Primary Rat Dorsal Root Ganglion Neuron Cells (DRGN)

SKU: CDS11661 | Category: Primary Cells — Rat

Validation & Biomarker Data Guide · Lineage classification: Neuron

1. Product Overview

Primary Rat Dorsal Root Ganglion Neuron Cells (DRGN) is a primary cell product from rat Dorsal root ganglion for physiologically relevant in vitro studies. The product is particularly relevant to Nervous cell series and Ganglion 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: Dorsal root ganglion | Growth type: Adherent Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 0.5 million cells

2. Typical Applications

- Nervous cell series
- Ganglion cells
- Cerebral and nervous systems

3. Identity & Phenotypic Marker Panel

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

Marker	Expected Result	Range
β-III Tubulin (Tuj1)	Positive	70–95% positive
MAP2	Positive	60–90% positive
NeuN	Positive	50–85% positive
GFAP	Negative / low	≤15% (background)

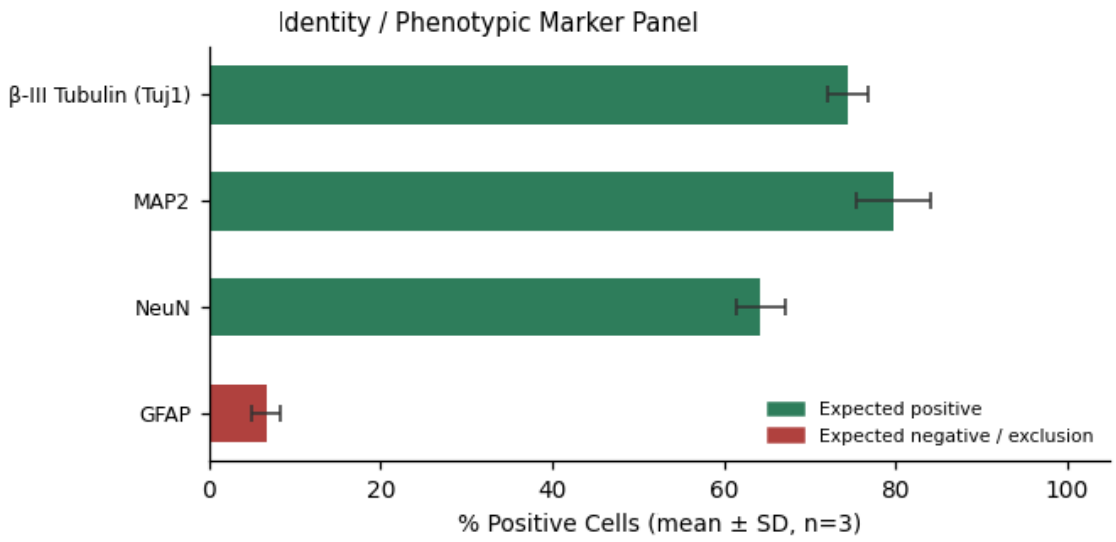

Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

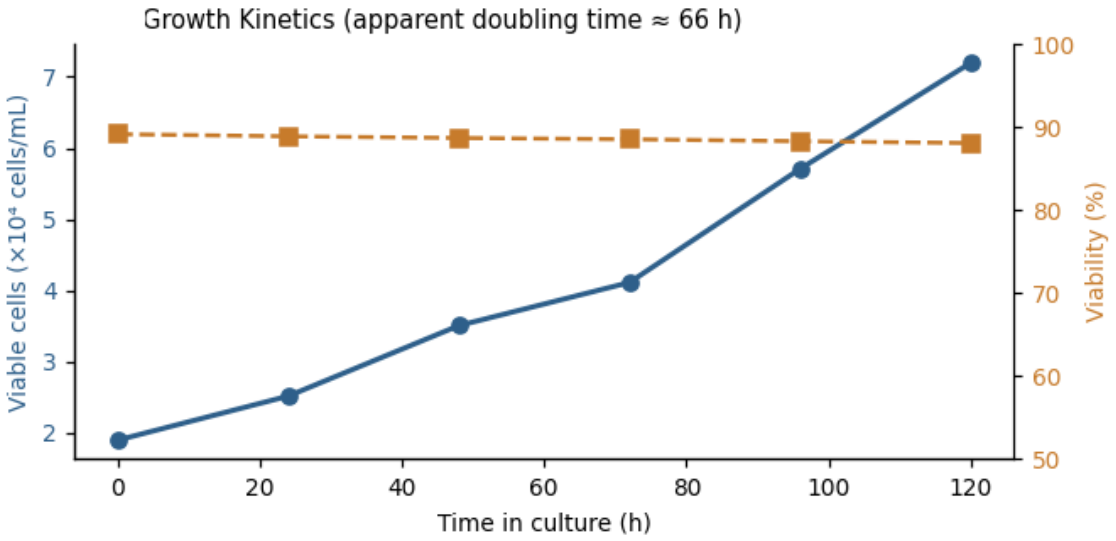

Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Neurite outgrowth / electrophysiology assay: Neurite-outgrowth imaging assay (length/branching quantification) and, where applicable, MEA (multi-electrode array) spontaneous activity recording to confirm neuronal functional maturity.

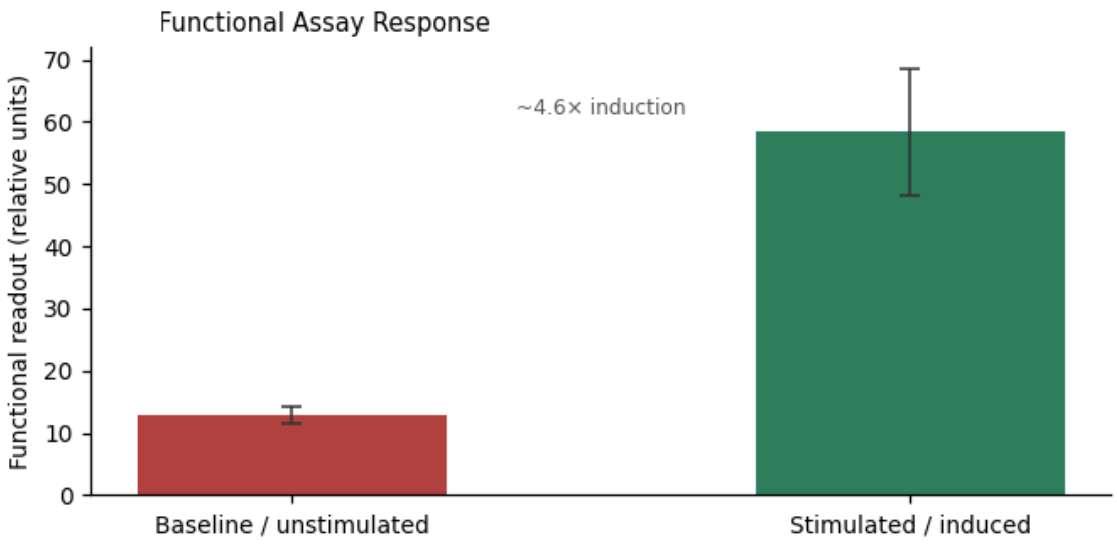

Figure 3. Functional assay readout — ~4.6× induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
≥60% βIII-tubulin+/MAP2+ by ICC	PASS
Neurite outgrowth observed by DIV 7-14	PASS
Apparent population doubling time	≈ 66 hours
Functional assay outcome	~4.6× 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.