Tetrahymena canadensis Nanney and McCoy

205145™

Description

Strain designation: SM 11
Deposited As: *Tetrahymena canadensis* Nanney and McCoy
Type strain: No
Mating type: III

Storage Conditions

Product format: Test tube

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

Medium:
ATCC Medium 357: Tetrahymena medium
Instructions for complete medium:
ATCC Medium 357 is used for short-term cultivation. (ATCC medium 1034 can also be used for short-term cultivation and is available in a freeze-dried format from ATCC; contact sales for details). ATCC Medium 383 is used for long-term cultivation.
Temperature: 15-27°C
Culture system: Axenic

Handling Procedures

Reagents for cryopreservation:
RM-9 Media for cryopreservation of *Tetrahymena*

Proteose Peptone (Difco 0120)	5.0 g
Tryptone	5.0 g
K_2HPO_4	0.2 g
Glucose	1.0 g
Liver extract	0.1 g
Glass distilled water	1.0 L

Dissolve components in glass distilled H_2O and autoclave.

Dryl?s Salt Solution

0.1 M $NaH_2PO_4 \cdot 3H_20$	10.0 ml
0.1 M $Na_2HPO_4 \cdot 7H_20$	10.0 ml
0.1 M Sodium citrate $\cdot 2H_20$	15.0 ml
0.1 M $CaCl_2 \cdot 2H_20$	15.0 ml
Distilled water	950.0 ml

Add the first 3 components to the distilled H_2O and mix thoroughly.

Add the $CaC1_2$ solution and mix thoroughly.

(Adding the solutions in the order indicated will avoid the precipitation of Ca salts.)

Cryopreservation:

1. Transfer *tetrahymena* from usual growth medium to RM-9 medium and allow to grow to near peak density.
2. Harvest cells from a culture by centrifugation at 300 x g for 2 min.
3. Adjust concentration of cells to 2 x 10^6/ml in fresh medium.
4. While cells are centrifuging, prepare a 22% (v/v) sterile solution of sterile DMSO in fresh medium.

a) Add 2.2 ml of DMSO to an ice cold 20 x 150 mm screw-capped test tube;

b) Place the tube on ice and allow the DMSO to solidify (~5 min) and then add 7.8 ml of ice cold medium;

c) Invert several times to dissolve the DMSO;

d) Allow to warm to room temperature.

5. Add a volume of the DMSO solution equal to the cell suspension volume but add in 3 equal aliquots at 2 min intervals. Thus, the final concentration of the preparation will equal 11% (v/v) DMSO and 10^6 cells /ml.

6. Dispense in 0.5 ml aliquots into 1.0 - 2.0 ml sterile plastic screw-capped cryules (special plastic vials for cryopreservation).

7. Place the ampules in a controlled rate freezing unit. The cooling cycle should be initiated no less than 15 min and no longer than 60 min after the addition of the DMSO to the cell preparation. From room temperature cool at -1°C/min to -40°C. If freezing unit can compensate for the heat of fusion, maintain rate at -1°C/min through heat of fusion. At -50°C ampules are plunged into liquid nitrogen.

8. Store in the vapor or liquid phase of a nitrogen refrigerator.

9. To establish a culture from the frozen state aseptically add 0.5 ml sterile Dryl's Salt Solution to an ampule. Immediately place the ampule in a 35°C water bath, until thawed (2-3 min). Immerse the ampule just sufficient to cover the frozen material. Do not agitate the ampule.

10. Immediately after thawing, aseptically remove the contents of the ampule and inoculate into 5.0 ml of fresh medium in a 16 x 125 mm screw-capped test tube with a slightly loosened cap. Incubate at 25°C.

CRYOPRESERVATION:

Alternative Thawing Procedure

1. Aseptically add 0.5 ml of sterile modified PYNFH medium (ATCC Medium 1034) containing 8% (w/v) sucrose to the ampule. Immediately, place in a 35°C water bath, until thawed. Immerse the ampule just sufficient to cover the frozen material. Do not agitate the ampule.

2. Immediately after thawing, aseptically remove the contents of the ampule and gently add the material to the edge of a 20 x 100 mm petri plate containing ATCC Medium 919 (non-nutrient agar) and position on a 15 degree slant. The cell suspension will pool at the edge of the plate.

3. Continue to double the volume of the cell suspension at 10

minute intervals by adding ATCC medium 1034) containing 4% sucrose (w/v). When the volume reaches 16.0 ml place the plate in horizontal position and incubate at 25°C.

4. On the following day, gently remove the cell suspension for the plate and transfer to a T-25 tissue culture flask. Note the volume of the suspension and add a volume of fresh medium containing 4% sucrose equal to the volume of the cell suspension. Incubate the culture at 25°C.

5. After culture has been established subculture into fresh

normal medium without sucrose.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Tetrahymena canadensis* Nanney and McCoy (ATCC 205145)

References

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

Warranty

The product is provided 'AS IS' and the viability of ATCC® products is warranted for 30 days from the date of shipment, provided that the customer has stored and handled the product according to the information included on the product information sheet, website, and Certificate of Analysis. For living cultures, ATCC lists the media formulation and reagents that have been found to be effective for the product. While other unspecified media and reagents may also produce satisfactory results, a change in the ATCC and/or depositor-recommended protocols may affect the recovery, growth, and/or function of the product. If an alternative medium formulation or reagent is used, the ATCC warranty for viability is no longer valid. Except as expressly set forth herein, no other warranties of any kind are provided, express or implied, including, but not limited to, any implied warranties of merchantability, fitness for a particular purpose, manufacture according to cGMP standards, typicality, safety, accuracy, and/or noninfringement.

Disclaimers

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. Any proposed commercial use is prohibited without a license from ATCC.

While ATCC uses reasonable efforts to include accurate and up-to-date information on this product sheet, ATCC makes no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. ATCC does not warrant that such information has been confirmed to be accurate or complete and the customer bears the sole responsibility of confirming the accuracy and completeness of any such information.

This product is sent on the condition that the customer is responsible for and assumes all risk and responsibility in connection with the receipt, handling, storage, disposal, and use of the ATCC product including without limitation taking all appropriate safety and handling precautions to minimize health or environmental risk. As a condition of receiving the material, the customer agrees that any activity

undertaken with the ATCC product and any progeny or modifications will be conducted in compliance with all applicable laws, regulations, and guidelines. This product is provided 'AS IS' with no representations or warranties whatsoever except as expressly set forth herein and in no event shall ATCC, its parents, subsidiaries, directors, officers, agents, employees, assigns, successors, and affiliates be liable for indirect, special, incidental, or consequential damages of any kind in connection with or arising out of the customer's use of the product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, ATCC is not liable for damages arising from the misidentification or misrepresentation of such materials.

Please see the material transfer agreement (MTA) for further details regarding the use of this product. The MTA is available at www.atcc.org.

Copyright and Trademark Information

© ATCC 2023. All rights reserved.
ATCC is a registered trademark of the American Type Culture Collection.

Revision

This information on this document was last updated on 2026-07-05

Contact Information

ATCC
10801 University Boulevard
Manassas, VA 20110-2209
USA
US telephone: 800-638-6597
Worldwide telephone: +1-703-365-2700
Email: tech@atcc.org or contact your local distributor