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Product Information

Human Pulmonary Artery Endothelial Cells (HPAECs)

Catalog Number	10HU-029	Cell Number	0.5 x 10^6 cells/vial
Species	*Homo sapiens*	Storage Temperature	Liquid Nitrogen

Description

The pulmonary vasculature is of great physiological/pathological significance. Human Pulmonary Artery Endothelial Cells (HPAECs) are critical to maintain the function of the pulmonary circulation and effective diffusion capacity of the lung. HPAECs provide a useful tool for studying various aspects of pathology and biology of the lung vasculature *in vitro* [1].

iXCells Biotechnologies provides high quality HPAEC, which are isolated from human pulmonary artery from single donors and cryopreserved at P2, with >0.5 million cells in each vial. HPAEC express vWF/Factor VIII and CD31 (Figure 1B & 1C) and are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi. They can further expand for 12 population doublings in Endothelial Cell Growth Medium (Cat# MD-0010) under the condition suggested by iXCells Biotechnologies.

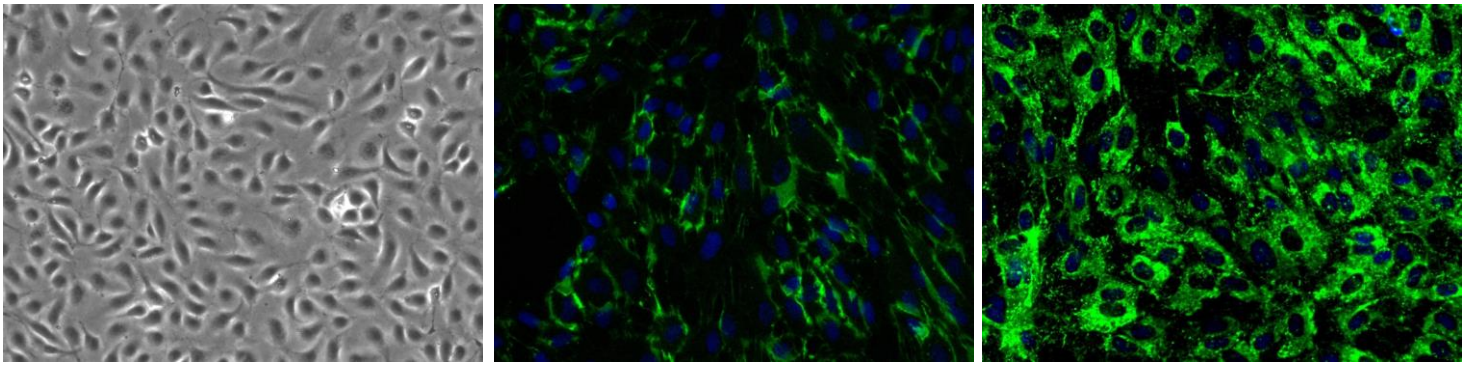

Figure 1. (A) HPAEC Phase contract **(B)** HPAEC CD31 staining (C). HPAEC vWF staining

Product Details

Tissue	Human pulmonary artery
Package Size	0.5 x10^6 cells/vial
Passage Number	P2
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Endothelial Cell Medium (Cat# MDECM)

Protocols

Thawing of Frozen Cells

1. Upon receipt of the frozen cells, 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 Endothelial Cell Medium (Cat# MD-0010).
4. Centrifuge at 1000rpm (~220g) for 5 minutes under room temperature.
5. Remove the supernatant and resuspend the cells in fresh culture medium.
6. Culture the cell in T75 flask.

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

Standard Culture Procedure

1. HPAEC can be cultured in Endothelial Cell Medium (Cat# MD-0010).
2. When cells reach ~80-90% confluence, remove the medium, and wash once with sterile PBS (5ml/T75 flask).
3. Add ~2.5 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.
4. Centrifuge 1,000 rpm (~220 g) for 5 min and resuspend the cells in desired volume of medium.
5. Seed the cells in the new culture vessels at 5 × 10^3 cells/cm^2.

Reference

[1] Meuchel LW, Thompson MA, Cassivi SD, Pabelick CM and Prakash YS. Neurotrophins induce nitric oxide generation in human pulmonary artery endothelial cells. Cardiovasc Res. 2011; 91(4): 668-676.

Disclaimers

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