



## Poietics™ Human Dental Pulp Stem Cells DPSC – Technical Sheet

### Introduction

Human Dental Pulp Stem Cells (hDPSC) are multipotent stem cells harvested from the soft living tissue inside adult teeth. These mesenchymal-like stem cells have been reported to have the potential to differentiate into a variety of cell types including osteoblasts, adipocytes, chondrocytes, and neurons. Poietics™ Dental Pulp Stem Cell System contains Normal Human Dental Pulp Stem Cells (DPSC), usually from wisdom teeth or third molars, and optimized medium for their growth. Each system can quickly generate DPSC cultures for experimental studies. Poietics™ Dental Pulp Stem Cell System is convenient and easy to use, allowing the researcher to focus on results. Cryopreserved DPSC are shipped in first passage.

Poietics™ Cells, Medium and Reagents are quality tested together and guaranteed to give optimum performance as a complete Cell System.

### Cell System Components (Sold Separately)

- One dental pulp stem cell product – (cryopreserved)
- One Dental Pulp Stem Cell Media BulletKit™ Medium - 500 ml

Poietics™ DPSC BulletKit™ (PT-3005) contains 500 ml of Dental Pulp Stem Cell Basal Medium (DPSC Basal Medium) and the following growth supplements: Dental Pulp Stem Cell Growth Supplement (DPSCGS), 50 ml; L-glutamine,

- 10.0 ml; Ascorbic Acid, 5.0 ml;  
Gentamicin/Amphotericin-B (GA), 0.5 ml.
- One ReagentPack™ (CC-3233), Containing:
  - Trypsin/EDTA 100 ml
  - Trypsin Neutralizing Solution 100 ml
  - HEPES Buffered Saline Solution 100 ml

### Characterization of Cells

Routine characterization of DPSC includes testing for surface antigens. Cells are tested for CD105<sup>+</sup>, CD166<sup>+</sup>, CD29<sup>+</sup>, CD90<sup>+</sup>, CD73<sup>+</sup>, CD133<sup>-</sup>, CD34<sup>-</sup>, CD45<sup>-</sup> by flow cytometry.

### Performance

Recommended seeding density for plating/subculture	5,000 cells/cm <sup>2</sup>
Typical time from subculture to confluent monolayer	5 - 7 days
Additional population doublings guaranteed using Poietics™ Media System	10

### Quality Control

All cells are performance assayed and test negative for HIV-1, mycoplasma, Hepatitis-B, Hepatitis-C, bacteria, yeast and fungi. Cell viability, cell number, plating efficiency, morphology and proliferative capacity are measured after recovery from cryopreservation. Poietics™ Media are formulated for optimal growth of specific types of normal human

cells. Certificates of Analysis (COA) for each cell strain are shipped with each order. COAs for all other products are available upon request.

Scientific Support, you may contact Lonza by web, e-mail, telephone, fax or mail (See page 1 for details).

## Ordering Information

### Cryopreserved Dendritic Pulp Stem Cells (Single Donor):

Cat. No.	Product	Description
PT-5025	DPSC	≥1,000,000 cells

### Dental Pulp Stem Cell Growth Media (Sold Separately):

Cat. No.	Product	Description
PT-3005	DPSC BulletKit™ Medium	500 ml DPSC Basal Medium plus PT-4105 SingleQuots™ Kit to formulate DPSC-GM Medium (growth medium)
PT-3927	DPSC Basal Medium	Dental pulp stem cell basal medium (500 ml)
PT-4516	DPSC SingleQuots™ Kit	Formulates 500 ml of DPSC Basal Medium to DPSC-GM Growth Medium; contains DPSCGS, 50 ml; L-glutamine, 10.0 ml; Ascorbic Acid, 5.0 ml; GA, 0.5 ml.

### Subculturing Reagents (Sold Separately):

Cat. No.	Product	Description
CC-3233	ReagentPack™	Provides necessary components for subculture of DPSC; contains Trypsin/EDTA Solution, 100 ml; Trypsin Neutralizing Solution (TNS), 100 ml; HEPES Buffered Saline Solution, 100 ml

## Product Warranty

Cultures have a finite lifespan *in vitro*.

Lonza guarantees the performance of its cells in the following manner only if Poietics™ Media and Reagents are used exclusively, and the recommend protocols are followed. Cryopreserved DPSC are assured to be viable and functional when thawed and maintained properly.

When placing an order or for Scientific Support, please refer to the product numbers and descriptions listed above. For a complete listing of all Poietics™ Products, refer to the Lonza website or the current Lonza catalog. To obtain a catalog, additional information or want to speak with

**THESE PRODUCTS ARE FOR RESEARCH USE ONLY.** Not approved for human or veterinary use, for application to humans or animals, or for use in clinical or *in vitro* procedures.

**WARNING: CLONETICS™ AND POIETICS™ PRODUCTS CONTAIN HUMAN SOURCE MATERIAL, TREAT AS POTENTIALLY INFECTIOUS.** Each donor is tested and found non-reactive by an FDA-approved method for the presence of HIV-1, hepatitis B virus and hepatitis C virus. Where donor testing is not possible, cell products are tested for the presence of viral nucleic acid from HIV, hepatitis B virus, and hepatitis C virus. Testing cannot offer complete assurance that HIV-1, hepatitis B virus, and hepatitis C virus are absent. All human-sourced products should be handled at the biological safety level 2 to minimize exposure of potentially infectious products, as recommended in the CDC-NIH manual, [Biosafety in Microbiological and Biomedical Laboratories](#), 5<sup>th</sup> ed. If you require further information, please contact your site safety officer or Scientific Support.

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