

# Primary Human Hepatic Stellate Cells (HSC)

SKU: CDS11721 | Category: Primary Cells — Human

**Validation & Biomarker Data Guide** • Lineage classification: Hepatic stellate cell

## 1. Product Overview

Primary Human Hepatic Stellate Cells (HSC) is a primary cell product from human Liver for physiologically relevant in vitro studies. The product is particularly relevant to Hepatic cell series and Stellate 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: Liver | Growth type: Adherent Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 0.5 million cells

## 2. Typical Applications

- Hepatic cell series
- Stellate cells
- Digestive system
- Hemolymphatic system

## 3. Identity & Phenotypic Marker Panel

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

| Marker            | Expected Result | Range             |
|-------------------|-----------------|-------------------|
| Desmin            | Positive        | 65–92% positive   |
| GFAP              | Positive        | 40–75% positive   |
| α-SMA (activated) | Positive        | 30–70% positive   |
| Albumin           | Negative / low  | ≤10% (background) |

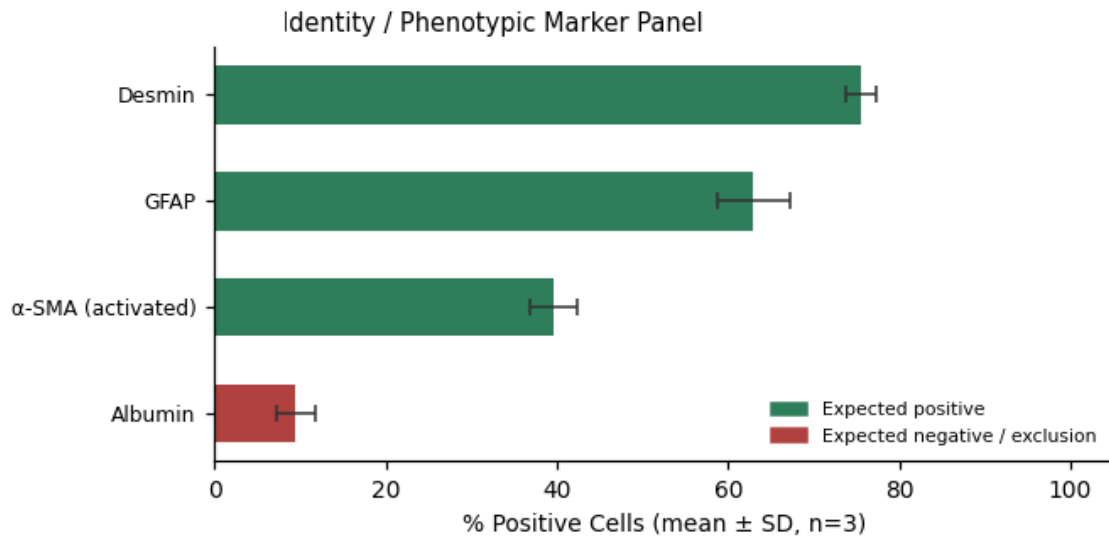


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

#### 4. Growth Kinetics & Viability

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

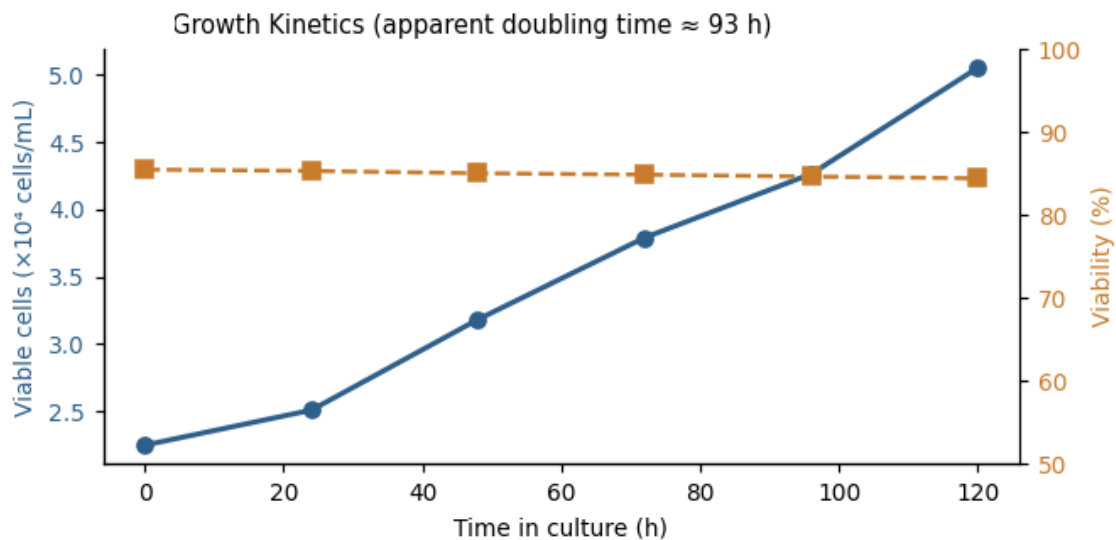


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

#### 5. Functional Validation Assay

**Activation / fibrogenic response assay:** TGF-β1-induced activation assessed by α-SMA upregulation and collagen I secretion (ELISA) to confirm fibrogenic functional phenotype.

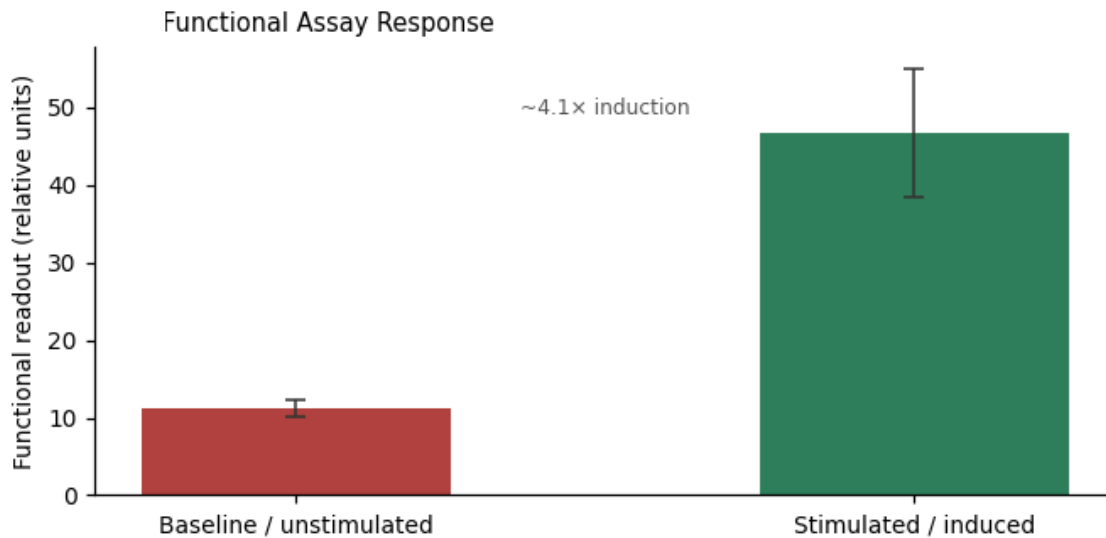


Figure 3. Functional assay readout — ~4.1× induction over baseline.

## 6. QC Acceptance Criteria

| Acceptance Criterion                                      | Result                        |
|-----------------------------------------------------------|-------------------------------|
| ≥60% Desmin+ by ICC                                       | PASS                          |
| α-SMA upregulation confirmed following TGF-β1 stimulation | PASS                          |
| Apparent population doubling time                         | ≈ 93 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.