U-CH1

CRL-3217™

Description

U-CH1 is a mesenchymal like cell line that was isolated in 1998 from the sacrum of a 56-year-old, White male patient with chordoma. This cell line was established from a local recurrence of a sacrococcygeal after radiotherapy 4 years after initial surgery. Chordoma is a rare slow-growing tumor type, and U-CH1 is a relatively slow-growing cell line. U-CH1 has a heterogeneous morphology consisting of physaliferous cells with mucinous intercellular substance, which represent typical chordoma features. The cells overexpress 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 non-profit organization working to improve the lives of chordoma patients by accelerating research to develop effective treatments for the chordoma disease. This cell line was deposited by Silke Bruderlein and Peter Moller.

Organism: *Homo sapiens*, human
Tissue: Vertebral spinal column; Sacrum
Age: 56 years
Gender: Male
Morphology: mesenchymal like, with variable vacuoles
Growth properties: Adherent
Disease: Chordoma

Storage Conditions

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: Iscove's Modified Dulbecco's Medium (IMDM; ATCC® No. 30-2005): RPMI-1640 Medium (ATCC® No. 30-2001) (4:1) + 10% FBS (ATCC® No. 30-2020) + additional 1% L-glutamine (ATCC® No. 30-2214)

Handling Procedure:

To insure 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). and dispense into a 25 cm^2 or a 75 cm^2 collagen-coated-culture flask (see subculture on product web page for the coating procedure). 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).

5. Incubate the culture at **37°C** in a suitable incubator. A 5% CO2 in air atmosphere is recommended if using the medium described on this product sheet.

Subculturing procedure:

Coating description: Dilute rat tail type I collagen (BD Biosciences, Catalog No. 354236) to 50 µg/ml. Add 7.5 ml coating buffer to flask and incubate at room temperature for one hour. Carefully aspirate remaining solution. Rinse flask 2 times to remove acid, using 1x DPBS. Coated flasks may be used immediately or stored at 2-8°C up to one week under sterile conditions.

Volumes used in this subculture protocol are for a 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 5.0ml Ca++/Mg++ free Dulbecco's phosphate-buffered saline (D-PBS) or 0.25% (w/v) Trypsin - 0.53 mM EDTA solution to remove all traces of serum which contains trypsin inhibitor.
3. Add 5.0 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 5.0 ml of complete growth medium and aspirate cells by gently pipetting.
5. Transfer cell suspension to a centrifuge tube and spin at approximately 125 x g for 5 to 10 minutes. Discard supernatant.
6. Resuspend the cell pellet in 10 ml fresh growth medium.
7. Add appropriate aliquots of the cell suspension to new coated culture vessels.
8. Incubate cultures at 37°C.

Reagents for cryopreservation: Complete growth medium supplemented with 20% (v/v) fetal bovine serum and 10% DMSO (ATCC 4-X)

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: U-CH1 (ATCC CRL-3217)

References

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

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