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Product Information

Human Exfoliated Deciduous Teeth Stem Cells (SHED)

Catalog Number	10HU-229	Cell Number	0.5 million cells/vial
Species	*Homo sapiens*	Storage Temperature	Liquid Nitrogen

Description

Human Exfoliated Deciduous Teeth Stem Cells (SHED) were identified to be a population of highly proliferative, clonogenic cells capable of differentiating into a variety of cell types including neural cells, adipocytes, and odontoblasts. After in vivo transplantation, SHED were found to be able to induce bone formation, generate dentin, and survive in mouse brain along with expression of neural markers.

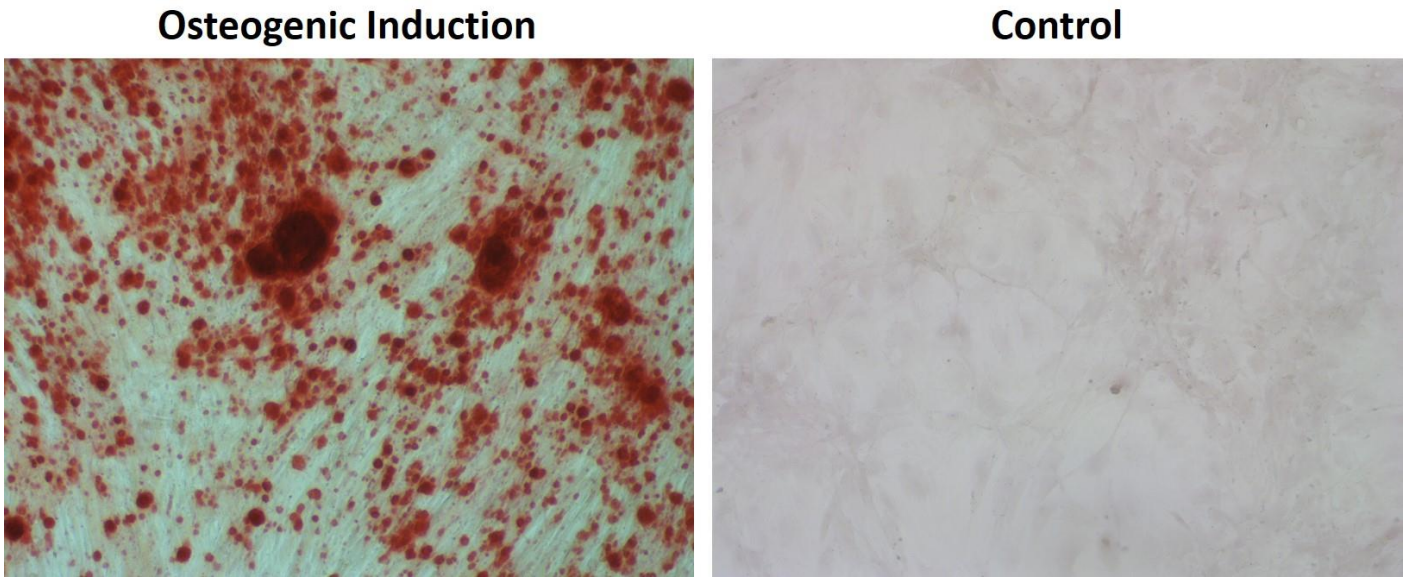

Figure 1. Human Exfoliated Deciduous Teeth Stem Cells (SHED) Osteogenic Induction (Day 24)

iXCells Biotechnologies offers Human Exfoliated Deciduous Teeth Stem Cells (SHED) isolated from exfoliated deciduous teeth of young donors. These cells are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi. SHED are guaranteed to maintain at least 15 doublings in Exfoliated Deciduous Teeth Stem Cell Growth Medium (Cat# MD-0096).

Product Details

Tissue	Exfoliated deciduous teeth of young donors
Package Size	0.5 million cells/vial
Passage Number	P2
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Exfoliated Deciduous Teeth Stem Cell Growth Medium (Cat# MD-0096)

Protocols

Standard Culture Procedure

1. Upon receipt of the frozen SHED, it is recommended to thaw the cells and initiate the culture immediately in order to retain the highest cell viability.
2. To thaw the cells, put the vial in 37°C water bath with gentle agitation for ~1 minute. Keep the cap out of water to minimize the risk of contamination.
3. Pipette the cells into a 15ml conical tube with 5ml fresh Exfoliated Deciduous Teeth Stem Cell Growth Medium (Cat# MD-0096).
4. Centrifuge at 1,000rpm (~220g) for 5 minutes at room temperature.
5. Remove the supernatant and re-suspend the cells in fresh Exfoliated Deciduous Teeth Stem Cell Growth Medium.
6. Culture the cells in one 100 mm dish or one T75 flask. Change medium every 3~4 days.
7. When cells reach >85% confluence, freeze them or subculture cells as following
8. Aspirate the culture medium and wash once with sterile PBS (5ml/T75 flask).
9. Add ~2 ml of 0.25% Trypsin-EDTA to the flask and incubate for ~3 minutes at 37°C. Neutralize the enzyme by adding 2-3 volumes of cell culture medium.
10. Centrifuge 1,000rpm (~220g) for 5min and re-suspend the cells in desired volume of medium.
11. Seed new culture vessels at 5 × 10^3 cells/cm^2.

Safety Precaution: *it is highly recommended that protective gloves and clothing should be used when handling frozen vials.*

References

[1] Arora V, Arora P, Munshi AK. Banking stem cells from human exfoliated deciduous teeth (SHED): saving for the future. J Clin Pediatr Dent. 2009 Summer;33(4):289-94.

[2] Telles PD, Machado MA, Sakai VT, Nör JE. Pulp tissue from primary teeth: new source of stem cells. J Appl Oral Sci. 2011 May-Jun;19(3):189-94.

Disclaimers

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