Product description

UM-UC-14 are a human transitional cell carcinoma of the renal pelvis. These cells were assessed for their susceptibility to adenoviral mediated gene delivery, tumour growth in nude mice and differences in genetic alterations. Tumorigenicity studies in nude mice revealed the UM-UC-14 produced tumours, 1-1.5 cm in diameter in < 3 weeks. This cell line demonstrated efficient gene transduction via an adenoviral vector when compared to several of the other cells evaluated. UM-UC-14 also demonstrated one of the highest levels of Coxsackie adenovirus receptor expression of the cells tested. These assays allowed for characterization of some of the most important features in each of the respective lines in an effort to more accurately establish commonly observed phenomena across cells of the same type of neoplasm.

Name: UM-UC-14 cell line

Organism: Human

Tissue: Bladder

Disease: Cancer

Cancer Type: Bladder cancer

Cancers detailed: Human bladder transitional cell carcinoma

Growth properties: Adherent

Model: Tumour line

Cellosaurus id: CVCL_2747

Contributor(s)

Inventor: H. Grossman ; Anita Sabichi
Institute: University of Michigan

Properties

Product format: Frozen

Unpacking and storage:

1. Check all containers for leakage or breakage.
2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below -130°C, preferably in liquid nitrogen vapor, until ready for use.

Recommended medium: EMEM (Eagle's Minimum Essential Medium with Earle's Balanced Salt Solution) supplemented with 2 mM L-Glutamine, 1% Non-Essential Amino Acids (NEAA) and 10% Fetal Bovine Serum (FBS)

Subculture: Split sub-confluent cultures (70-80%) 1:4 to 1:10 i.e. seeding at 2-4x10,000 cells/cm² using 0.05% trypsin/EDTA; 5% CO_2; 37°C.

Culture conditions: 37.0°C ± 1.0°C incubator with 5.0% ± 1.0% CO_2

Handling instructions

1. Please ensure that vials are frozen when received, and store at **<-130 °C long term**. When removing frozen cells from storage, it is important to minimize exposure to room temperature (15 - 25°C). If not proceeding directly to thawing, place the cells on dry ice or in a liquid nitrogen container.
2. **Do not thaw at room temperature.** To thaw, swirl the vial quickly in a 37 °C water bath with O-ring and cap above the water to avoid contamination. Remove from the water bath with a small ice pellet remaining (this should not take more than 2 minutes) and wipe the exterior with 70% ethanol or isopropanol before transferring to a biosafety cabinet. Further steps should be conducted under aseptic conditions.
3. We strongly recommend that the volume of cell suspension is measured at this point, and a 20 uL aliquot be removed for a **viable cell count** using trypan blue or similar dye. This ensures that provided cells are viable, and the cell count can be used to determine volume of growth medium to be added to the cell suspension.
4. Transfer the remaining cell suspension to a 15 mL conical tube using a pipette.
5. Rinse the vial with 1 mL of pre-warmed medium and add it dropwise to the cells, while gently swirling the tube.
6. Based on seeding density, add appropriate volume of complete medium **dropwise**, while gently swirling the tube and transfer to a suitable cell culture flask.
7. Change cell culture medium after 24 hours to remove residual DMSO.

References

- Sabichi et al. 2006. J Urol. 175(3 Pt 1):1133-7. PMID: 16469639.
- Grossman et al. 1984. J Urol. 132(4):834-7. PMID: 6471236.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: UM-UC-14 cell line, was invented by H. Grossman and Anita Sabichi at the University of Michigan (CancerTools.org #160443).