

Human pluripotent stem cells (hDPSC) | 300702

General information

Description	Human pluripotent stem cells (DPSC, hDPSC) are derived from human dental pulp stem cells, which are a type of adult stem cell. These cells are capable of self-renewal and differentiation into all three germ layers (ectoderm, mesoderm, and endoderm). hDPSCs are derived from DPSCs by treatment with retinoic acid and growth factors.
Organism	Human
Tissue	Dental pulp
Applications	Regenerative medicine, drug discovery, basic research, cell therapy

Characteristics

Growth properties	Adherent
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Identification and safety

Citation	Human pluripotent stem cells (DPSC, hDPSC) (Cytion 300702)
Biosafety level	1
NCBI_TaxID	9606

Media and supplements

Media

Culture Medium	DMEM, w: 2.0 mM Glucose, w/o: FBS, w/o: Penicillin, w/o: Streptomycin, w: 1.0 mM Glutamine, w: 2.2g/l Sodium Butyrate
Supplements	10% FBS, 2 ng/mL bFGF
Dissociation Reagent	Trypsin

Subculturing	Cells are typically passaged using Trypsin. After dissociation, cells are resuspended in DMEM + 10% FBS and seeded into T25 flasks. Cells are typically passaged every 3-5 days.
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Freeze medium

Freezing medium: 90% FBS + 10% DMSO, CM-1 (Cytion 800100), 100 µg/ml penicillin, 100 µg/ml streptomycin, 100 µg/ml nystatin

Thawing and Culturing Cells

1. Thaw cells rapidly in a water bath at 37°C. Transfer the cells to a pre-warmed medium.
2. Centrifuge the cells at 300 x g for 5 minutes. Remove the supernatant and resuspend the cells in 1 ml of medium.
3. Seed the cells into a 25 cm² flask containing 10 ml of medium. Incubate at 37°C in 5% CO₂.
4. After 24 hours, replace the medium with fresh medium. Remove the non-adherent cells.
5. After 48 hours, replace the medium with fresh medium. Remove the non-adherent cells.
6. After 72 hours, replace the medium with fresh medium. Remove the non-adherent cells.
7. After 96 hours, replace the medium with fresh medium. Remove the non-adherent cells.
8. After 120 hours, replace the medium with fresh medium. Remove the non-adherent cells.

Incubation Atmosphere

37°C, 5% CO₂, humidified

Flask Coating

Flask coating: 0.1% gelatin, 0.1% bovine serum albumin, 0.1% hyaluronic acid

Freezing Procedure

Freezing procedure: 1. Seed cells into a 25 cm² flask. 2. Harvest cells into a 15 ml tube. 3. Resuspend cells in 1 ml of freezing medium. 4. Freeze cells at -80°C.

Shipping Conditions

Shipping conditions: 1. Pack cells in a dry ice container. 2. Ship cells at -78°C.

Storage Conditions

Storage conditions: 1. Store cells at -150°C for up to 196 weeks.

Genotype: HLA

Product sheet

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Sterility

300702 (hDPSC) is a sterile, single-use PCR plate. It is designed for use in PCR applications and is not intended for use in other applications.

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