Product Description

Endothelial cells lining the microvasculature are known to play a critical “gatekeeper” role in the inflammatory process through their ability to recruit circulating immune cells into tissues and foci of inflammation. Studies show that intestinal microvascular endothelial cells exhibit a strong immune response to LPS challenge and play a critical regulatory role in gut inflammation [1]. Pharmacological inhibition of NOS in activated intestinal microvascular endothelial cells resulted in a significant increase in leukocytes binding [2]. Gene expression profile studies revealed that intestinal endothelial cells express biotinidase, which is involved in biotin recycling [3]. Human colonic microvascular endothelial cell (HCoMEC) cultures have enabled scientists to perform systematic analyses of cytokine profiles with regard to mRNA expression and protein secretion, and to compare these data with cytokine profiles from other endothelial cells.

iXCells Biotechnologies provides high quality HCoMEC, which are isolated from human colonic tissue and cryopreserved at P1, with >0.5 million cells in each vial. These HCerMEC 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 and 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 colonic tissue
Package Size	0.5 million cells/vial
Passage Number	P1
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Endothelial Cell Growth Medium (Cat# MD-0010)

References

[1]. Ogawa, H., Rafiee, P., Heidemann, J., Fisher, P. J., Johnson, N. A., Otterson, M. F., Kalyanaraman, B., Pritchard, K. A. Jr., Binion, D. G. (2003) Mechanisms of endotoxin tolerance in human intestinal microvascular endothelial cells. J Immunol. 170(12):5956-64.
[2]. Binion, D. G., Fu, S., Ramanujam, K. S., Chai, Y. C., Dweik, R. A., Drazba, J. A., Wade, J. G., Ziats, N. P., Erzurum, S. C. and Wilson, K. T. (1998) iNOS xpression in human intestinal microvascular endothelial cells inhibits leukocyte adhesion. Am. J. Physiol. 275:G592-603.
[3]. Chi, J-T, Chang, H. Y., Haraldsen, G., Jahnsen, F. L., Troyanskaya, O. G., Chang, D. S., Wang, Z., Rockson, S. G., van de Rijn, M., Botstein, D. and Brown, P. O. (2003) Endothelial cell diversity revealed by global expression profiling. PNAS 100(19):10623-10628.

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