Protocol for composing human skin models

ADMATRIX™

ADMATRIX™ enables you to prepare human skin models easily and handily.

ADMATRIX™ is a highly bioactive ADM (Acellular Dermal Matrix) made from tissue of normal porcine skin, which has the most similar structure to that of human skin. (Fig. 1, 2) Bearing the basement membrane, a higher attachment rate of epithelial cells is shown with **ADMATRIX™ .**

■How to make human skin models■

3-Dimentional cultured human skin equivalent with multi-layered epidermis can be composed with **ADMATRIX™** used as its scaffold. By using the both side of **ADMATRIX™** for culturing, multiple kinds of cells can be incorporated.

<Sample procedure to make cultured composite skin: Fig 3>

1. Place **ADMATRIX™** set in a culture insert into a 6-well plate, with the dermal side up, and its backings – the filter paper sheets— attached on the both sides. Seed human fibroblasts (1 x 10^5 cells/mL) onto the surface of **ADMATRIX™** . SFM medium added with 5% FCS is to be used as culture medium.

2. Incubate for more than one day, and then turn the **ADMATRIX™** back over inside the culture insert placed in the 6-well plate. Seed human keratinocytes (1 x 10^5 cells /mL) onto the basement membrane side of **ADMATRIX™ ,** and use SFM medium added with 1% FCS as culture medium.

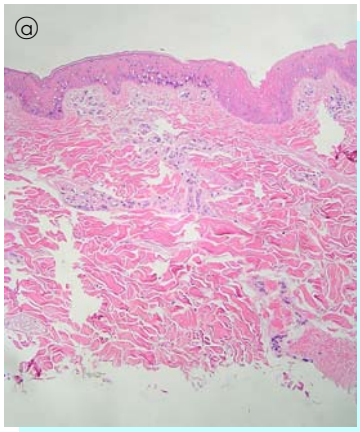
3. Incubate for 3 days with this medium by liquid phase culture. Then, prepare the culture medium containing SFM and D-MEM at the proportion of 1:1 added with 5% FCS, and with which go on to liquid-phase culture for 24 hours to induce the differentiation of keratinocytes.

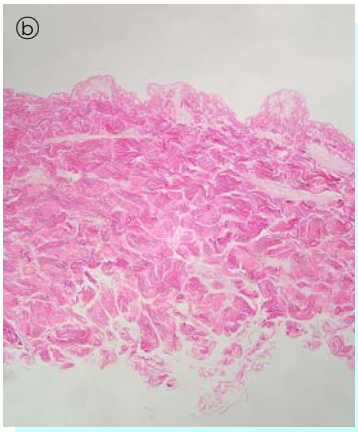
4. Exposure the surface of **ADMATRIX™** to the air, and continue incubation along with the same culture medium and air-liquid interface culture for 1 week to induce keratinocytes to become multi-layered.

ADMATRIX® *Application Note* I

human skin models composed with ADMATRIX™

Fig.1: ADMATRIX™ made from porcine skin tissue, HE stained (x100)

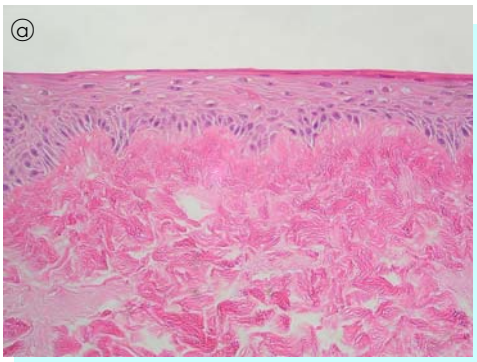


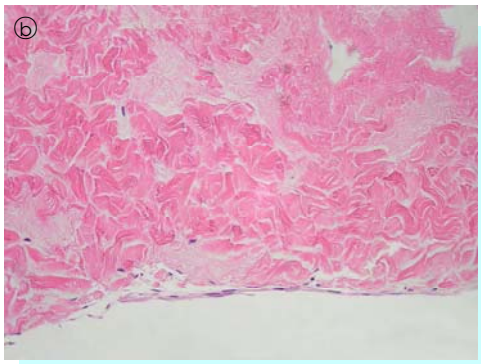


a: Normal porcine skin tissue **b: ADMARIX™**

Fig.2 : ADMATRIX™ porcine type IV collagen, stained (x200)

Fig.3 : human skin model composed from ADMATRIX™ , HE stained (x200)





a: Human keratinocytes (ADMATRIX™, basement membrane side)
b: Human fibroblasts (ADMADRIX™ dermal side)

This product is for RESEARCH USE ONLY. DO NOT use for any other purpose.

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