

## Product Information

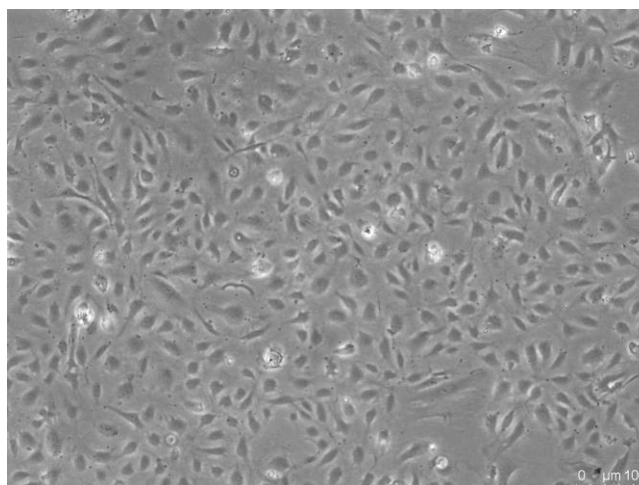
### Human Renal Glomerular Endothelial Cells (HRGEC)

Catalog Number	10HU-078	Cell Number	0.5 million cells/vial
Species	<i>Homo sapiens</i>	Storage Temperature	Liquid Nitrogen

### Description

Human primary renal glomerular endothelial cells (HRGEC) are a specialized microvascular cell type involved in the regulation of glomerular ultrafiltration. They form the inner part of the filtration barrier and are involved in pathophysiological processes in the glomerulum<sup>[1]</sup>. HRGEC constitutively produce bio-active molecules, which can be amplified by inflammatory and thrombotic molecules<sup>[2]</sup>. Endothelial cell injury due to a severe glomerular lesion can inhibit angiogenesis and result in sclerosis at the injured site<sup>[3,4]</sup>. HRGEC injury affects mesangial and epithelial cells and leads to the progression of renal disease<sup>[4]</sup>. The biological properties of HRGEC remain largely unknown because of difficulties associated with the culturing, cloning and propagation of these cells.

iXCells Biotechnologies provides high quality HRGEC, which are isolated from human kidneys and cryopreserved at P0 after purification, with >0.5 million cells in each vial. HRGEC are characterized by immunofluorescence with antibodies specific to vWF/Factor VIII and CD31 (PECAM), and by the formation of microtubular structures in vitro. They are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi. HRGEC can proliferate in Endothelial Cell Growth Medium (Cat# MD-0010), but they are not recommended for further expansion, because the purity of the endothelial population may decrease.



**Figure 1.** Human Renal Glomerular Endothelial Cells (HRGEC) (phase contrast).

## Product Details

<b>Tissue</b>	Normal human kidney
<b>Package Size</b>	0.5 million cells/vial
<b>Passage Number</b>	P0
<b>Shipped</b>	Cryopreserved
<b>Storage</b>	Liquid nitrogen
<b>Growth Properties</b>	Adherent
<b>Media</b>	Endothelial Cell Growth Medium (Cat# MD-0010)

## Protocols

### Thawing of Frozen Cells

1. Upon receipt of the frozen HRGEC, it is recommended to thaw the cells and initiate the culture immediately in order to retain the highest cell viability.
2. To thaw the cells, put the vial in 37°C water bath with gentle agitation for ~1 minute. Keep the cap out of water to minimize the risk of contamination.
3. Pipette the cells into a 15ml conical tube with 5ml fresh Endothelial Cell Growth Medium (Cat# MD-0010).
4. Centrifuge at 1,000rpm (~220g) for 5 minutes under room temperature.
5. Remove the supernatant and resuspend the cells in fresh Endothelial Cell Growth Medium.
6. Culture the cell in T75 flask.
7. HRGEC can proliferate in Endothelial Cell Growth Medium, but they are not recommended for further expansion.

**Safety Precaution:** *it is highly recommended that protective gloves and clothing should be used when handling frozen vials.*

## References

- [1] Nangaku, M., Shankland, S. J., Couser, W. G. and Johnson, R. J. (1998) A new model of renal microvascular injury. *Curr Opin Nephrol Hypertens* 7(4):457-62.
- [2] Kester, M., Nowinski, R. J., Holthofer, H., Marsden, P. A. and Dunn, M. J. (1994) Characterization of platelet-activating factor synthesis in glomerular endothelial cell lines. *Kidney Int* 46(5):1404-12.
- [3] Lee, L. K., Meyer, T. W., Pollock, A. S. and Lovett, D. H. (1995) Endothelial cell injury initiates glomerular sclerosis in the rat remnant kidney. *J Clin Invest* 96(2):953-64.
- [4] Yamanaka, N. and Shimizu, A. (1999) Role of glomerular endothelial damage in progressive renal disease. *Kidney Blood Press Res* 22(1-2):13-20.

## Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans. While iXCells Biotechnologies uses reasonable efforts to include accurate and up-to-date information on this product sheet, we make no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. iXCells Biotechnologies does not warrant that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, and use. iXCells Biotechnologies is not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to insure authenticity and reliability of strains on deposit, iXCells Biotechnologies is not liable for damages arising from the misidentification or misrepresentation of cultures.

© iXCells Biotechnologies 2015. All rights reserved.