



Applied StemCell

PRODUCT DATA SHEET

ActiCells™ RUO hiPSCs

(CD34+ Cord Blood Cells, Normal, Male)

Catalog No. ASE-9250 RUO • Rev. 1 | August 2026

Product Overview

ASE-9250 is a research-grade human induced pluripotent stem cell (hiPSC) line reprogrammed from male CD34+ umbilical cord blood cells. Each lot is fully characterized for pluripotency, normal karyotype, identity, sterility, and tri-lineage differentiation potential – providing a reliable, well-defined starting material for disease modeling, directed differentiation, and downstream genome engineering.

Key Features & Benefits

Feature	Benefit
Well-characterized pluripotency	Positive for OCT4, SOX2, NANOG, SSEA-4, TRA-1-60, and TRA-1-81, with confirmed tri-lineage differentiation.
Normal male karyotype	G-banding-confirmed genomic integrity for dependable downstream work.
Neonatal CD34+ cord blood source	Fewer somatic mutations than adult-cell-derived iPSCs..
Rigorous per-lot QC release	Sterility, mycoplasma, endotoxin (≤ 0.5 EU/mL), and pathogen testing on every lot.
Ready for engineering & differentiation	A strong substrate for gene editing (including TARGATT™ knock-in) and multi-lineage differentiation.

Product Specifications

Product Type	RUO
Cell Type	Human induced pluripotent stem cells (hiPSCs)
Parental Line / Background	CD34+ umbilical cord blood cells (Male)
Format	1 vial / 1×10^6 cells / 1 mL
Long-Term Storage	-135 °C (liquid nitrogen vapor phase)
Shipping Condition	Dry ice
Shelf Life / Retest	~3 years from manufacture (see lot-specific CoA)
Downstream	Differentiation-competent; suitable for gene editing
Quality System	Manufactured under ISO 13485:2016

Applications

- Cell-based disease modeling
- Directed differentiation into multiple lineages
- Substrate for genome engineering/ gene editing (e.g., TARGATT™, CRISPR)
- Drug screening and toxicology research

Quality Control Summary

Each lot is released against the following quality criteria. Lot-specific results are provided on the accompanying Certificate of Analysis (CoA).

- Pluripotency biomarkers positive: OCT4, SOX2, NANOG, SSEA-4, TRA-1-60, TRA-1-81
- Tri-lineage differentiation into ectoderm, mesoderm, and endoder
- Normal hiPSC morphology and normal karyotype (G-banding)
- Identity confirmed by STR / DNA profiling (match to donor)
- Post-thaw viability (>20% attachment over 3 days); doubling time 10–24 h
- Sterility (bacterial & fungal): negative; Mycoplasma (PCR): negative
- Endotoxin ≤ 0.5 EU/mL; Pathogen bioanalysis (PCR): negative

Supporting Data

Morphology Analysis

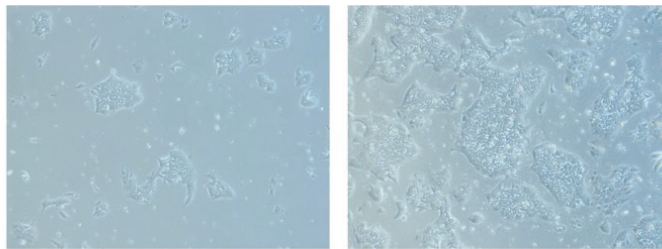


Figure 1. Morphology images of the ASE-9250 iPSCs captured at 24 hours and 72 hours after thawing. The control human iPSCs were generated from normal CD34+ umbilical cord blood cells using an episomal method. The image of the hiPSCs on the left was taken 24 hours after thawing, and the image on the right was captured 72 hours after thawing.

Expression of Pluripotency Markers

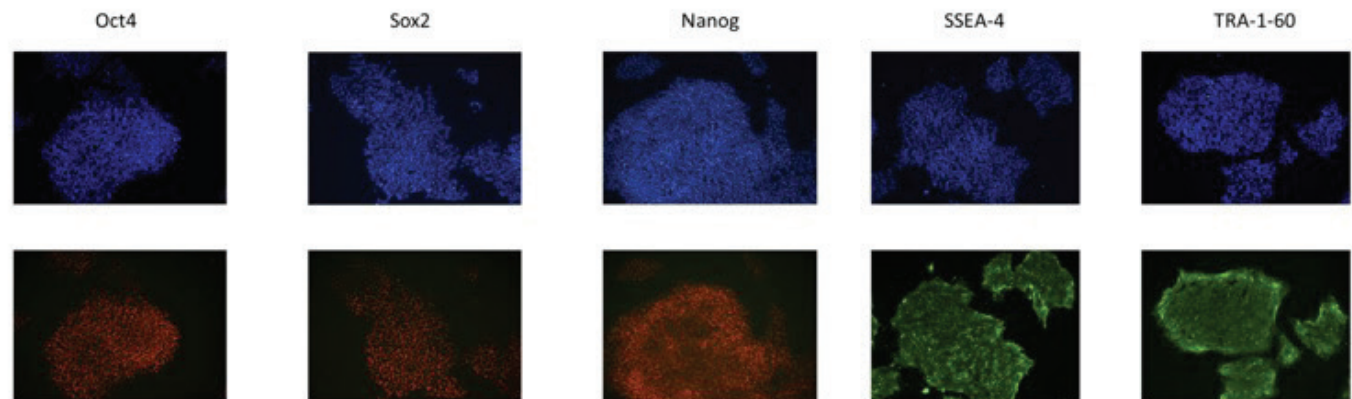


Figure 2. Expression of pluripotency markers. The ASE-9250 hiPSC line, derived from male CD34+ umbilical cord blood cells, expresses pluripotency markers Oct4, Sox2, Nanog, SSEA-4, and Tra-1-60, indicating pluripotency of the hiPSC line. The corresponding DAPI staining is shown above each image.

Alkaline Phosphatase (AP) Analysis

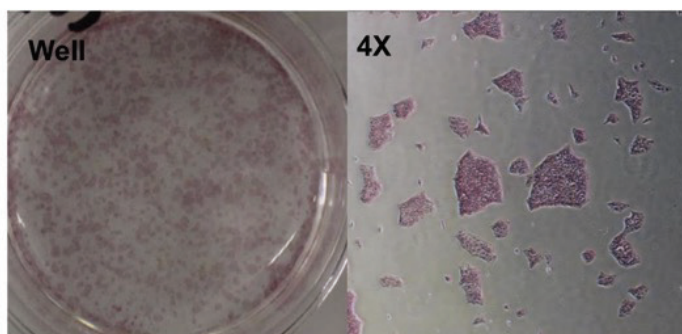


Figure 3. Alkaline phosphatase (AP) staining of ASE-9250. The AST-9250 hiPSC line stained positive for alkaline phosphatase.

Supporting Data

Directed Differentiation to the Three Germ Layers

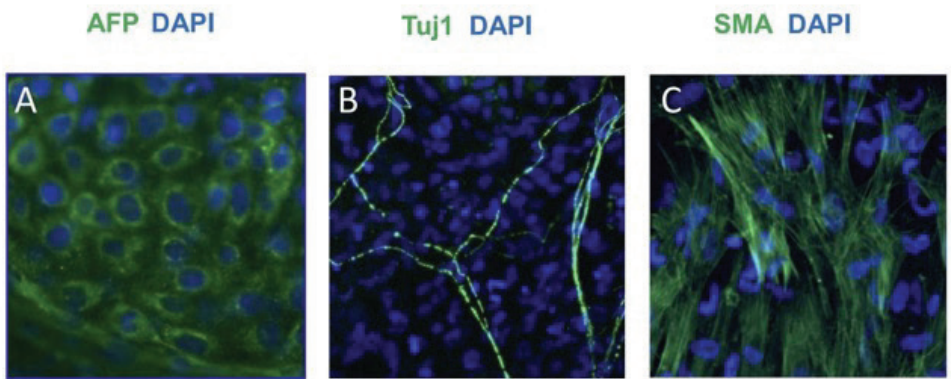


Figure 4. Directed differentiation of ASE-9250 to three germ layers. Immunofluorescent staining for the three germ layers after directed differentiation of hiPSC line ASE-9250. A) Endoderm is demonstrated by alpha-fetoprotein (AFP) immunofluorescence (IF, green), (B) ectoderm by Neuron-specific class III β -tubulin (Tuj1) IF, and (C) mesoderm by smooth muscle actin (SMA) IF. DAPI staining in blue.

STR Profile

Amelogenin	X	Y	D18S51	14	
vWA	16		Penta E	7	11
D8S1179	13	14	D5S818	11	
TPOX	8		D13S317	9	11
FGA	18	25	D7S820	10	11
D3S1358	15		D16S539	11	13
THO1	6	9.3	CSF1PO	12	
D21S11	31.2	33.2	Penta D	11	13

Figure 5. STR profiling of the ASE-9250 hiPSC line. The DNA STR profile of the ASE-9250 cell line is consistent with the presence of a single cell line.

Ordering Information

Catalog No.	ASE-9250
Description	Human iPSC Line, Research Grade (CD34+ cord blood, male)
Format	Cells
Pack Size	1.0 × 10 ⁶ cells/vial

Related Products

- ASE-9280 – Human iPSC Line, GMP Grade (CD34+ cord blood, male)
- TARGATT™ iPSC Knock-in Kits (AST-1602 / 9450 / 9480 / 9650)
- Custom iPSC genome engineering & differentiation services

Contact & Ordering

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