

## Product Information

### Human Coronary Artery Endothelial Cells (HCAECs)

Catalog Number	10HU-028	Cell Number	0.5 million cells/vial
Species	<i>Homo sapiens</i>	Storage Temperature	Liquid Nitrogen

### Description

Human Coronary Artery Endothelial Cells (HCAECs) line the vessel wall of coronary artery. They are extremely important in regulation of coronary blood flow and cardiac function. HCAEC has been used as a valuable *in vitro* model system to study the cardiovascular diseases such as thrombosis, atherosclerosis, hypertension, coronary artery diseases <sup>[1]</sup> and diabetes-related cardiovascular diseases <sup>[2]</sup>.

**iXCells Biotechnologies** provides high quality HCAECs, which are isolated from human coronary artery from single donors and cryopreserved at P2, with  $\geq 0.5$  million cells in each vial. These HCAECs express vWF/Factor VIII, VE-Cadherin, and CD31. They are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi and can further expand no more than 3 passages in **Endothelial Cell Growth Medium** (Cat# MD-0010) under the condition suggested by iXCells Biotechnologies.

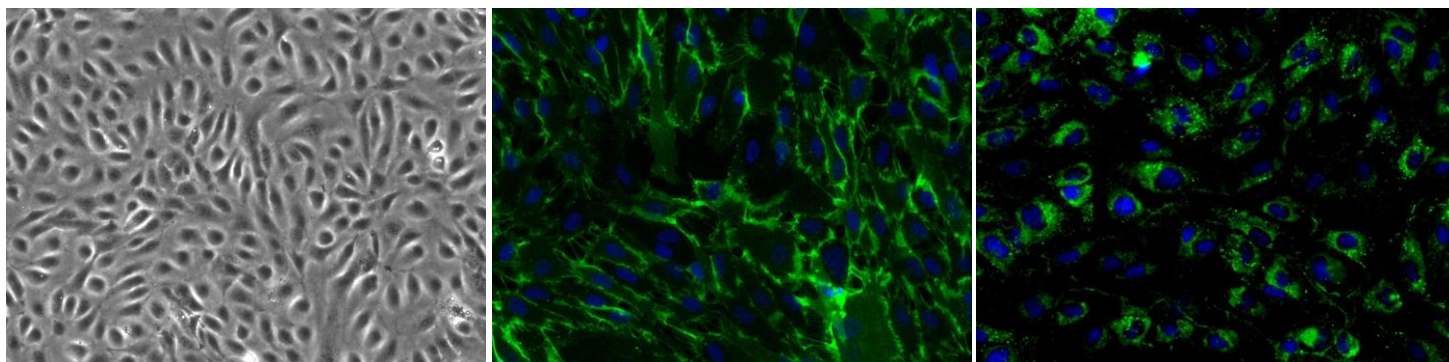


Figure 1. (A) HCAEC Phase contract

(B) HCAEC CD31 staining

(C). HCAEC vWF staining

## Product Details

<b>Tissue</b>	Human coronary artery
<b>Package Size</b>	0.5 million 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 1-2 minute. Keep the cap out of water to minimize the risk of contamination.
3. Pipette the cells into a 15 mL conical tube with 5 mL fresh Endothelial Cell Growth Medium (Cat# MD-0010).
4. Centrifuge at 1,000 rpm (~220 g) 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. Change the medium every other day until the cells reach about 80-90% confluency.

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

### Standard Culture Procedure

1. HCAECs can be cultured in the optimized Endothelial Cell Growth Medium (Cat# MD-0010).
2. When cells reach ~80-90% confluence, remove the medium, and wash once with sterile PBS (5 mL/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 1,000rpm (~220 g) for 5 minutes 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>. Change the medium every other day until the cells reach about 80-90% confluency.

## Reference

- [1] Besler C, et al and Landmesser U. Mechanisms underlying adverse effects of HDL on eNOS-activating pathways in patients with coronary artery disease. J Clin Invest. 2011; 121 (7): 2693-2708.
- [2] Eriksson L and Nystrom T. Activation of AMP-activated protein kinase by metformin protects human coronary artery endothelial cells against diabetic lipoapoptosis. Cardiovasc Diabetol. 2014; 13:152

## Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans. While iXCells Biotechnologies uses reasonable efforts to include accurate and up-to-date information on this product sheet, we makes no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. iXCells Biotechnologies does not warrant that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, and use. iXCells Biotechnologies is not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to insure authenticity and reliability of strains on deposit, iXCells Biotechnologies is not liable for damages arising from the misidentification or misrepresentation of cultures.  
© iXCells Biotechnologies 2015. All rights reserved.