Product Description

Microvascular endothelial cells line blood vessels and contribute to many biological processes such as angiogenesis, coagulation, trafficking of lymphocytes, and the inflammatory response. Microvascular endothelial cells are diverse and have specific cellular characteristics and functions depending on the organ/tissue in which they are located. Adipose tissue is unique because it has the capacity to continually grow throughout adult life. Thus, it has a high level of angiogenesis to provide the extensive vascularization required for adipose tissue [1]. Studies have shown that angiogenesis precedes adipogenesis, implying that microvascular endothelial cells influence the proliferation of preadipocytes [2]. At the same time, microvascular endothelial cell growth is stimulated by adipocyte secreted VEGG, suggesting a complex paracrine relationship between microvascular endothelial cells and preadipocytes during tissue development [3].

iXCells Biotechnologies provides high quality Human Adipose Microvascular Endothelial Cells (HAMEC), which are isolated from human adipose tissue and cryopreserved at P2, with >0.5 million cells in each vial. These HAMEC express vWF/Factor VIII, CD31 (PECAM), and Dil-Ac-LDL by uptake. They are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi. HAMEC can further expand for 10 population doublings in Endothelial Cell Growth Medium (Cat# MD-0010) under the condition suggested by iXCells Biotechnologies.

Product Details

Tissue	Human adipose tissue
Package Size	0.5 million cells/vial
Passage Number	P2
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Endothelial Cell Growth Medium (Cat# MD-0010)

References

[1] Crandall D.L., Hausman G.J., Kral J.G. (1997) A review of the microcirculation of adipose tissue: anatomic, metabolic, and angiogenic perspectives. Microcirculation 4(2):211-32
[2] Hutley, L. J., Herington, A. C., Shurety, W., Cheung, C., Vesey, D. A., Cameron, D. P., Prins, J. B. (2000) Human adipose tissue endothelial cells promote preadipocyte proliferation. American Journal of Physiology: Endocrinology and Metabolism. 281(5):E1037-E1044
[3] Hausman, G. J., Richardson, R. L. (2004) Adipose tissue angiogenesis. Journal of Animal Science. 82(3): 925-934

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