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Product Information

Human iPS Cell Line (Type 2 Diabetes)

Catalog Number	30HU-005	Cell Number	~0.5-1.0 million cells/vial
Species	*Homo sapiens*	Storage Temperature	Liquid nitrogen

Product Description

Induced Pluriopotent Stem Cells (iPSCs) are a type of pluripotent stem cells that can be derived directly from adult somatic cells [1]. The derived iPSCs can propagate indefinitely, as well as give rise to other cell types in the body. iPS cells, thus, hold great promise in the field of regenerative medicine by representing a single source of cells that could be used to replace those damaged/diseased cells.

iXCells Biotechnologies is proud to offer human iPS cell lines derived from the human dermal fibroblasts from patients with Type 2 Diabetes (T2D). The pertinent donor information is available upon request (info@ixcellsbiotech.com). These iPS cells are established from a single clone and expanded in feeder-free conditions. The Certificate of Analysis is provided for each cell lot purchased. The cells have been fully characterized for their self-renewal and pluripotency (Figure

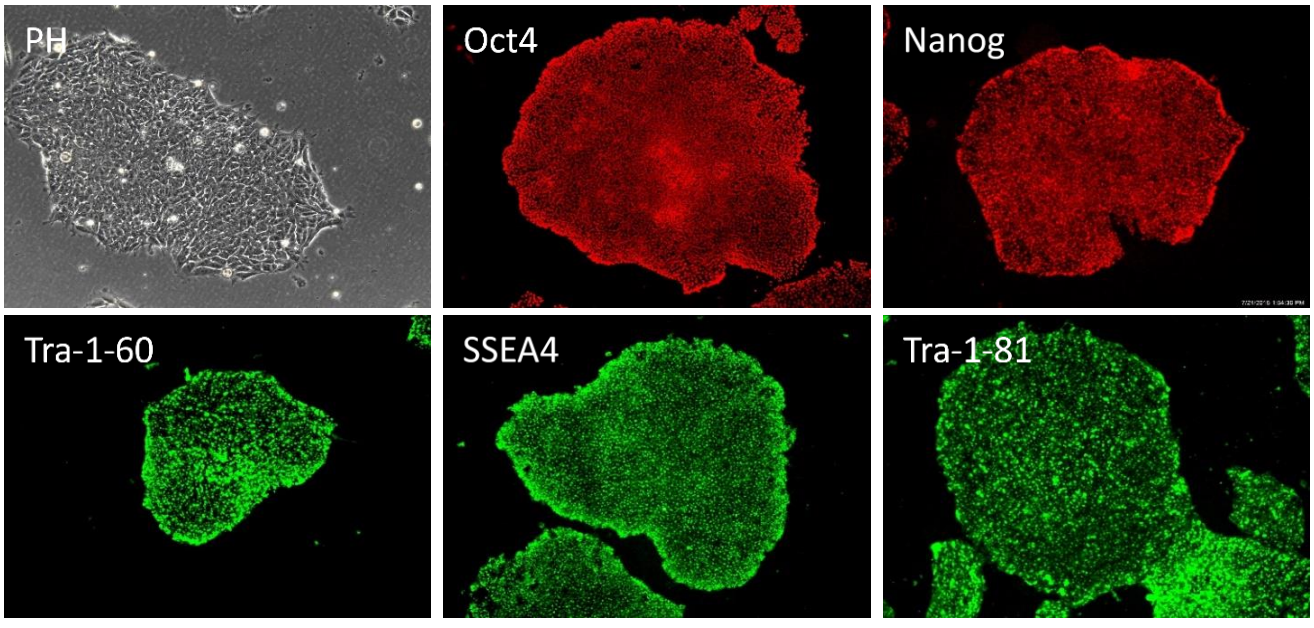

Figure 1. iXCells human iPS cells are characterized by immunostaining with Oct4, Nanog, Sox2, SSEA4, TRA-1-60-R, TRA-1-81.

1). All the cells provided by iXCells are negative for mycoplasma, bacteria, yeast, and fungi. HIV-1, hepatitis B and hepatitis C.

Normal human iPS cell lines are also available as separate products (Cat# 30HU-002). The currently available diseased specific iPS cell lines are derived from patients with Type 1 Diabetes (T1D), Type 2 Diabetes (T2D), Alzheimers's Disease (AD), Parkinson's Disease (PD), Amyotrophic Lateral Sclerosis (ALS) (Cat# 30HU-004). More disease-specific iPS cell lines are under development. We also provide custom iPSC generation and iPSC differentiation services to meet your needs.

Product Details

Tissue Origin	Human iPS Cells derived from dermal fibroblasts of Type 2 Diabetes patient
Package Size	~0.5-1.0 million cells/vial
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Human iPSC Growth Medium (Cat # MD-0018) MEF Conditioned Medium (Cat # MD-0015) Human iPSC Feeder-Free Growth Medium (Cat # MD-0019) Human iPSC Xeno-Free Growth Medium (Cat # MD-0074) iMEF Feeder (CF1), irradiated (Cat # 10MU-001) Matrigel Coated Plates (Cat # MD-0023)

Protocols

Thawing of Frozen Cells

1. Upon receipt of the frozen cells, it is recommended to thaw the cells and initiate the culture immediately in order to retain the highest cell viability.
2. Prepare Matrigel™ coated plates (Cat # MD-0023) or MEF feeder (Cat # 10MU-001) coated plates the day before recovering the cells.
3. To thaw the cells, put the vial in 37°C water bath with gentle agitation for ~1 minute. Keep the cap out of water to minimize the risk of contamination.
4. Pipette the cells into a 15ml conical tube with 5ml fresh culture media: Human iPSC Growth Medium (Cat # MD-0018) can be used in on-feeder culture system, MEF Conditioned Medium (Cat # MD0015) or Human iPSC Feeder-Free Growth Medium (Cat # MD-0019) can be used in feeder-free culture system.
5. Centrifuge at 50g for 5 minutes at room temperature.
6. Remove the supernatant and re-suspend the cells in culture media supplemented with 10μM Y27632 (MD-0025).

7. Seed the cells on Matrigel™ coated plates (Cat# MD-0023) for feeder-free culture, or on feeder plates for on-feeder culture.

8. Incubate in 37°C CO_2 incubator overnight.

9. The next day, change to media without Y27632.

10. Change media daily until the cells are ready to be passaged. It may take 1-2 weeks to fully recover the cells before passaging.
Note: There may be 5-20% differentiated cells after thaw. The cells will be stabilized after 2-3 passages.

Safety Precaution: *it is highly recommended that protective gloves and clothing should be used when handling frozen vials.*

References

[1] Okita K, Matsumura Y, Sato Y, Okada A, Morizane A, Okamoto S, Hong H, Nakagawa M, Tanabe K, Tezuka K, Shibata T, Kunisada T, Takahashi M, Takahashi J, Saji H, Yamanaka S. A more efficient method to generate integration-free human iPS cells. Nat Methods. 2011 May; 8(5):409-12.

Disclaimers