

Human Dental Follicle Stem Cells (hDFSC) | 300701

Product Overview

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description | Human Dental Follicle Stem Cells (DFSCs, hDFSCs) are a type of Mesenchymal Stem Cell (MSC) derived from human dental follicles. These cells are capable of self-renewal and differentiation into various cell types, including osteoblasts, adipocytes, and chondrocytes. hDFSCs are characterized by their ability to form bone and cartilage in vivo. They are typically cultured in the presence of specific growth factors and are used for regenerative medicine and tissue engineering applications. |
| Organism    | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Tissue      | Dental Follicle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

Characteristics

|                   |          |
|-------------------|----------|
| Growth properties | Adherent |
|-------------------|----------|

Identification and Documentation

|                 |                                                                |
|-----------------|----------------------------------------------------------------|
| Citation        | Human Dental Follicle Stem Cells (DFSC, hDFSC) (Cytion 300701) |
| Biosafety level | 1                                                              |
| NCBI_TaxID      | 9606                                                           |

Storage and Handling

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 supplemented with 10% FBS and 2 ng/mL bFGF. Cells are then seeded into new flasks at a density of 1-3 x 10^5 cells per flask. |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Human CD34<sup>+</sup> hematopoietic stem cells (hDFSC) | 300701**

**Seeding density**

$2 \times 10^4$  cells/cm<sup>2</sup>

**Freeze medium**

Freeze medium: 90% FBS + 10% DMSO, CM-1 (Cytion 800100), 10% FBS

**Thawing and Culturing Cells**

1. Thaw cells rapidly in a water bath at 37°C. Transfer the cells to a centrifuge tube and centrifuge at 300 x g for 5 minutes. Remove the supernatant and resuspend the cells in 10 ml of pre-warmed medium.
2. Seed cells into a T25 flask at a density of  $2 \times 10^4$  cells/cm<sup>2</sup>.
3. Incubate cells in a humidified incubator at 37°C with 5% CO<sub>2</sub>.
4. Monitor cell growth and morphology. Cells should reach confluence within 7-10 days.
5. Once cells are confluent, passage them into a new T25 flask.
6. For long-term storage, harvest cells and freeze them in freeze medium.
7. Thaw frozen cells and seed them into a new T25 flask.
8. Continue to monitor and passage cells as needed.

**Incubation Atmosphere**

37°C, 5% CO<sub>2</sub>, humidified

**Flask Coating**

Flask coating: 0.1% gelatin, 0.1% hyaluronic acid

**Freezing Procedure**

Freezing procedure: Harvest cells and freeze them in freeze medium at -80°C.

**Shipping Conditions**

Shipping conditions: Dry ice, -78°C

**Storage Conditions**

Storage conditions: -150 to -196°C

Human CD34<sup>+</sup> hematopoietic stem cells / hDFSC / HLA

Product sheet

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Sterility

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