

Endothelial Cell Growth Medium

SKU: MD-0010

PRODUCT SHEET

Product Description

Endothelial cells form a single cell layer that lines all blood vessels and regulates exchanges between the bloodstream and other cellular parts of the blood vessels as well as the surrounding tissues ^[1]. Endothelial Cell Growth Medium is uniquely designed to promote primary endothelial cell proliferation *in vitro*. Primary endothelial cells can be isolated from umbilical vein, aorta, pulmonary arteries, brain vascular tissue, intestinal tissue, spleen tissue, liver sinusoidal tissue, and dermal vascular tissue. These cells generally express some common endothelial cell markers such as CD31, VE-Cadherin, and von Willebrand factor (vWF). They might also express some specific markers that reflect their tissue origin, such as SE-1 for Hepatic sinusoidal endothelial cells ^[2]. Primary endothelial cells are commonly used for the study of physiological or pathological processes involving the blood vessels, such as molecular exchanges, drug toxicity, and angiogenesis.

iXCells® Endothelial Cell Growth Medium (SKU: MD-0010), containing the Endothelial Cell Basal Medium (Cat# MD-0010B) and Endothelial Cell Growth Supplement (ECGS, Cat# MD-0010S), is formulated to support the expansion of primary endothelial cells isolated from human as well as other mammalian species (mouse, rat, bovine, etc.) under low-serum conditions *in vitro*, which provides the researchers a more controlled and defined system. This medium has been tested for its ability to support the *in vitro* endothelial cell growth and to maintain the endothelial specific markers, such as CD31+, vWF, VE-Cadherin of multiple types of endothelial cells. This medium has also been tested in some specialized or customized culture system to support the early differentiation or expansion of other primary cell types that relates to the vascular system, such as Mouse Brain Vascular Pericytes (MBVP, SKU: 10MU-014).

For Research Use Only

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RELATED PRODUCTS



Human Aortic Endothelial Cells
(HAOEC)

SKU: 10HU-020



Human Umbilical Vein
Endothelial Cells (HUVEC)

SKU: 10HU-012

SKU	MD-0010				
Country of manufacture	United States of America (USA)				
Quantity	One kit				
Form	Liquid				
Component, Package and Storage	Component	Name	Size	Shipping	Storage
	<u>MD-0010B</u>	Endothelial Cell Basal Medium	250 mL	Room temperature	4°C
	<u>MD-0010S</u>	Endothelial Cell Growth Supplements (ECGS) (50X)	5 mL	Dry ice	-20°C
	<i>Note: The components for this kit require different shipping temperatures and will arrive in separate packaging.</i>				
Sterility Test	Negative for bacteria, yeast, fungi, and mycoplasma.				
Product line	• Mammalian cells • Primary cells • Low serum (Fetal bovine serum, final concentration is ≤ 2%) • With phenol red • Antibiotics is not included in the kit				
Product use	• Do not use components that are beyond the expiration date indicated on the label. • Tested in the iXCells primary endothelial cells following the recommended protocol in a 37 °C, 5% CO₂ incubator. • For laboratory research use only. Not for use in Diagnostic procedures. • Results may vary due to variations among species, organ or tissue origin, and donors. • Results may vary due to different culture conditions including temperature, CO₂ concentration, culture vessels, coating conditions, medium adding amount, and medium change frequency. For certain culture or test conditions, please follow the culture protocol for each specific cell type. • It is not approved for human or animal use. • Penicillin-Streptomycin, Antibiotics and antimycotics, or other antibiotics can be optional in the culture media. iXCells in house cell culture test was performed under antibiotics free condition for >=3 days by following the recommended protocol, and no bacterial or fungi contamination were observed during the culture period.				
Precaution	• When handling biohazardous materials such as cryopreserved cells, safe laboratory procedures should be followed, and personal protective equipment should be worn including but not limited to face masks, gloves, and lab coat.				

References

- [1] Alberts B, Johnson A, Lewis J, et al. Molecular Biology of the Cell. 4th edition. New York: Garland Science; 2002.
- [2] Goncharov NV, Popova PI, Avdonin PP, Kudryavtsev IV, Serebryakova MK, Korf EA, Avdonin PV. Markers of Endothelial Cells in Normal and Pathological Conditions. Biochem (Mosc) Suppl Ser A Membr Cell Biol. 2020;14(3):167-183. doi: 10.1134/S1990747819030140. Epub 2020 Oct 13. PMID: 33072245; PMCID: PMC7553370.

Disclaimers

This product is for laboratory research purposes only and should not be used in humans. While iXCells Biotechnologies strives to provide accurate and current information on this product sheet, we do not guarantee its accuracy. Citations from scientific literature and patents are for informational purposes and may not be confirmed as accurate.

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