Data Sheet

Human iPSC-Derived Dopamine Neurons (Parkinson's disease)

Catalog No.	Size	Storage Conditions
CIPC-DDC001	> $1x10^6$ cells/Vial	Vapor phase of liquid nitrogen

• Description

Human iPSC-Derived Dopamine Neurons, offered from both healthy individuals (Cat. No. CIPC-DWC001) and Parkinson's disease patients (Cat. No. CIPC-DDC001), are produced using a proprietary differentiation protocol. Upon receipt, these neurons require further culture to reach full maturity. They are characterized by markers such as TH and MAP2 and demonstrate robust electrophysiological properties, making them ideal for advanced research. These cells provide a consistent and reliable resource for studying Parkinson's disease, offering valuable insights into disease mechanisms and drug screening applications.

• iPSC Line Background

Donor Status	Parkinson's disease
Gender	Male
Ethnicity	White
Age At Sampling	63
Tissue Source	Skin
Reprogramming Method	Retroviral expression of OCT4, SOX2, KLF4, and MYC genes

• Materials Required for Cell Culture

- Dopaminergic Neuron Maturation Kit (AcroBiosystems, Cat. No. RIPC-NWM002K)
- DMEM/F12 (Gibco, Cat. No. 12634010)
- Y-27632 (MCE, HY-10071)
- Matrigel (Corning, Cat. No. 354277)
- Accutase (STEMCELL Technologies, Cat. No. 07920)
- Thermostat water bath
- Cell Culture Plates
- Cell Culture Incubator
- Biological Safety Cabinet

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• Preparation for thawing and passaging

1. For optimal viability, thaw the vial and start the culture immediately upon receipt. If storage is required, keep it in liquid nitrogen vapor, not at -80°C.

2. Preparing cell culture surfaces: Dilute Matrigel 1:100 with DMEM/F12, add enough to cover the surface of the plate, then incubate at 37°C for 1 hour.

• Thawing and maintenance

1. Quickly thaw the cells (< 2 minutes) in a 37°C water bath until only a few ice crystals left in the vial.

2. Sterilize the cryovial with 70% ethanol, then transfer the vial into a laminar flow hood.

3. Transfer the cells into a 15 mL centrifuge tube containing 9 mL pre-warmed DMEM/F12.

4. Centrifuge at 300 x g for 5 minutes, discard the supernatant.

5. Resuspend the pellet in 2 mL Dopaminergic Neuron Maturation Medium with 10 μM Y-27632.

6. Perform cell count using a hemocytometer.

7. Seed at a seeding density of 200, 000 viable cells/cm^2 onto a pre-coated plate.

8. Incubate the plate at 37°C with 5% CO_2 overnight (< 24 hours), then replace the medium with Dopaminergic Neuron Maturation Medium without Y-27632. Change the medium every 2 days.

9. On day 7, replace the medium with Dopaminergic Neuron Maintenance Medium and change the medium every 2 days. Cells can be used for further analysis after day 14.

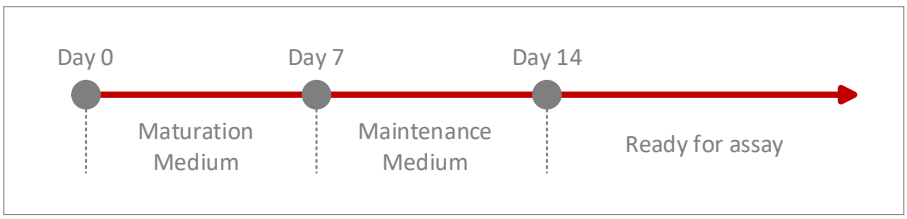

Figure 1. Schematic for Cell Culture

• Permits & Restrictions

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