

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 human esophageal microvascular endothelial cells (HEsMEC) exhibit a strong inflammatory immune response to LPS, cytokines, and pH exposure, thus playing a critical regulatory role in esophageal inflammation [1]. When exposed to acidic pH, HEsMEC express certain proteins, such as VCAM-1, but not others, such as ICAM-1 [2]. This expression pattern could play a role in the cellular response triggered by gastroesophageal reflux disease. HEsMEC cultures have enabled scientists to observe leukocyte binding, upregulation of cell adhesion molecules, and other cellular responses to LPS, cytokines and pH exposure and has shown that HEsMEC are intrinsically different from lower gastrointestinal endothelial cells [1].

iXCells Biotechnologies provides high quality HEsMEC, which are isolated from human esophageal tissue and cryopreserved at P1, with >0.5 million cells in each vial. HEsMEC 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 esophageal 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]. Rafiee, P., Ogawa, H., Heidemeann, J., Li, MS., Aslam, M., Lamirand, TH., Risher, PJ., Graewin, SJ., Dwinell, MB., Johnson, CP., Shaker, R., Binion, DG. (2003) Isolation and characterization of human esophageal microvascular endothelial cells: mechanisms of inflammatory activation. *Am J Physiol Gastrointest Liver Physiol.* 285(6): G1277-92.
- [2]. Rafiee, P., Theriot, ME., Nelson, VM., Heidemann, J., Kanaa, Y., Horowitz, SA., Roqaczewski, A., Johnson, CP., Ali, I., Shaker, R., Binion, DG. (2006) Human esophageal microvascular endothelial cells respond to acidic pH stree by PI3K/AKT and p38 MAPK-regulated induction of Hsp70 and Hsp27. *Am J Physiol Cell Physiol.* 291(5): C931-45.

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