India Contact:
Life Technologies (India) Pvt. Ltd.
Mobile: +91-9810521400, Ph: +91-11-42208000
Email: customerservice@lifetechindia.com
Web: www.lifetechindia.com

Human Cervical Epithelial Cells (HCerEpC)

Catalog Number	10HU-094	**Cell Number**	0.5 million cells/vial
Species	*Homo sapiens*	**Storage Temperature**	Liquid Nitrogen

Description

The cervix is the lower portion of the uterus and functions to promote fertility and protect the female reproductive tract and fetus from potential pathogens. In addition, the cervix plays a critical role in childbirth by effacing and dilating to allow the baby to pass out of the uterus [1]. Human Cervical Epithelial Cells (HCerEpC) maintain structural integrity and limit the passage of molecular and cellular substances into the cervix using intercellular junctions [2,3]. Studies have shown that patients infected with human papillomavirus (HPV) causes inflammation of the epithelial cell layer which can lead to the development of cervical carcinoma [4]. Primary HCerEpC are a useful *in vitro* model for studying the pathophysiology of cervical polyps, HPV, and cervical cancer.

iXCells Biotechnologies provides high quality HCerEpC, which are isolated from normal human cervix and cryopreserved at P2, with ≥ 0.5 million cells in each vial. HCerEpC express cytokeratin-18 and ZO-1, and are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi. They can be further expanded no more than 3 passages in Epithelial Cell Growth Medium (Cat# MD-0041) under the condition suggested by iXCells Biotechnologies. Further expansion may decrease the purity.

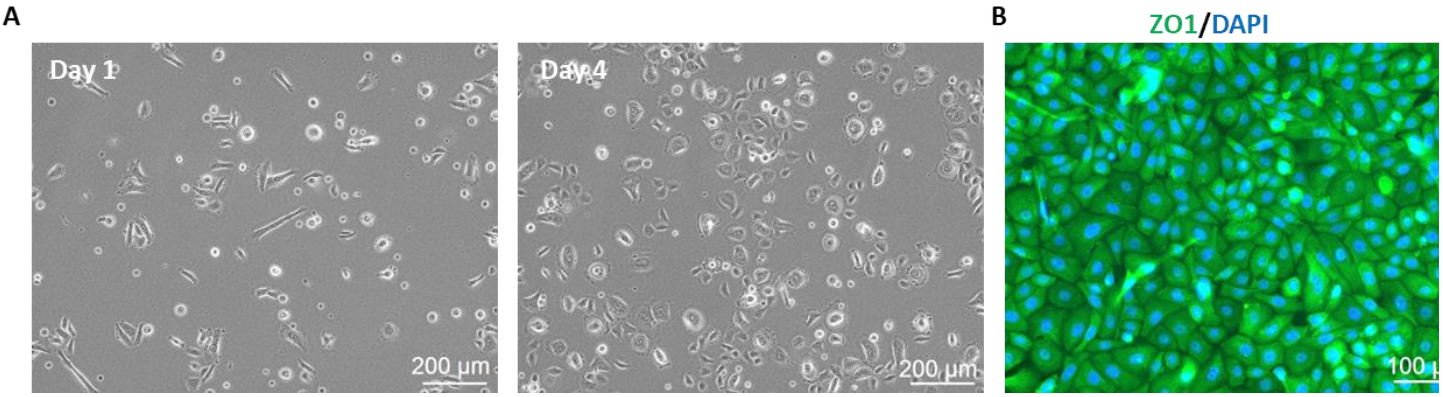

Figure 1. (A) Phase contrast image of HCerEpC on day 1 and day 3 post recovery. (B) Immunofluorescence staining of HCerEpC with antibody against ZO1 (Green).

Product Details

Tissue	Human cervix
Package Size	0.5 million cells/vial
Passage Number	P2
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 Cervical Epithelial Cells (HCerEpC), 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 5 mL 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 desired volume of Endothelial Cell Growth Medium.
6. Culture the cell in T75 flask or the desired culture vessel. Change the medium every other day until cells reach 80-90% confluence. We recommend seeding at 5,000-10,000 cells/cm^2.

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

Standard Culture Procedure

1. When cells reach ~80-90% confluence, remove the medium, and wash once with sterile PBS (5 mL/T75 flask).
2. Add ~2.5 mL of 0.05% Trypsin-EDTA to the flask and incubate for ~3 minutes at 37°C. Neutralize the enzyme by adding 2-3 volumes of cell culture medium.
3. Centrifuge at 1,000 rpm (~220 *g*) for 5 minutes and resuspend the cells in desired volume of medium.
4. Seed in the new culture vessels at 5,000-10,000 cells/cm^2. Change the medium every other day until cells reach 80-90% confluence.

Reference

[1] Kristin M. Myers, Helen Feltovich, Edoardo Mazza, Joy Vink, Michael Bajka, Ronald J. Wapner, Timothy J. Hall, Michael House (2016) The mechanical role of the cervix in pregnancy. J Biomech. 48(9): 1511–1523.
[2] Turyk M, Golub T, Wood N, Hawkins J, Wilbanks G. (1989) "Growth and characterization of epithelial cells from normal human uterine ectocervix and endocervix." In Vitro Cell Dev Biol. 25(6):544-556.
[3] Blaskewicz C, Pudney J, Anderson D. (2011) "Structure and function of intercellular junctions in human cervical and vaginal mucosal epithelia." Biol Reprod. 85(1): 97-104.
[4] McLaughlin-Drubin M, Meyers J, Munger K. (2012) "Cancer associated human papillomaviruses." Curr Opin Virol. 2(4): 459-466.

Disclaimers