Mouse dermal papilla cells

Cat NO.: CP-M312

I. Product Introduction

1. **Product Name:** Mouse dermal papilla cells
2. **Tissue Source: Skin Tissue**
3. **Product specification:** 5 × 10^5cells/T25 cell culture flask
4. **Cell Profile:**

Dermal papilla cells were isolated from hair follicle tissue. Hair follicle is a continuous pouch-like epithelium formed by epidermal cells. Its base is a dermal papilla with a concave dermis, the center is a hair, one side of the arrector pili muscle is obliquely attached to the wall of the hair follicle, the upper part of the attachment point is the short neck of the sebaceous gland into the hair follicle, and the opening of the follicle on the skin surface is the follicular pore. The hair follicle is located in the dermis and subcutaneous tissue. The hair follicle extends downward into the dermis to a depth of about one centimeter. It is an organ accessory tissue with a relatively complex structure composed of an epithelial sheath surrounding the hair and connecting with the epidermis, as well as sebaceous glands and arrector pili muscles. Hair follicles are actually composed of connective tissue and epithelium. Except for the dermal papilla (dermal papilla) with connective tissue and blood vessels, the rest of the hair follicle is differentiated from epidermal cells. Dermal papilla cells are located at the base of hair follicles and are a kind of fibroblasts. In the early stage of hair follicle development, dermal cells send out the first dermal signal to the monolayer epithelial cells, which stimulates the local formation of hair basal plate. Hair basal plate cells then send out the first epidermal signal to the underlying dermis, inducing it to form an aggregated cell mass composed of fibroblasts. During this process, the hair matrix cells gradually encapsulated the aggregated cells and formed mature dermal papilla cells. As an important cell population in the hair follicle, the molecular mechanism and clinical application of dermal papilla cells are gradually understood and analyzed.

5. **Brief introduction of the method:**

The mouse dermal papilla cells isolated by the laboratory of Punocel were prepared by collagenase-neutral protease mixed digestion method, and the total amount of cells was about 5 × 105 cells/bottle.

6. **Quality inspection:**

The purity of dermal papilla cells isolated from mice in Punosai laboratory was identified by laminin immunofluorescence, and the purity was more than 90%, and it did not contain HIV-1, HBV, HCV, mycoplasma, bacteria, yeast and fungi.

7. **Training information:**

Coating conditions PLL(0.1mg/ml)
Culture medium Contains FBS, Growth Additives, Penicillin, Streptomycin, etc. Item No. CM-M312
Frequency of fluid change
Change liquid

every 2-3 days Growth characteristics Adhere to the wall
Cell morphology Passage characteristics of fusiform and polygon Passable for 1-2 generations
Passage ratio 1:2
Digestive juice 0.25% Trypsin
Culture conditions Gas phase: air, 95%; CO_2,5%

The culture cycle of dermal papilla cells in vitro is limited. It is recommended to use the special growth medium and correct operation method of Punoxicam to ensure the best culture state of the cells.

2. Cell culture status

Send electronic photos of cells at the time of shipment

III. Usage

Mouse dermal papilla cells are adherent cells, which are fusiform and polygonal in shape. Under the standard operation procedure of Puno Technology Department, the cells can be passaged for 1-2 generations. It is recommended that you perform the experiments as soon as you receive the cells.

When the customer receives the cells, follow the instructions below.

1. Take out the T25 cell culture bottle, disinfect the bottle with 75% alcohol, remove the sealing film, and put it into a cell incubator with 37 ℃, 5% CO2 and saturated humidity for 3-4 hours to stabilize the cell state.

2. **Adherent Cell Digestion**

1) Aspirate the medium from the T25 cell culture flask and wash the cells once with PBS;
2) adde 1 mL of 0. 25% trypsin digestive solution into a T25 culture flask, slightly rotating that culture flask until the digestive solution cover the whole bottom of the culture flask, sucking out excessive trypsin digestive solution, and bathing at 37 deg C for 1 to 3 minutes; Observed under an inverted microscope, after the cells were retracted and rounded, 5 ml of complete medium was added to stop digestion. 3) Gently blow and mix them with a straw, inoculate T25 culture flask for passage according to the passage ratio, then supplement fresh complete culture medium to 5 mL, and place it in a cell incubator with 37 ℃, 5% CO2 and saturated humidity for static culture; 4) aft that cells are completely adhere to the wall, culturing and observing; After that, the fresh complete medium was replaced according to the frequency of medium replacement.

3. **Cell experiments**

Due to the particularity of primary cell adherence, when the adherent primary cells are transferred to other experimental vessels (such as glass slides, culture plates, confocal culture dishes, etc.) After digestion, the experimental vessels need to be coated to enhance cell adherence and avoid the impact of cell adhesion on the experiment. Rat tail collagen I (2-5 $\mu g/cm^2$) and polylysine PLL (0.1 mg/ml) were used as coating condition), gelatin (0.1%), depending on cell type. Suspension/semi-suspension cells do not need to be coated.

IV. Precautions

1. The culture medium can be stored for 3 to 6 months at 4 deg C.
2. Please take care to maintain aseptic handling during cell culture.
3. In the process of subculture, the time of trypsin digestion should not be too long, otherwise it will affect the adherence and growth of cells.
4. It is suggested that customers take several pictures of each multiple of cells in the first three days after receiving the cells to record the cell status, so as to facilitate communication with the Puno Technology Department; Due to transportation, some sensitive cells will be unstable. Please contact us in time to inform us of the specific situation of the cells in detail, so that our technicians can follow up and pay a return visit until the

problem is solved.

5. The cells can only be used for scientific research.

Note: Due to the different reagents, operating environment and operating methods used in the experiment, the above methods are only for reference by laboratories.