UM-Chor1

CRL-3270™

Description

UM-Chor1 is a mesangial cell line that was isolated in 2012 from the clivus of a 64-day-old, White male patient with chordoma. UM-Chor1 is the first known human clival chordoma established. It exhibits chordoma-like characteristics and has molecular, genetic, and morphological features typical of chordoma. This cell line was established from a suprasellar lesion with solid, cystic, and hemorrhagic components. It extended along the clivus, and into the ethmoid sinuses. The resultant cultures were purified by flow cytometry and the population of cells staining positive for neural cell adhesion molecule (NCAM) were expanded as the UM-Chor1 chordoma cell line. Chordoma is a rare slow growing tumor type, and UM-Chor1 is a relatively slow growing cell line. The cells express the transcription factor T (Brachyury) that is the most specific marker for chordoma. This cell line was accessioned with the support of the Chordoma Foundation, a nonprofit organization working to improve the lives of chordoma patients by accelerating research to develop effective treatments for the chordoma disease. This rare chordoma cell line can be a useful tool for studying the diversity of primary tumors of the spinal cord. This cell line was deposited by M Prince and J Owen (University of Michigan).

Organism: *Homo sapiens*, human
Cell Type: mesangial cell
Tissue: Bone; Clivus
Age: 64 days
Gender: Male
Morphology: epithelial-like
Growth properties: Adherent
Disease: Chordoma
Volume: 1.0 mL

Storage Conditions

UM-Chor1
CRL-3270

Product format: Frozen
Storage conditions: Vapor phase of liquid nitrogen

Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

BSL 1

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Temperature: 37°C
Atmosphere: 95% Air, 5% CO_2

Handling Procedures

Unpacking and storage instructions:

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.

Complete medium: The base medium for this cell line is a 4:1 mixture of ATCC-formulated Iscove's Modified Dulbecco's Medium, Catalog No. 30-2005 and ATCC-formulated RPMI-1640 Medium, Catalog No. 30-2001. To make the complete growth medium, add the following component to the base medium:

- fetal bovine serum to a final concentration of 10%

Handling Procedure:

To ensure the highest level of viability, thaw the vial and initiate the culture as soon as possible upon receipt. If upon arrival, continued storage of the frozen culture is necessary, it should be stored in liquid nitrogen vapor phase and not at -70°C. Storage at -70°C will result in loss of viability.

1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of 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 the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions.
3. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete

culture medium. and spin at approximately 125 x *g* for 5 to 7 minutes.

4. Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio). It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the complete growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6). pH (7.0 to 7.6).
5. Incubate the culture at 37°C in a suitable incubator. A 5% CO_2 in air atmosphere is recommended if using the medium described on this product sheet.

Subculturing procedure:

Volumes used in this protocol are for 75 cm^2 flask; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes.

1. Remove and discard culture medium.
2. Briefly rinse the cell layer with 0.25% (w/v) Trypsin- 0.53 mM EDTA solution to remove all traces of serum that contains trypsin inhibitor.
3. 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).
   Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal.
4. Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting.
5. Add appropriate aliquots of the cell suspension to new culture vessels. Cultures can be established between 2 x 10^4 and 4 x 10^4 viable cells/cm^2.
6. Incubate cultures at 37°C.

Interval: Maintain cultures at a cell concentration between 1 x 10^5 to 2 x 10^5 cell/cm^2.

Subcultivation Ratio: A subcultivation ratio of 1:2 to 1:6 is recommended

Medium Renewal: 2 to 3 times per week

Reagents for cryopreservation: Complete growth medium supplemented with 10% (v/v) DMSO (ATCC 4-X)

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: UM-Chor1 (ATCC CRL-3270)

References

References and other information relating to this material are available at www.atcc.org.

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