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Product Information

Human Coronary Artery Endothelial Cells (HCAECs)

Catalog Number	10HU-027	Cell Number	0.5 x 10^6 cells/vial
Species	*Homo sapiens*	Storage Temperature	Liquid Nitrogen

Description

Human Coronary Artery Endothelial Cells (HCAEC) 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 [1] and diabetes-related cardiovascular diseases [2].

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

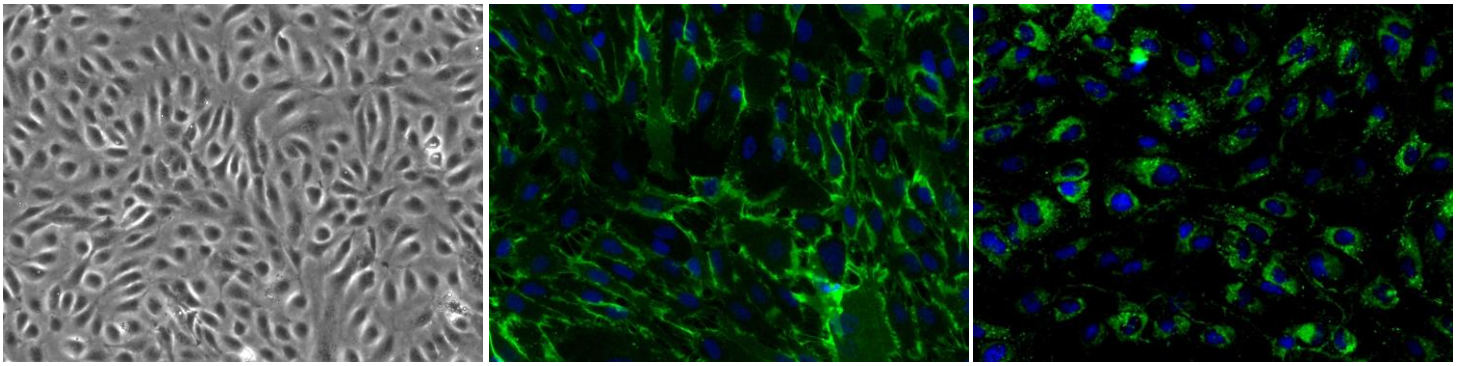

Figure 1. (A) HCAEC Phase contract **(B)** HCAEC CD31 staining (C). HCAEC vWF staining .

Product Details

Tissue	Human coronary 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# MDECM).
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. HCAECs can be cultured in the optimized ready-to-use Endothelial Cell Medium (Cat# MDECM).
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 1000rpm (~220g) for 5min 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] 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

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