HEK293E Human Embryonic Kidney Cell Line

SKU: CDS3040 | Category: Cell Lines — Normal and Non-Tumor Cell Lines

Validation & Biomarker Data Guide · Lineage classification: Engineered production / host cell line (e.g. HEK293, CHO, Vero, BHK variants)

1. Product Overview

HEK293E Human Embryonic Kidney Cell Line is an established non-tumor cell model for in vitro research. It is suitable for studies of cell physiology, growth, signaling, toxicity, drug response, biomarker analysis and assay development under controlled culture conditions. The cell line provides a reproducible system for basic and translational cell biology. For research use only.

Growth type: Adherent Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 1 million cells

2. Typical Applications

- Cell-based assay development, pathway and mechanism studies, biomarker characterization, and comparative functional testing consistent with this lineage.

3. Identity & Phenotypic Marker Panel

A representative identity panel for engineered production / host cell line (e.g. hek293, cho, vero, bhk variants) products is shown below. Actual per-lot Certificates of Analysis should be consulted for verified identity data.

Marker	Expected Result	Range
Transfection efficiency (reporter-based)	Positive	60–95% positive
Recombinant protein/titer output	Positive	50–95% positive
Mycoplasma / adventitious agent markers	Negative / low	≤2% (background)

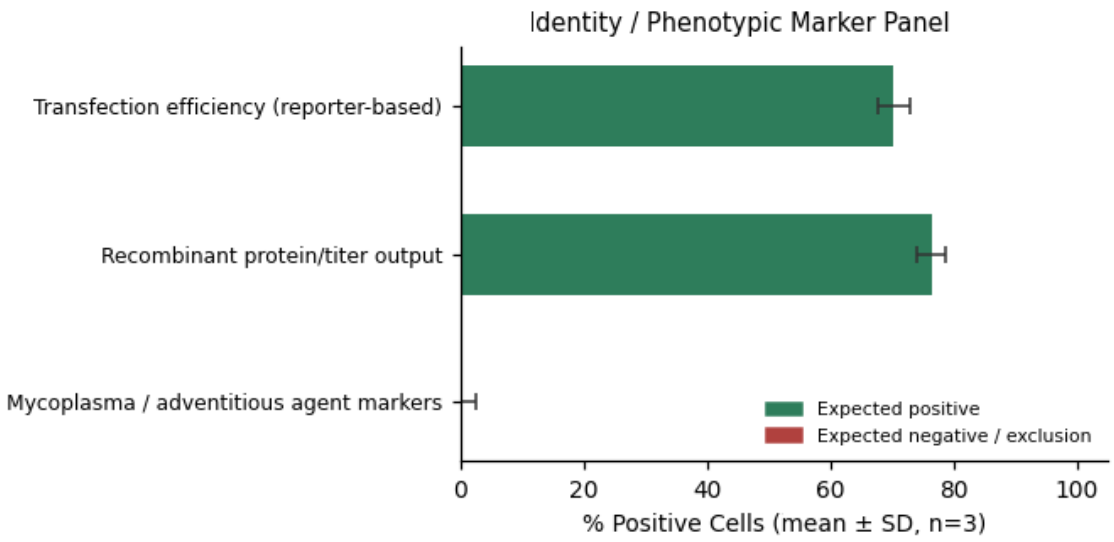


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

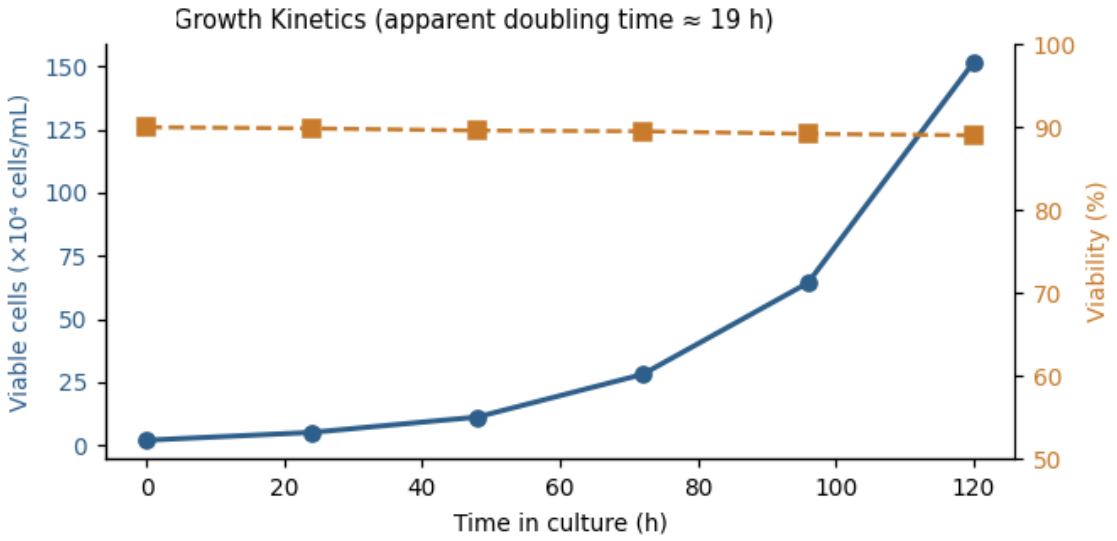


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Transfection efficiency / production titer assay: Transient transfection with a reporter construct (GFP/luciferase) to confirm transfectability, and/or batch culture with product titer quantified by ELISA or activity assay to confirm production performance.

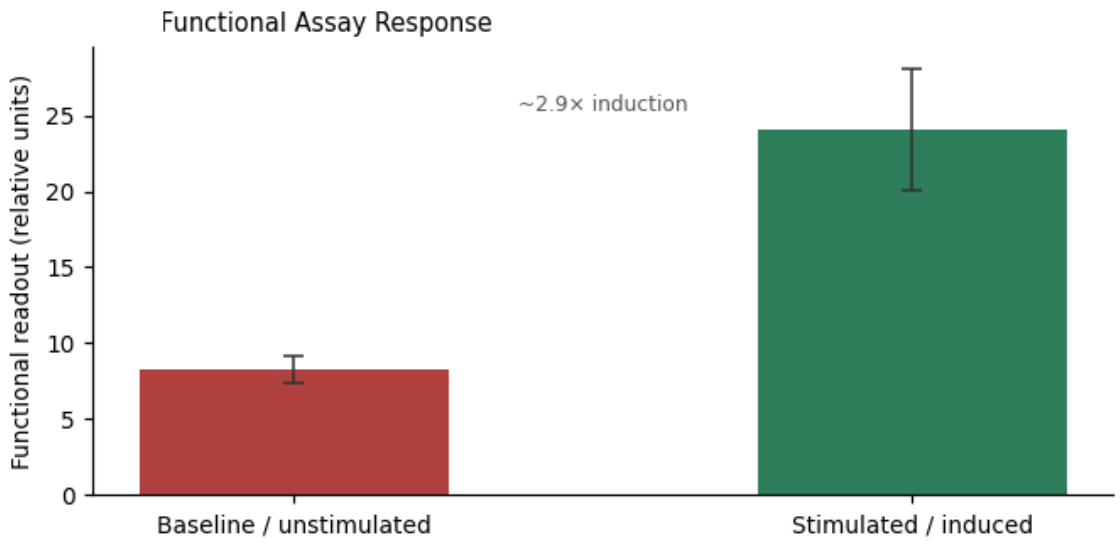


Figure 3. Functional assay readout — ~2.9× induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
Transfection efficiency within historical reference range	PASS
Negative for mycoplasma/adventitious agents by PCR	PASS
Karyotype/STR consistent with parental line record	PASS
Apparent population doubling time	≈ 19 hours
Functional assay outcome	~2.9× 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.