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Product Information

Human Colonic Epithelial Cells (HCoEpC)

Catalog Number	10HU-096	**Cell Number**	0.5 million cells/vial
Species	*Homo sapiens*	**Storage Temperature**	Liquid Nitrogen

Description

The colorectum is a major organ in both malignant and nonmalignant diseases. Cells that line the colonic mucosal surface form a major mechanical barrier that separates the host's internal milieu from the external environment. In addition to the well-established role of epithelial cells in ion transport, these cells appear to function as an integral component of the mucosal immune system. Human colonic epithelial cells (HCoEpC) can process and present antigens to T cells in vitro, and can be stimulated to express HLA class II and intercellular adhesion molecules in vivo [1]. They also respond to a broad array of cytokines with altered gene expression and growth characteristics [2]. In addition, normal colonic epithelial cells were found to express the α3, α5, α6, β1 and β4 integrin [3].

iXCells Biotechnologies provides high quality HCoEpC, which are isolated from human colonic tissue and cryopreserved at P1, with >0.5 million cells in each vial. HCoEpC express cytokeratin-18 and -19. They are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi and can further expand for 10 population doublings in Epithelial Cell Growth Medium (Cat# MD-0041) under the condition suggested by iXCells Biotechnologies.

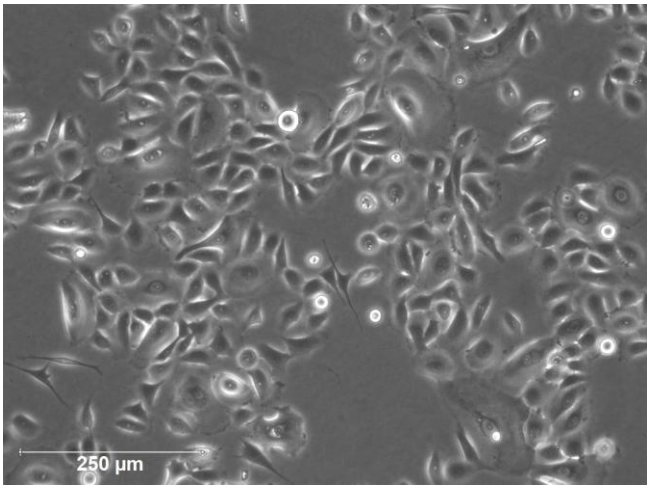

Figure 1. Phase contrast image of Human Colonic Epithelial Cells (HCoEpC).

Product Details

Tissue	Normal human colonic tissue
Package Size	0.5 million cells/vial
Passage Number	P1
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Epithelial Cell Growth Medium (Cat# MD-0041)

Protocols

Thawing of Frozen Cells

1. Upon receipt of the frozen Human Colonic Epithelial Cells (HCoEpC), 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 1-2 minutes. Keep the cap out of water to minimize the risk of contamination.
3. Pipette the cells into a 15 mL conical tube with 5ml fresh Epithelial Cell Growth Medium (Cat# MD-0041).
4. Centrifuge at 1,000 rpm (~220 g) for 5 minutes under room temperature.
5. Remove the supernatant and resuspend the cells in fresh Epithelial Cell Growth Medium.
6. Culture the cell in the T75 flask. Change the medium every other day until cells reach 80-90% confluence.

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

Standard Culture Procedure

1. HCoEpC can be cultured in Epithelial Cell Growth Medium (Cat# MD-0041).
2. When cells reach ~80-90% confluence, remove the medium, and wash once with sterile PBS (5mL for one T75 flask).
3. Add 3 mL of 0.25% Trypsin-EDTA to the flask and incubate for 5 minutes at 37°C. Neutralize the enzyme by adding 2-3 volumes of cell culture medium.
4. Centrifuge 1,000 rpm (~220 g) for 5 minutes and resuspend the cells in desired volume of medium.
5. Seed the cells in the new culture vessels at 5×10^3 cells/cm^2. Change the medium every other day until cells reach 80-90% confluence.

References

[1] Mayer, L., Eisenhardt, D., Salomon, P., Bauer, W., Plous, R. and Piccinini, L. (1991) Expression of class II molecules on intestinal epithelial cells in humans. Differences between normal and inflammatory bowel disease. Gastroenterology. 100:3-12.

[2] Eckmann, L., Jung H.-C., Schuerer-Maly, C.-C., Panja, A., Morzycka-Wroblewska, E., and Kagnoff, M. F. (1993) Differential cytokine expression by human intestinal epithelial cell lines: regulated expression of interleukin-8. Gastroenterology. 105:1689-1697.

[3] Stallmach, A., v Lampe, B., Matthes, H., Bornhoft, B., and Riecken, E. O. (1992) Diminished expression of integrin adhesion molecules on human colonic epithelial cells during the benign to malign tumor. Gut 33:342-346.

Disclaimers