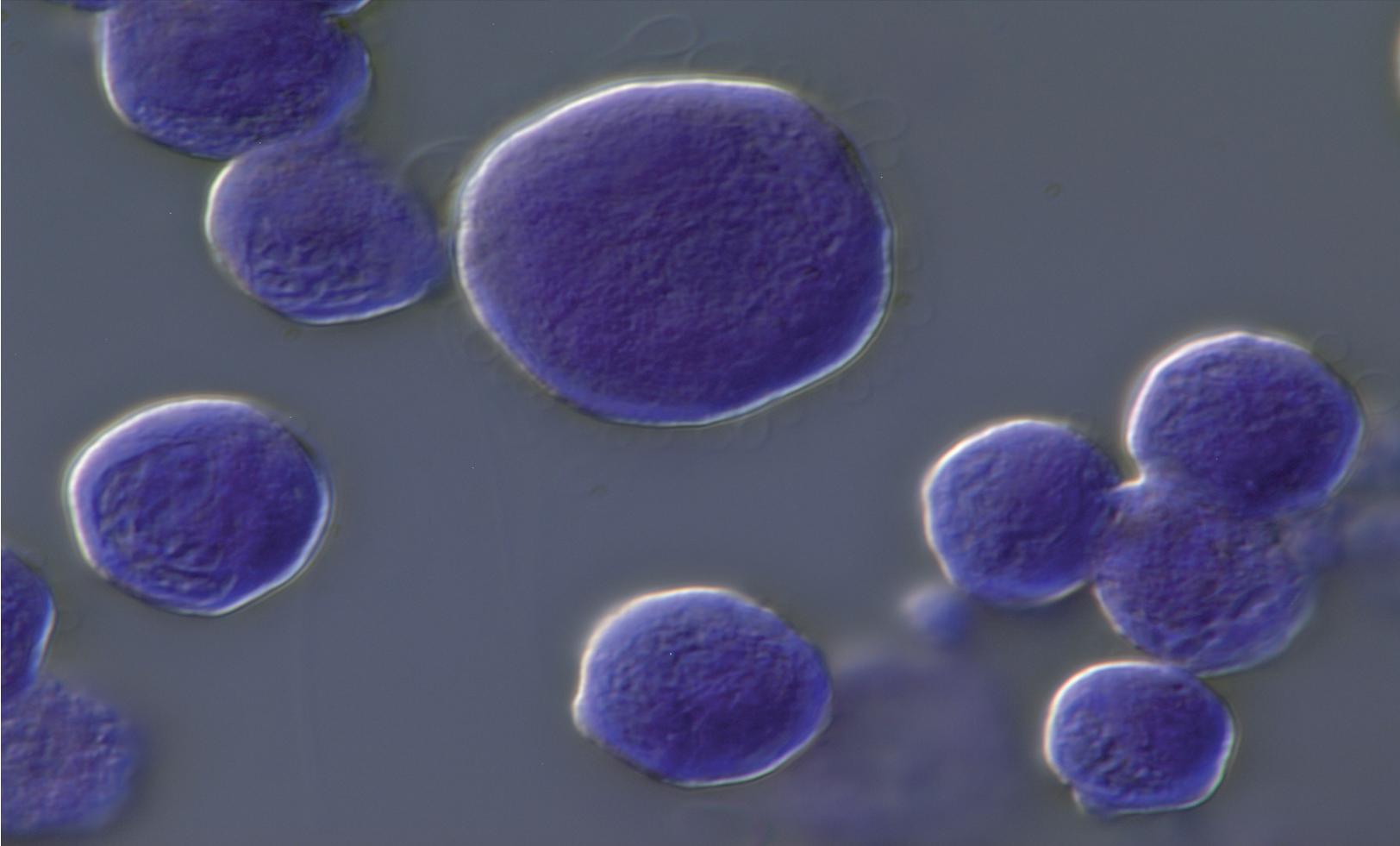


Dental Mesenchymal Stem Cells



The main characteristics of dental stem cells are their potential for multilineage differentiation and self-renewal capacity. The multipotency of dental stem cells may be attributable to their embryonic origin which is the neural crest. From the dental tissue, the following three stem cells are available:

- Stem Cells from Human Exfoliated Deciduous teeth (SHED)
- Dental Follicle Stem Cells (DFSC)
- Dental Pulp Stem Cells (DPSC)

Possible applications of these cells in various fields of medicine makes them good candidates for future research as a new, powerful tool for therapy.

Research Applications:

- Transplantation Studies
- Multilineage Differentiation
- Toxicity
- Tissue Engineering
- Study of Chronic Blood Disorders
- Cytology

For more information on other related human primary cells, please visit our website at www.allcells.com

Helping You Discover 1 x 10⁶ Cells at a Time

Stem Cells from Human Exfoliated Deciduous teeth (SHED)

SHED are considered to be the most immature of the Dental Stem Cells and show the highest proliferative capacity when grown in culture. Similar to the DPSCs from third molars, SHED are very durable in culture and can be passaged over 80 times with no detectable signs of senescence or telomere shortening.

SHED express the embryonic stem cell markers Oct-4, Nanog, the stage-specific embryonic antigens, SSEA-3 and 4, and the tumor recognition antigens TRA-1-60 and TRA-1-81.

These cells has been shown to differentiate into multiple lineages including dentinogenic, adipogenic, chondrogenic, myogenic, and neurogenic phenotypes.

Dental Follicle Stem Cells (DFSC)

The dental follicle is an ectomesenchymal tissue surrounding the enamel organ and the dental papilla of the developing tooth germ prior to eruption. The tissue contains the progenitor cells that form the periodontium.

In culture the DFSC adhere to plastic, proliferate well and like other mesenchymal stem cells, show a typical fibroblast-like morphology. DFSCs express the embryonic marker Oct-4 and the neural progenitor markers Notch-1 and Nestin.

These cells has been shown to differentiate into multiple lineages including dentinogenic, adipogenic, chondrogenic, myogenic, and neurogenic phenotypes.

Dental Pulp Stem Cells (DPSC)

Dental pulp stem cells were primarily derived from the pulp tissues of exfoliated deciduous teeth, primary incisors and permanent third molar teeth. The dental pulp, third molars in particular, have been shown to be a significant stem cell source due to greater numbers of stem cells residing in the pulp. DPSCs from third molars have been shown to express developmentally important transcription factors, such as Oct-4, Sox-2 and Nanog.

These cells are positive for CD73, CD90, CD105, and CD166, but negative for CD34, CD45, and CD133, suggesting that they are mesenchymal-like stem cells.

Ordering Information

Dental Stem Cells

Catalog No.	Description	Size
DP001F	Processed Tissue, Deciduous Teeth	Custom
DP002F	Processed Tissue, Adult 3 rd Molar	Custom
FT001F	Follicular Tissue	1 million cells
FT002F	Follicular Stem Cells	1 million cells
DP003F	Dental Pulp Stem Cells, Adult	1 million cells
DP004F	Dental Pulp Stem Cells, Deciduous Teeth	1 million cells

Contact Information

U.S.A.

Customer Service	1-888-535-3444
International	1-510-450-3900
E-mail:	info@allcells.com
Online Ordering:	www.allcells.com