

## Product Information

### Human Lung Microvascular Endothelial Cells (HLMVECs)

Catalog Number	10HU-030	Cell Number	0.5 x 10 <sup>6</sup> cells/vial
Species	<i>Homo sapiens</i>	Storage Temperature	Liquid Nitrogen

### Description

The pulmonary vasculature is of great physiological/pathological significance. Human Lung Microvascular Endothelial Cells (HLMVECs) play an important role in regulating lung function. HLMVECs provide a useful tool for studying various aspects of pathology and biology of the pulmonary microvasculature *in vitro* <sup>[1]</sup>.

iXCells Biotechnologies provides high quality HLMVEC, which are isolated from human lung tissue from a single donor and cryopreserved at P2, with >0.5 million cells in each vial. HLMVEC express vWF/Factor VIII and CD31 (PECAM). They are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi and can further expand for 5 population doublings in Endothelial Cell Growth Medium (Cat# MD-0010) under the condition suggested by iXCells Biotechnologies.

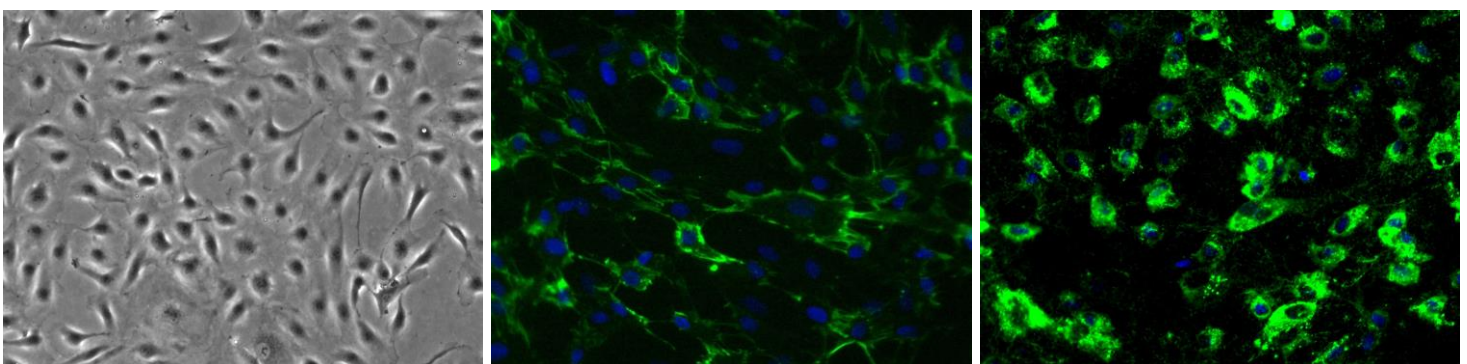


Figure 1. (A) HLMVEC Phase contract

(B) HLMVEC CD31 staining

(C) HLMVEC vWF staining

## Product Details

<b>Tissue</b>	Human lung tissue
<b>Package Size</b>	0.5 x10 <sup>6</sup> cells/vial
<b>Passage Number</b>	P2
<b>Shipped</b>	Cryopreserved
<b>Storage</b>	Liquid nitrogen
<b>Growth Properties</b>	Adherent
<b>Media</b>	Endothelial Cell Growth Medium (Cat# MD-0010)

## 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 15 ml conical tube with 5ml fresh Endothelial Cell Growth Medium (Cat# MD-0010).
4. Centrifuge at 1,000rpm (~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. HLMVECs can be cultured in Endothelial Cell Growth 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 ~2.5ml 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 1,000rpm (~220g) for 5min and resuspend the cells in desired volume of medium.
5. Seed the cells in the new culture vessels at  $5 \times 10^3$  cells/cm<sup>2</sup>.

## Reference

[1] Pacurari M, Qian Y, Fu W, Schwegler-Berry D, Ding M, Castranova V and Guo NL. Cell permeability, migration, and reactive oxygen species induced by multiwalled carbon nanotubes in human microvascular endothelial cells. J Toxicol Environ Health A. 2012; 75(3): 129-147.

## Disclaimers

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