Human Seminal Vesicle Epithelial Cells (HSVEpiC)

Catalog #4460

Cell Specification

The seminal vesicles (SV) are a pair of tubular glands located near the prostate and are essential to the urinary system. They function under androgen control to produce and secrete fluid into the ejaculatory duct. The SV consists of three layers: the inner basal mucosal layer composed of simple cuboidal and pseudo-stratified columnar epithelial cells, the middle muscular layer formed by smooth muscle cells, and the outer layer made up of dense connective tissue. Various pathological conditions can arise in the SV, including congenital SV cysts, seminal vesculitis, and primary and secondary neoplasms [1-3]. Additionally, SV invasion is often used as a prognostic marker in prostate cancer [4]. SV epithelial cells offer unique opportunities to study many features of the SV.

HSVEpiC from ScienCell Research Laboratories are isolated from human seminal vesicle tissue. HSVEpiC are cryopreserved at passage one and delivered frozen. Each vial contains >5 x 10^5 cells in 1 ml volume. HSVEpiC are characterized by immunofluorescence with antibody specific to cytokeratin (CK-18). HSVEpiC are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast and fungi. HSVEpiC are guaranteed to further expand for 15 population doublings under the conditions provided by ScienCell Research Laboratories.

Recommended Medium

It is recommended to use Epithelial Cell Medium-2 (EpiCM-2, Cat. #4121) for the culturing of HSVEpiC *in vitro*.

Product Use

HSVEpiC are for research use only. It is not approved for human or animal use, or for application in *in vitro* diagnostic procedures.

Storage

Upon receiving, directly and immediately transfer the cells from dry ice to liquid nitrogen and keep the cells in liquid nitrogen until they are needed for experiments.

Shipping

Dry ice.

References

[1] Arora SS, Breiman RS, Webb EM, Westphalen AC, Yeh BM, Coakley FV. (2007) "CT and MRI of congenital anomalies of the seminal vesicles." *AJR Am J Roentgenol.* 189: 130-5.

[2] Campobasso D, Fornia S, Ferretti S, Maestroni U, Cortellini P. (2012) "Primary bilateral seminal vesicle carcinoma: description of a case and literature review." *Int J Surg Pathol*. 20: 633-5.

[3] Wang J, Yue X, Zhao R, Cheng B, Wazir R, Wang K. (2013) "Primary squamous cell carcinoma of seminal vesicle: an extremely rare case report with literature review." *Int Urol Nephrol.* 45: 135-8.

[4] Kristiansen A, Wiklund F, Wiklund P, Egevad L. (2013) "Prognostic significance of patterns of seminal vesicle invasion in prostate cancer." *Histopathology*. 62: 1049-56.

Instructions for culturing cells

Caution: Cryopreserved cells are very delicate. Thaw the vial in a 37°C water bath and return the cells to culture as quickly as possible with minimal handling!

Initiating the culture:

1. Prepare a poly-L-lysine coated culture vessel (2 μg/cm^2, T-75 flask is recommended). Add 10 ml of sterile water to a T-75 flask and then add 15 μl of poly-L-lysine stock solution (10 mg/ml, Cat. #0413). Leave the vessel in incubator overnight (minimum one hour at 37°C incubator).
2. Prepare complete medium. Decontaminate the external surfaces of medium bottle and medium supplements with 70% ethanol and transfer them to sterile field. Aseptically transfer supplement to the basal medium with a pipette. Rinse the tube with medium to recover the entire volume.
3. Rinse the poly-L-lysine coated vessel with sterile water twice and then add 15 ml of complete medium. Leave the vessel in the sterile field and proceed to thaw the cryopreserved cells.
4. Place the frozen vial in a 37°C water bath. Hold and rotate the vial gently until the contents completely thaw. Remove the vial from the water bath promptly, wipe it down with 70% ethanol and transfer it to a sterile field.
5. Remove the cap carefully without touching the interior threads. Gently resuspend and dispense the contents of the vial into the equilibrated, poly-L-lysine coated culture vessel. A seeding density of 5,000 cells/cm^2 is recommended.

   Note: Dilution and centrifugation of cells after thawing are not recommended since these actions are more harmful to the cells than the effect of residual DMSO in the culture. It is also important that cells are plated in poly-L-lysine coated culture vessels to promote cell attachment.
6. Replace the cap or lid, and gently rock the vessel to distribute the cells evenly. Loosen cap if necessary to allow gas exchange.
7. Return the culture vessel to the incubator.
8. For the best result, do not disturb the culture for at least 16 hours after the culture has been initiated. Refresh culture medium the next day to remove the residual DMSO and unattached cells, then every other day thereafter.

Maintaining the culture:

1. Refresh supplemented culture medium the next morning after establishing a culture from cryopreserved cells.
2. Change the medium every three days thereafter, until the culture is approximately 70% confluent.
3. Once the culture reaches 70% confluency, change medium every other day until the culture is approximately 90% confluent.

Subculturing:

1. Subculture when the culture reaches 90% confluency or above.
2. Prepare poly-$_L$-lysine-coated culture vessels (2 μg/cm^2) one day before subculture.
3. Warm complete medium, trypsin/EDTA solution (T/E, Cat. #0103), T/E neutralization solution (TNS, Cat. #0113), and DPBS (Ca^{++}- and Mg^{++} -free, Cat. #0303) to **room temperature**. We do not recommend warming reagents and medium in a 37°C water bath prior to use.
4. Rinse the cells with DPBS.
5. Add 8 ml of DPBS and then 2 ml of T/E solution into flask (in the case of a T-75 flask). Gently rock the flask to ensure complete coverage of cells by T/E solution. Incubate the flask in a 37°C incubator for 1 to 2 minutes or until cells completely round up. Use a microscope to monitor the change in cell morphology.
6. During incubation, prepare a 50 ml conical centrifuge tube with 5 ml of fetal bovine serum (FBS, Cat. #0500).
7. Transfer T/E solution from the flask to the 50 ml centrifuge tube (a small percent of cells may detach) and continue to incubate the flask at 37°C for another 1 to 2 minutes (no solution in the flask at this moment).
8. At the end of incubation, gently tap the side of the flask to dislodge cells from the surface. Check under a microscope to make sure that all cells detach.
9. Add 5 ml of TNS solution to the flask and transfer detached cells to the 50 ml centrifuge tube. Rinse the flask with another 5 ml of TNS to collect the residual cells.
10. Examine the flask under a microscope for a successful cell harvest by looking at the number of cells being left behind; there should be less than 5%.

    Note: Use ScienCell T/E solution that is optimized to minimize cell damages due to over trypsinization.
11. Centrifuge the 50 ml centrifuge tube at 1000 rpm for 5 minutes. Resuspend cells in culture medium.
12. Count and plate cells in a new poly-$_L$-lysine-coated culture vessel with the recommended cell density.

Caution: Handling human derived products is potentially biohazardous. Although each cell strain tests negative for HIV, HBV and HCV DNA, diagnostic tests are not necessarily 100% accurate, therefore, proper precautions must be taken to avoid inadvertent exposure. Always wear gloves and safety glasses when working with these materials. Never mouth pipette. We recommend following the universal procedures for handling products of human origin as the minimum precaution against contamination [1].

[1] Grizzle WE, Polt S. (1988) "Guidelines to avoid personal contamination by infective agents in research laboratories that use human tissues." *J Tissue Culture Methods*. 11: 191-9.