7270 Trade Street, Suite 102, San Diego, CA 92121
Tel: (858)412-5988 Fax: (858)368-8716
Technical Supports: supports@ixcellsbiotech.com
Orders: orders@ixcellsbiotech.com

Human Prostate Epithelial Cells (HPrEpC)

Catalog Number	10HU-109	**Cell Number**	0.5 million cells/vial
Species	*Homo sapiens*	**Storage Temperature**	Liquid Nitrogen

Description

The prostate is a major accessory organ of the male mammalian reproductive system, with structural and functional activities under the control of androgens. The normal prostate is composed of three compartments, which can be identified by the cytokeratin (CK) expression profile [1]. CK5 and -14 are prominently expressed in the basal cells whereas, the secretory compartment consisting of luminal layer of columnar cells, constitutively express CK8 and CK18. On the other hand, the intermediate cells express a combination of basal and luminal cytokeratins [2,3]. Additionally, there is increasing evidence that basal epithelial cells can differentiate into luminal epithelial cells. Prostate cancer is one of the most common cancers affecting men and it has a high morbidity and mortality rate. Human primary prostate epithelial cell (HPrEpC) culture provides unique opportunities to study many important features of the prostate, as well as chemical and hormonal carcinogenesis.

iXCells Biotechnologies provides high quality HPrEpC, which are isolated from normal human prostate tissue and cryopreserved at P1, with >0.5 million cells in each vial. HPrEpC express cytokeratin-14, -18 and -19. They are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi and can further expand for up to 3 passages in Epithelial Cell Growth Medium (Cat# MD-0041) under the condition suggested by iXCells Biotechnologies.

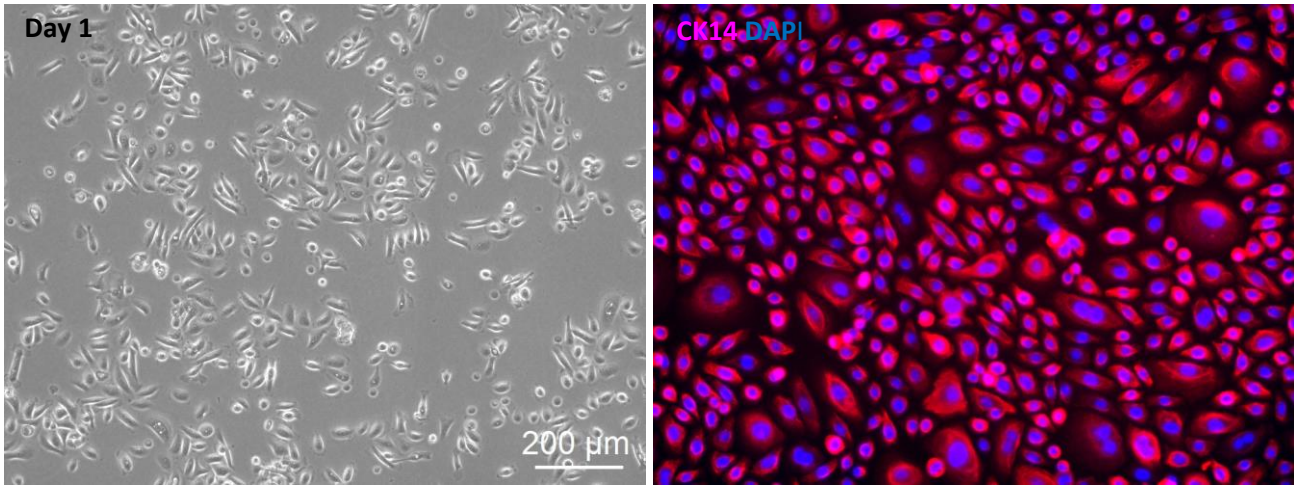

Figure 1: Phase contrast and cytokeratin-14 (CK14) staining post recovery

Product Details

Tissue	Human prostate 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 Prostate Epithelial Cells (HPrEpC), 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 fresh Epithelial Cell Growth Medium.
6. Culture the cell in the T75 flask. A seeding density of 5,000-10,000 cells/cm^2 is recommended. 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. When cells reach ~80-90% confluence, remove the medium, and wash once with sterile PBS (5 mL for one T75 flask).
2. 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.
3. Centrifuge at 1,000 rpm (~220 g) for 5 minutes and resuspend the cells in desired volume of medium.
4. Seed the cells in the new culture vessels at 5,000 cells/cm^2. Change the medium every other day until cells reach 80-90% confluence. HPrEpC can be further expanded for 2-3 passages in iXCell's Epithelial Medium under the conditions suggested by iXCells Biotechnologies.

References

[1] van Leenders G, Dijkman H, Hulsbergen-van de Kaa C, Ruiter D, Schalken J: Demonstration of intermediate cells during human prostate epithelial differentiation in situ and in vitro using triple-staining confocal scanning microscopy. Lab Invest 2000, 80:1251-1258.

[2] Sherwood ER, Berg LA, Mitchell NJ, McNeal JE, Kozlowski JM, Lee C: Differential cytokeratin expression in normal, hyperplastic and malignant epithelial cells from human prostate. J Urol 1990, 143:167-171

[3] De Marzo, A. M., Meeker, A. K., Epstein, J. I., & Coffey, D. S. (1998). Prostate stem cell compartments: expression of the cell cycle inhibitor p27Kip1 in normal, hyperplastic, and neoplastic cells. The American journal of pathology, 153(3), 911–919.

Disclaimers