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BCRJ Code: 0298

Cell Line: EKVX

Species: Homo sapiens

Vulgar Name: Human

Tissue: Lung

Disease: Adenocarcinoma

Growth Properties: Adherent

Sex: Male

Biosafety: 1

Additional Info: The cell line EKVX was established following passage of the original tumor cells through nude mice, providing a possible source of the X-MLV found in the EKVX cells. EKVX is one of the cell lines of the NCI-60 panel which represents different cancer types and has been widely utilized for drug screening and molecular target identification.

Culture Medium: RPMI-1640 medium modified to contain 2 mM L-glutamine, 1000 mg/L glucose and 10% of fetal bovine serum.

Subculturing: Remove and discard culture medium. Briefly rinse the cell layer with PBS without calcium and magnesium to remove all traces of serum which contains trypsin inhibitor. Add 2.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes). Cells that are difficult to detach may be placed at 37°C to facilitate dispersal. Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting. Add appropriate aliquots of the cell suspension into new culture vessels. Incubate cultures at 37°C. NOTE: For more information on enzymatic dissociation and subculturing of cell lines consult Chapter 12 in Culture of Animal Cells, a manual of Basic Technique by R. Ian Freshney, 6th edition, published by Alan R. Liss, N.Y., 2010.

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Subculturing Medium Renewal:

2 to 3 times per week

Subculturing Subcultivation Ratio:

1:5, 10, 20

Culture Conditions:

Atmosphere: air, 95%; carbon dioxide (CO₂), 5% Temperature: 37°C

Cryopreservation:

95% FBS + 5% DMSO (Dimethyl sulfoxide)

SAFETY PRECAUTION: It is strongly recommended to always wear protective gloves, clothing, and a full-face mask when handling frozen vials. Some vials may leak when submerged in liquid nitrogen, allowing nitrogen to slowly enter the vial. Upon thawing, the conversion of liquid nitrogen back to its gas phase may cause the vial to explode or eject its cap with significant force, creating flying debris.

1. Thaw the vial by gently agitating it in a 37°C water bath. To minimize contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes).
2. Remove the vial from the water bath as soon as its contents are thawed and decontaminate it by dipping in or spraying with 70% ethanol. From this point, all operations must be performed under strict aseptic conditions.
3. For cells sensitive to DMSO, it is recommended to remove the cryoprotective agent immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL of complete culture medium and centrifuge at approximately 125 × g for 5 to 7 minutes.
4. Discard the supernatant and resuspend the cell pellet in the recommended complete medium (see specific batch information for the appropriate dilution ratio).
5. Incubate the culture under appropriate atmospheric and temperature conditions (see "Culture Conditions" for this cell line).

Thawing Frozen Cells:

NOTE: It is important to avoid excessive alkalinity of the medium during cell recovery. To minimize this risk, it is recommended to place the culture vessel containing the growth medium in the incubator for at least 15 minutes before adding the vial contents. This allows the medium to stabilize at its normal pH (7.0 to 7.6).

References:

Cmarik, J.L.; Troxler, J.A.; Hanson, C.A.; Zhang, X.; Ruscetti, S.K. The Human Lung Adenocarcinoma Cell Line EKVX Produces an Infectious Xenotropic Murine Leukemia Virus. *Viruses* 2011, 3, 2442-2461.



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