

India Contact:

Life Technologies (India) Pvt. Ltd.
Mobile: +91-9810521400, Ph: +91-11-42208000
Email: customerservice@lifetechindia.com
Web: www.lifetechindia.com

Product Information

Porcine Aorta Endothelial Cells (PAECs)

Catalog Number	10PO-001	Cell Number	0.5 x 10 ⁶ cells/vial
Species	<i>Sus scrofa</i>	Storage Temperature	Liquid Nitrogen

Description

Porcine Aorta Endothelial Cells (PAECs) line the vessel wall of aorta, and are constantly exposed to high hemodynamic forces. They produce endothelium-derived substances regulating vasoconstriction and vessel growth^[1]. PAECs also modulate the expression of cellular adhesion molecules to control and fine-tune inflammatory responses and fibrinolysis^[2]. These physiological properties allow PAEC cultures to be widely used in the study of mechanisms for endothelium dysfunction, pathogenesis of vascular diseases and atherosclerosis, and the development of novel disease treatments.

iXCells Biotechnologies provides high quality PAEC, which are isolated from porcine aorta and cryopreserved at P2, with >0.5 million cells in each vial. PAEC express CD31 and vWF/Factor VIII. They are negative for mycoplasma, bacteria, yeast, and fungi and can further expand for 14 population doublings in Endothelial Cell Growth Medium (Cat# MD-0010) under the condition suggested by iXCells Biotechnologies.

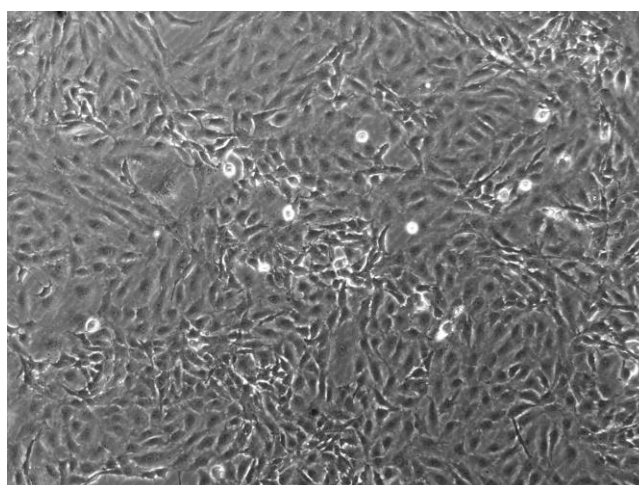


Figure 1. Porcine Aorta Endothelial Cells (PAECs).

Product Details

Tissue	Porcine aorta
Package Size	0.5x10 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. PAECs can be cultured in 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 new culture vessels at 5×10^3 cells/cm².

References

- [1] Ando J, and Kamiya A. Flow-dependent regulation of gene expression in vascular endothelial cells. *Heart J.* 1996; 37:19-32.
- [2] Wynants M, et al and Quarck R. NF-kB pathway is involved in CRP-induced effects on pulmonary arterial endothelial cells in chronic thromboembolic pulmonary hypertension. *Am J Physiol Lung Cell Mol Physiol.* 2013; 305(12): L934-942.

Disclaimers

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