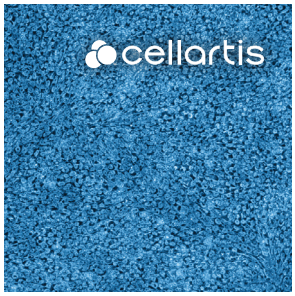

Stem Cell Products

Robust culture system for undifferentiated human stem cells

that's GOOD science!™

DEF-CS™ – Defined culture system for efficient expansion and scale up of hPSC.

An easy-to-use and robust culture system for the efficient expansion and of human pluripotent stem cells in a feeder-free and defined environment. The highly reproducible nature of the system coupled with the stable high growth rate makes it ideal for the mass production of cells.

Features

- Includes additives and coating compound
- Single cell passaging
- Single cell applications
- Efficient expansion
- Robust system with high reproducibility
- No cell selection is needed
- Virtually no background differentiation
- Obtain controlled material for subsequent differentiation in any format

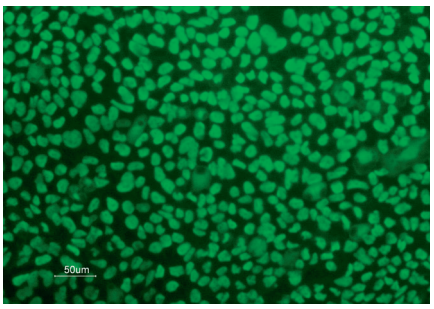

Figure 1. Human pluripotent stem cells remain undifferentiated when cultured in DEF-CS over time. Human iPS cells cultured for 23 passages in DEF-CS characterised by Oct-4 staining.

The fact that cells are maintained in an undifferentiated state with virtually no background differentiation means that no cell selection is required. Enzymatic passaging as single cells also makes DEF-CS perfect for single cell applications including high-throughput screening, transfection and seeding onto scaffolds.

DEF-CS is a complete culture system including basal medium as well as additives and coating compound. A number of human pluripotent stem cell lines cultured in DEF-CS are also available for purchase.

Takara Clontech
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Applications

- Scale up and mass production of human pluripotent stem cells
- Bioreactor
- Transfection and reprogramming
- Single cell seeding for high troughput screening
- Seeding in scaffolds (Tissue engineering, maturation of human pluripotent stem cells towards tissue-like structures)

Expansion potential from cell bank

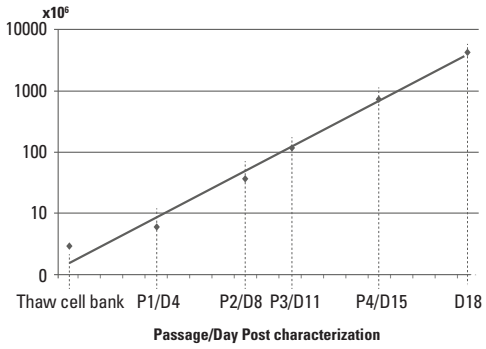

Figure 2. Expansion potential from chatacterised working cell bank. The system can produce in the region of $2x10^9$ pluripotent stem cells within 4 passages (18-20 days) from a thawed cell bank vial ($2-2,5x10^6$ cells).

Comparison of growth characteristics

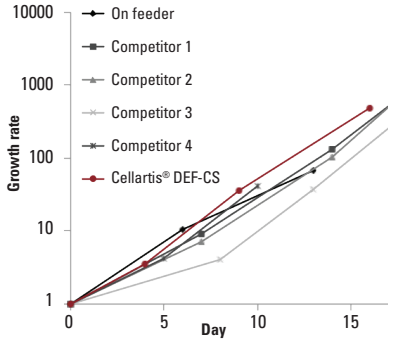

Figure 3. DEF-CS showed the highest and most robust growth rate compared to other stem cell culture systems. Cells were cultured for 3 weeks prior to testing.

Quantitative pluripotent marker analysis

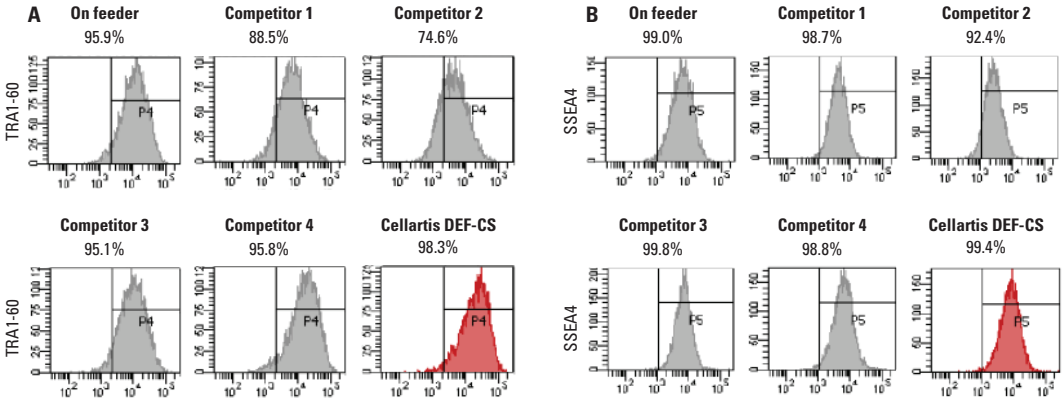

Figure 4. Pluripotency of cells grown for 5 weeks in DEF-CS stem cell culture media as compared to other available culture systems. DEF-CS revealed the highest proportion and intensity of TRA1-60 (A), and SSEA4 (B).

PRODUCTS

Cat. #	Product	Description
Y30010 **SAMPLE AVAILABLE**	DEF-CS 500	Complete kit for culturing human pluripotent stem cells, including 500 ml basal medium, additives and coating compound
Related products		
Y00260 Y00300	DEF-hiPSC™ ChiPSC4 DEF-hiPSC™ ChiPSC18	From source cell line DEF-hiPSC™ ChiPSC4 and DEF-hiPSC™ ChiPSC18, cultured and frozen in DEF-CS – Approximately $3x10^6$ cells/vial

Learn more at www.clontech.com/stemcells