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Product Information

Mouse Aortic Endothelial Cell (MAOEC)

Catalog Number	10MU-002	Cell Number	0.5 million Cells/vial
Species	<i>Mus musculus</i>	Storage Temperature	Liquid Nitrogen

Product Description

Mouse Aortic Endothelial Cells (MAOEC) 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]. MAOEC also modulate the expression of cellular adhesion molecules to control and fine-tune inflammatory responses and fibrinolysis [2]. These physiological properties allow MAOEC 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 Mouse Aortic Endothelial Cells (MAOEC), which are isolated mouse aorta and cryopreserved at P2, with ≥ 0.5 million cells in each vial. MAOEC express vWF/Factor VIII, CD31 (PECAM) and Dil-Ac-LDL by uptake. These MAOEC are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi and can further expand for no more than 3 passages in **Endothelial Cell Growth Medium (Cat# MD-0010)** under the condition suggested by iXCells Biotechnologies. Further expansion may decrease the purity.

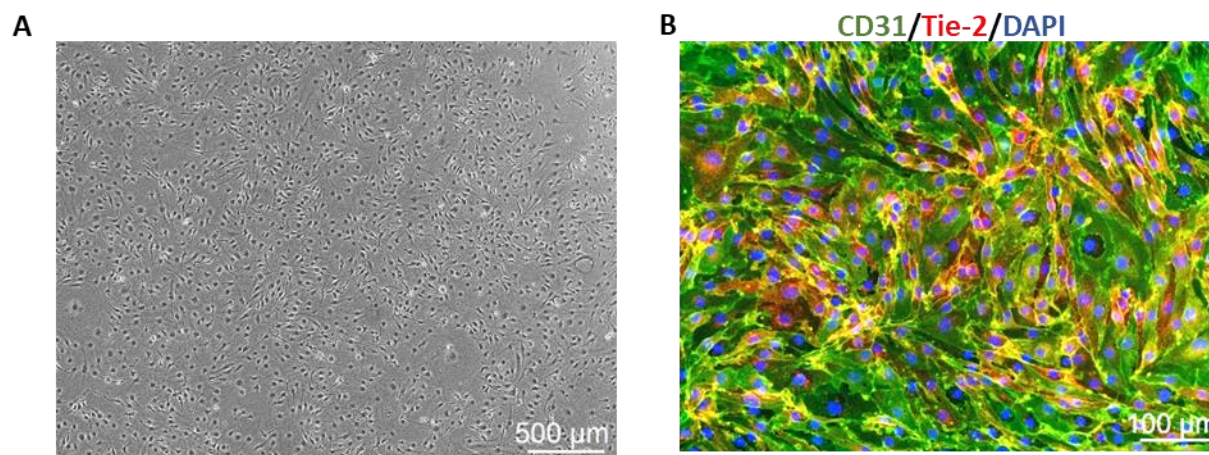


Figure 1. Mouse aortic endothelial cells (MAOEC). **(A)** Phase contrast image of MAOEC. **(B)** Immunofluorescence staining with antibody against CD31 and Tie-2.

Product Details

Tissue	Aorta of C57BL/6 mice
Package Size	0.5 million cells/vial
Passage Number	P2
Shipped	Cryopreserved
Growth Properties	Adherent
Media	Endothelial Cell Growth Medium (Cat# MD-0010)

Protocols

Thawing of Frozen Cells

1. Upon receipt of the frozen Mouse Aortic Endothelial Cell (MAOEC), 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 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 Endothelial Cell Growth Medium.
6. Culture the cell in 100 mm culture dish or T75 flask. Change the medium every other day till the cells reach about 80-90% confluency.

Standard Culture Procedure

1. Mouse Aortic Endothelial Cell (MAOEC) 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 (5 mL for one T75 flask).
3. Add 3 mL of 0.25% Trypsin-EDTA to the flask and incubate for 5 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 minutes and resuspend the cells in desired volume of medium.
5. Seed the cells in the new culture vessels at 1×10^4 cells/cm². Change the medium every other day until cells reach 80-90% confluence.

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

References

- [1] Ando J, and Kamiya A. Flow-dependent regulation of gene expression in vascular endothelial cells. Heart J. 1996; 37:19-32.
- [2] Nishiyama T, et al and Saito I. Functional analysis of an established mouse vascular endothelial cell line. J Vasc Res. 2007;44(2):138-148

Disclaimers

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