

Endothelial cell culture

By Christian Gojak, PromoCell

The *in vitro* culture of primary human endothelial cells is a widely established model system used to investigate several cardiovascular diseases and cancer research applications. Our comprehensive endothelial cell culture portfolio consists of 12 different types of large vessel and microvascular human endothelial cells with optimized growth media for each cell type.

TISSUE SOURCES AND DONOR INFORMATION

PromoCell large vessel endothelial cells are available from the umbilical vein and artery, the aorta, the coronary artery, the pulmonary artery, and the saphenous vein. Our microvascular endothelial cells are available from dermal, lung, cardiac and uterine tissues. All our cell types are sourced from healthy, consented donors. Specific donor information like age, sex and tissue location is available for each produced lot. Endothelial cells from diseased donors (e.g., diabetes, myopathies) are available upon request.

QUALITY CONTROL

Each produced cell lot is tested for cell morphology, adherence rate, cell viability, flow cytometric analyses for cell-type specific markers, e.g., von Willebrand Factor (vWF) and CD31, as well as Dil-Ac-LDL uptake. Growth performance is tested through multiple passages up to 15 population doublings (PD) under culture conditions without antibiotics and antimycotics. In addition, all cells have been tested for the absence of HIV-1, HIV-2, HBV, HCV, HTLV-1, HTLV-2 and microbial contaminants (fungi, bacteria, and mycoplasma).

CELL CULTURE MEDIA – OPTIMIZED FOR EACH CELL TYPE

Just like the cellular microenvironment is different for large and microvascular vessels, such are their media requirements. At

PromoCell we have developed optimized growth media for both large vessel and microvascular endothelial cell types. In addition, we offer media formulations with and without Endothelial Cell Growth Supplement (ECGS), a bovine hypothalamic extract traditionally used for cultivating endothelial cells without added VEGF. Generally, VEGF leads to higher endothelial cell proliferation in culture. But, because of its multiple effects on the cell metabolism, it may also interfere with certain experimental setups.



For information on additional types of endothelial cells, contact your VWR Life Science Specialist

Human Primary Endothelial Cells — 500,000 Cryopreserved Cells		
Human aortic endothelial cells (HAoEC)	10171-970	Each
Human umbilical vein endothelial cells (HUVEC), pooled donors	10171-910	Each
Human umbilical vein endothelial cells (HUVEC), single donor	10171-906	Each
Human coronary artery endothelial cells (HCAEC)	10171-940	Each
Endothelial Cell Growth Media, 500 mL		
Endothelial Cell Growth Medium Kit	10172-288	Each
Endothelial Cell Growth Medium MV Kit	10172-292	Each
Endothelial Cell Growth Medium MV 2 Kit	10175-256	Each
Endothelial Cell Basal Medium, Phenol Red-Free	10175-266	Each