Primary Porcine Trigeminal Ganglion Astrocytes (TGA)

SKU: CDS12159 | Category: Primary Cells — Pig

Validation & Biomarker Data Guide · Lineage classification: Astrocyte

1. Product Overview

Primary Porcine Trigeminal Ganglion Astrocytes (TGA) is a primary cell product from porcine Trigeminal ganglion for physiologically relevant in vitro studies. The product is particularly relevant to Astrocytes 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: Trigeminal ganglion | Growth type: Adherent Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 0.5 million cells

2. Typical Applications

- Astrocytes
- Ganglion cells
- Cerebral and nervous systems

3. Identity & Phenotypic Marker Panel

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

Marker	Expected Result	Range
GFAP	Positive	80–98% positive
S100β	Positive	65–92% positive
β-III Tubulin	Negative / low	≤15% (background)

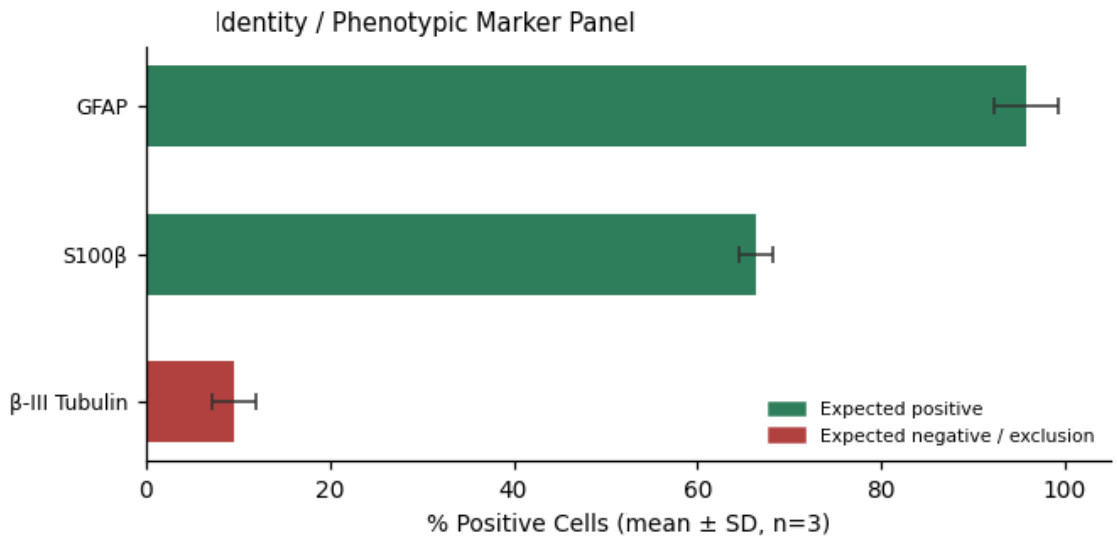


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

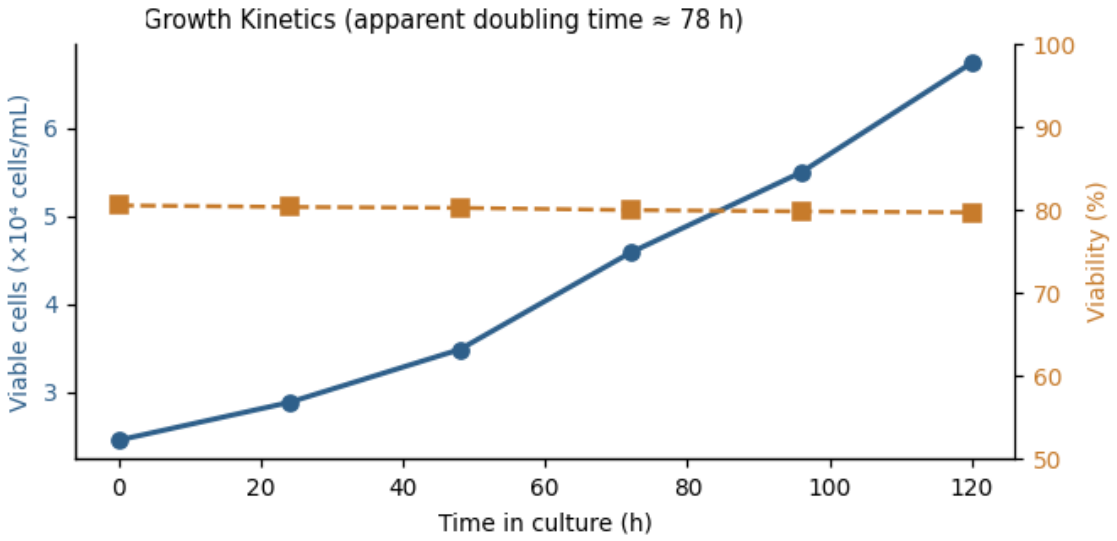


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Glutamate uptake assay: Glutamate-uptake functional assay confirming astrocytic transporter activity; reactive-astrocyte GFAP upregulation under cytokine challenge as secondary readout.

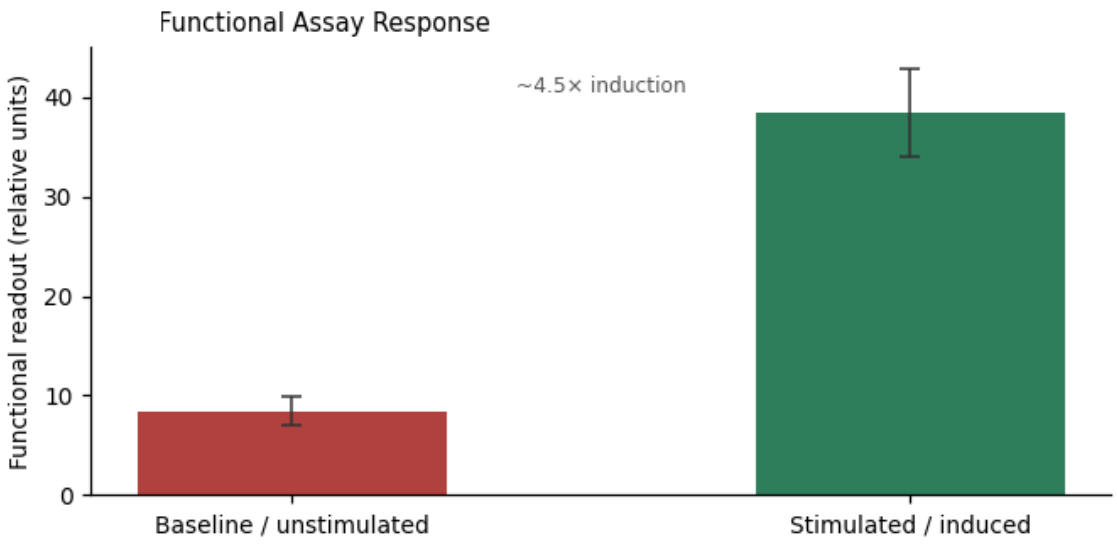


Figure 3. Functional assay readout — ~4.5× induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
≥80% GFAP+ by ICC	PASS
Detectable glutamate uptake above background	PASS
Apparent population doubling time	≈ 78 hours
Functional assay outcome	~4.5× 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.