Cryopreserved Human iPSC-Derived Cerebral Organoids

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Cat. No. : CIPO-BWL001KC

Description

Human iPSC-Derived Cerebral Organoids are differentiated from hESC or iPSCs using Human iPSC-Derived Cerebral Organoid Differentiation Kit (Ca. No. RIPO-BWM001K). Cerebral organoids are three-dimensional in vitro models with a cellular composition and structural organization that is representative of the human cerebral regions. Organoids generated using Human iPSC-Derived Cerebral Organoid Differentiation Kit (Ca. No. RIPO-BWM001K) feature various types of neurons (including TH positive neurons) and glia cells (including OLIG2 and IBA1 positive cells). These cerebral organoids show spontaneous electrophysiological activity and response to a-syn PFFs induced toxicity, representing the functionality of the organoids.

Product Specification

The cerebral organoids are cryopreserved at 60 days old under –80°C using the cerebral organoid cryopreservation medium. Cryopreservation and shipment will not cause deactivation of the cerebral organoids.

Origin	Human iPSC (ATCC-HYR0103)
Property	Suspension
Incubation	37 ℃ with 5% CO_2
Biosafety Level	1

Product Information

Name	Shipment	Storage
Cryopreserved Human iPSC-Derived Cerebral Organoids	-70°C	Please recover the live organoid immediately upon receipt.
Cerebral Organoid Recovery Medium	-70°C	Please use immediately upon receipt.

Materials Required for Organoid Culture

- Human iPSC-Derived Cerebral Organoid Maturation and Maintenance Kit (Cat. RIPO-BWM003)
- Ultra-Low Adherent 6 Well plate

Equipment Required

- Incubator (37°C, 5% CO_2)
- Orbital shaker (2 mm shaking diameter)
- Biosafety cabinet

Experimental Procedure

1. **Initial Inspection:** Upon receiving the organoids, first check the cryotubes for any signs of damage, leakage, or turbidity in the transport solution. Gently invert the cryotubes to ensure that the organoids settle at the bottom. Visually inspect the organoids to confirm they are intact and not broken or disintegrated. If any issues are detected, contact the supplier immediately.
2. **Thawing the Recovery Medium:** Thaw the Cerebral Organoid Recovery Medium from the Cryopreservation Kit in a 37℃ water bath before use.
3. **Revival of Organoids:**

3.1 Take the cryopreserved cerebral organoids from the -80℃ freezer and quickly thaw them in a 37℃ water bath. (Shake the tubes gently with hands to accelerate thawing the organoids.)

3.2 Using a Pasteur pipette, transfer the organoids to an ultra-low adhesion 6-well plate. You can put in maximum 24 organoids per well in an ultra-low adhesion 6-well plate.

3.3 Rinse the organoids once with 5 ml cerebral organoid maintenance medium.

3.4 Add 5mL of Cerebral Organoid Recovery Medium. Put the plate on an orbital shaker (as shown figures) with the speed of 100 rpm. Incubate at 37°C, 5% CO2 for 48 h.

4. **Further Culture**

4.1 After 48 h of recovery, change the recovery medium in each well to 5ml cerebral organoid maintenance medium (Cat. RIPO-BWM003) per well.

4.2 Keep the plate an orbital shaker (as shown figures) set the speed at 100 rpm. Incubate at 37° C, 5% CO_2.

4.3 Change the whole medium every 3 days.

Related Products

Product	Cat. No.
Human iPSC-Derived Cerebral Organoid Maturation and Maintenance Kit	**RIPO-BWM003**
Cerebral organoid cryopreservation kit	**RIPO-BWM006**