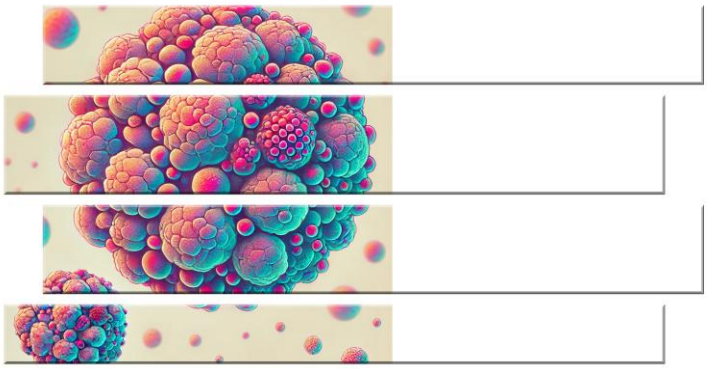

TriDix Bio
INNOVATING DRUG DISCOVERY

PRODUCT DATA SHEET

Human Dermal Spheroid

SKU: TDC-T1201

Product Details

Catalog Number: TDC-T1201

Organism: *Homo Sapiens*, Human

Cell Type: Shperoid (Keratinocytes/Fibroblasts)

Tissue: Skin

Age: Neonate

Gender: Male

Clinical Information: Healthy (with no known disease phenotypes)

Package Size: 96-well plate

Passage Number: P1

Growth Properties: 3D

Associated Media: Human Dermal Spheriod Culture Kit (Cat. # TDM-1014)

Storage Conditions & Shipment

Product Format/Shipped: Fresh / RT

Storage: 37C, 5% CO2

Safety Precaution

PLEASE READ BEFORE HANDLING ANY FROZEN VIALS. *Please wear appropriate Personal Protection Equipment (lab coat, thermal gloves, safety goggles and a face shield) when handling*

Description

Human dermal spheroids are three-dimensional (3D) cell culture models made from human dermal cells, typically human dermal fibroblasts (HDFs) or a mixture of dermal cells like keratinocytes, endothelial cells, and immune cells. These spheroids mimic key aspects of the skin's structure and function, providing a more physiologically relevant model compared to traditional 2D cell cultures. Human dermal spheroids are used in a wide range of research areas, including skin biology, wound healing, fibrosis, drug testing, and tissue engineering.

Product Data

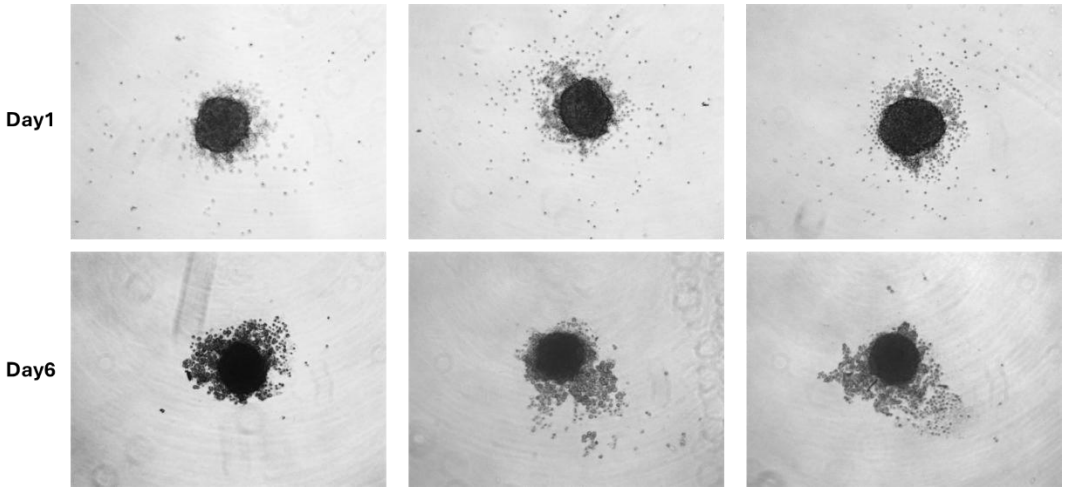

Figure 1, Phase contrast images of human dermal spheroid cultured in vitro: Dermal fibroblast and karetinocytes from the same donor were mixed and grew in Keratinocyte Growth Medium (Cat. # TDM-1016). The images above show the morphology and cellular arrangement of the dermal spheroids. They show 3D structures of aggregated cells, illustrating the size distribution and compactness of dermal spheroids.

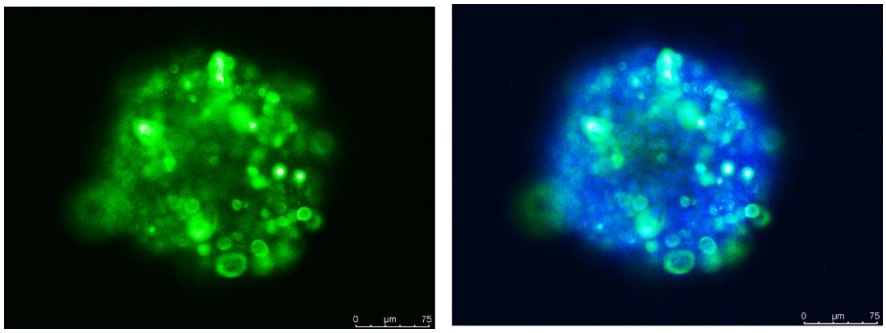

Figure 2, Cytokeratin Staining of Dermal Spheroids: The dermal spheroids were stained with Cytokeratin to visualize the presence and distribution of epithelial cells. Cytokeratin-positive cells (green) are observed throughout the spheroids, highlighting the structural integrity and cellular composition. Nuclei were counterstained with Dapi and are shown in blue (Left). The image demonstrates the organization and expression of cytokeratin filaments in the 3D culture, indicative of the epithelial nature of the spheroids. Scale bar = 75um

Applications

1. Drug Testing and Toxicity Screening
2. Wound Healing and Skin Regeneration
3. Fibrosis and Scarring
4. Tissue Engineering and Skin Substitutes
5. Skin Disease Modeling
6. Immune Response and Inflammation

Protocols

Spheroid Maintenance

1) Incubation Conditions: Spheroids are cultured at 37°C in a humidified incubator with 5% CO_2. The spheroids should be maintained in a controlled environment to ensure proper growth and prevent nutrient depletion.

2) Medium Change: The culture medium should be half-medium changed every 2-3 days to prevent accumulation of metabolic waste products and ensure adequate nutrient supply. Be sure to gently aspirate the medium to avoid disrupting the spheroids.

3) Spheroid Growth Monitoring: Spheroids should be monitored regularly for growth, morphology, and consistency. The size and shape of spheroids can provide insight into their health and quality. Spheroids typically increase in size as they aggregate and form a dense central core.

Disclaimers

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.