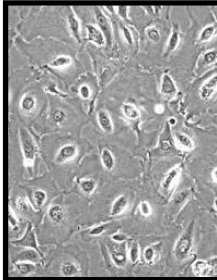


**PULMONARY SYSTEM INNOPROFILE™**  
**HUMAN PULMONARY ALVEOLAR EPITHELIAL CELLS**



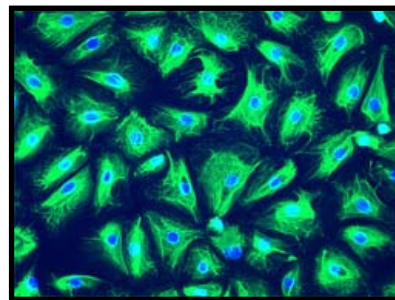
<b>Product Type:</b>	Cryo-preserved Alveolar Epithelial Cells
<b>Catalog Number:</b>	P10556
<b>Source:</b>	Human Lung
<b>Number of Cells:</b>	1 x 10 <sup>6</sup> Cells / vial (1ml)
<b>Storage:</b>	Liquid Nitrogen

Human Pulmonary Alveolar Epithelial Cells (HPAEpiC) provided by Innoprot are isolated from human lung tissue. HPAEpiC are cryopreserved at primary culture and delivered frozen. HPAEpiC are guaranteed to further culture at the conditions provided by Innoprot. **However, this cell type is not recommend for expanding or long term cultures since the cells would differentiate to become type I alveolar epithelial cells immediately after plating and type I alveolar epithelial cells do not proliferate in culture.**

PAEpiC comprised of alveolar type I and type II epithelial cells, line more than 99% of the internal surface area of the lung. Type I cells are large squamous cells whose thin cytoplasmic extensions cover >95% of the internal surface area. They contain aquaporins and exhibit the highest osmotic water permeability of any mammalian cell type. Type II cells, which cover 2-5% of the surface area, produce, secrete, and recycle pulmonary surfactant.

 **Recommended Medium**

- Alveolar Epithelial Cell Medium (Reference: P60102)



 **Product Characterization**

Immunofluorescent method

- Cytokeratin-18
- Cytokeratin-19
- Vimentin

The cells test negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast and fungi

 **Product Use**

THESE PRODUCTS ARE FOR RESEARCH USE ONLY. Not approved for human or veterinary use, for application to humans or animals, or for use in vitro diagnostic or clinical procedures

## INSTRUCTIONS FOR CULTURING CELLS

**IMPORTANT:** Cryopreserved cells are very delicate. Thaw the vial in a 37 °C waterbath and return them to culture as quickly as possible with minimal handling!

### Set up culture after receiving the order:

1. Prepare a poly-L-lysine-coated culture vessel (2 µg/cm<sup>2</sup>, T-75 flask is recommended). Add 10 ml of sterile water to a T-75 flask and then add 150 µl of poly-L-lysine stock solution (1 mg/ml, Cat. PLL). Leave the vessel in a 37°C incubator overnight (or for a minimum of one hour).
2. Prepare complete medium. Decontaminate the external surfaces of medium bottle and medium supplement tubes with 70% ethanol and transfer them to a sterile field. Aseptically transfer supplement to the basal medium with a pipette. Rinse the supplement tube with medium to recover the entire volume.
3. Rinse the poly-L-lysine-coated vessel twice with sterile water and then add 15 ml of complete medium. Leave the vessel in the sterile field and proceed to thaw the cryopreserved cells.
4. Place the frozen vial in a 37°C water bath. Hold and rotate the vial gently until the contents completely thaw. Promptly remove the vial from the water bath, wipe it down with 70% ethanol, and transfer it to the sterile field.
5. Carefully remove the cap without touching the interior threads. Gently resuspend and dispense the contents of the vial into the equilibrated, poly-L-lysine-coated culture vessel. A seeding density of 10,000-15,000 cells/cm<sup>2</sup> is recommended.

Note: Dilution and centrifugation of cells after thawing are not recommended since these actions are more harmful to the cells than the effect of residual DMSO in the culture. It is also important that cells are plated in poly-L-lysine-coated culture vessels to promote cell attachment.

6. Replace the cap or lid of the culture vessel and gently rock the vessel to distribute the cells evenly. Loosen cap, if necessary, to allow gas exchange.
7. Return the culture vessel to the incubator.
8. For best results, do not disturb the culture for at least 16 hours after the culture has been initiated. Refresh culture medium the next day to remove residual DMSO and unattached cells, then every other day thereafter.

### Maintenance of Culture:

1. Refresh supplemented culture medium the next morning after establishing a culture from cryopreserved cells.
2. Change the medium every three days thereafter.

**HPAEpiC are not recommended to be subcultured because this cell type will terminally differentiate in long-term cultures.**

**Caution:** Handling human derived products is potentially biohazardous. Although each cell strain testes negative for HIV, HBV and HCV DNA, diagnostic tests are not necessarily 100% accurate, therefore, proper precautions must be taken to avoid inadvertent exposure. Always wear gloves and safety glasses when working these materials. Never mouth pipette. We recommend following the universal procedures for handling products of human origin as the minimum precaution against contamination [1].

- [1]. Grizzle, W. E., and Polt, S. S. (1988) Guidelines to avoid personal contamination by infective agents in research laboratories that use human tissues. *J Tissue Culture Methods*. 11(4).