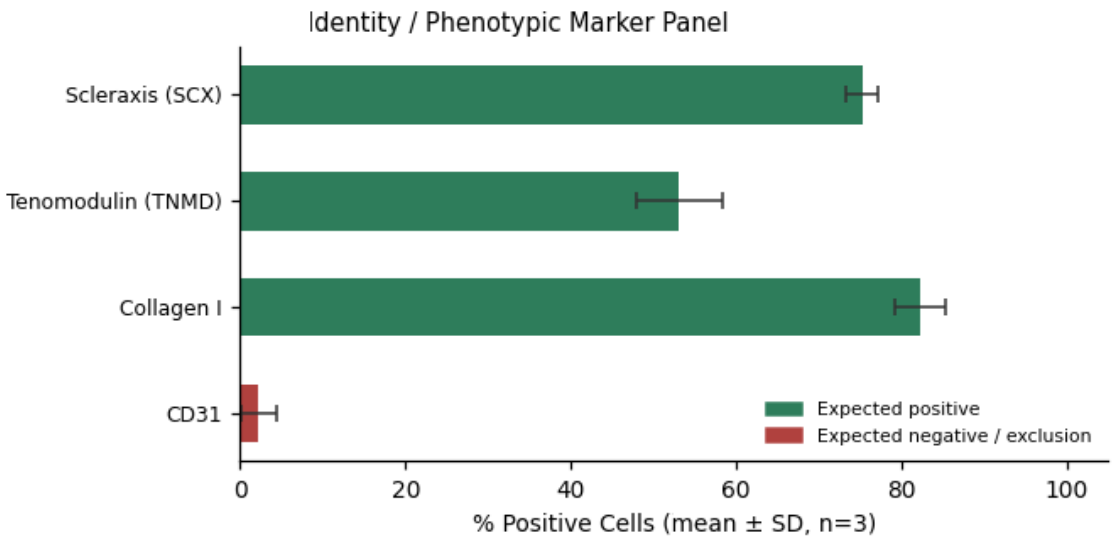


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

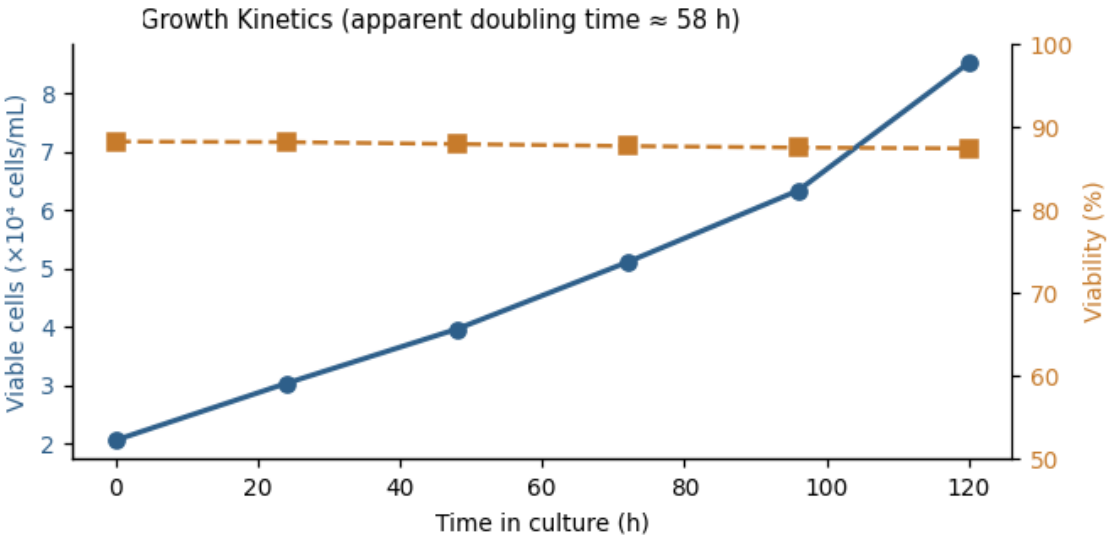


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Tenogenic differentiation / ECM assay: Mechanical-loading or growth-factor (e.g. GDF-5/BMP-12) induced tenogenic differentiation assessed by Collagen I deposition and Scleraxis/Tenomodulin upregulation (ICC/qPCR).

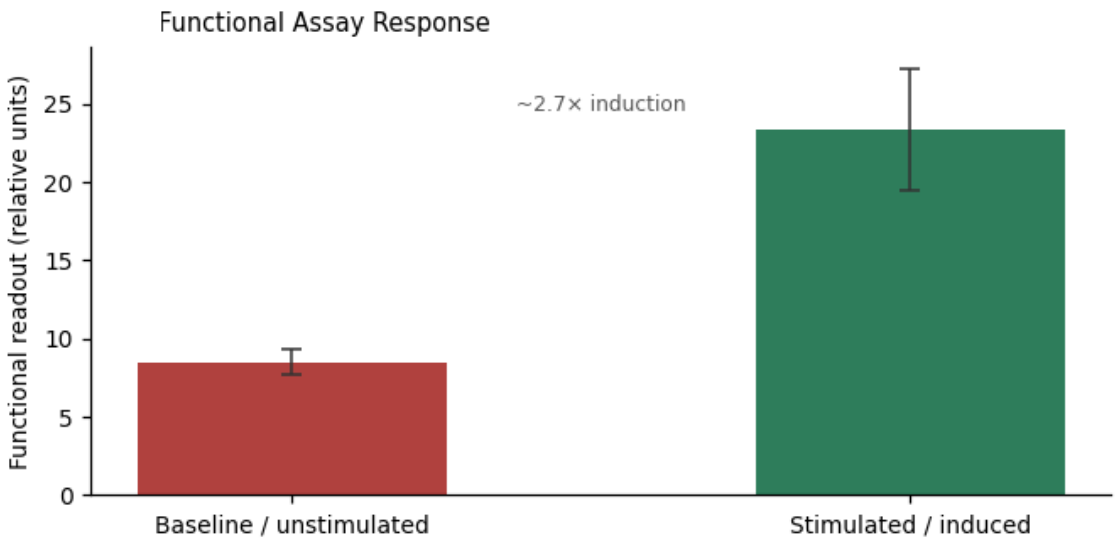


Figure 3. Functional assay readout — ~2.7× induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
≥55% Scleraxis+ by ICC	PASS
Spindle-shaped adherent morphology confirmed by phase-contrast imaging	PASS
Apparent population doubling time	≈ 58 hours
Functional assay outcome	~2.7× 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.