ATCC

Product Sheet

# *Acanthamoeba sp.* (ATCC® 50710™)

**Please read this FIRST**

Biosafety Level
**2**

**Intended Use**

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

**Citation of Strain**

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: *Acanthamoeba sp.* (ATCC® 50710™)


American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
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*Or contact your local distributor*


## Description

**Strain Designation:** Jin E5
**Deposited Name:** *Acanthamoeba* sp.
**Depositor:** TJ Byers, JY Jin
**Isolation:**
human Acanthamoeba keratitis, Bejing, China

## Propagation

**Growth Conditions**
**Max Temperature:** 30.0°C
**Min Temperature:** 27.0°C
Duration: axenic
**Protocol:** ATCCNO: 30135 SPEC: This strain is distributed as a frozen stabilate. See general instructions for thawing and storage of frozen material before proceeding. As soon as the shipment arrives, remove the frozen ampule from the dry ice and transfer it directly to a 35C water bath. After thawing the ampule, transfer the contents to a 16 x 125 mm plastic screw-capped test tube containing 5 ml of fresh medium. (Glass test tubes may also be used, but the cultures can be transferred less frequently when maintained in plastic.) Screw the cap on tightly and incubate the tube on a 5-15 degree slant at the appropriate temperature. Subculture every 2-4 weeks by vigorously agitating the culture and aseptically transferring a 0.1 ml aliquot to a fresh tube of medium. Prolongation of the transfer interval can be extended up to 6 months for certain strains of Acanthamoeba, however, this must be determined empirically for each strain.

**Medium**
ATCC® Medium 712: PYG w/ Additives

**Instructions for Complete Medium**
ATCC Medium 712

**Culture Maintenance**
1. When the culture is at or near peak density, vigorously agitate the culture.
2. Transfer approximately 0.25 ml to a fresh tube or flask containing 5 ml of fresh ATCC medium 712.
3. Screw the caps on tightly and incubate at 25°C (incubate test tubes at a 15° horizontal slant).
4. The amoebae will form an almost continuous sheet of cells on the bottom surface of the flask or test tube.

Repeat steps 1-3 at 10-14 d intervals.

## Cryopreservation

1. To achieve the best results set up cultures with several different inocula (e.g. 0.25 ml, 0.5 ml, 1.0 ml). Harvest cultures and pool when the culture that received the lowest inoculum is at or near peak density.
2. If the cell concentration exceeds the required level do not centrifuge, but adjust the concentration to between 2 x $10^6$ and 2 x $10^7$cysts/ml with fresh medium. If the concentration is too low, centrifuge at 600 x g for 5 min and resuspend the pellet in the volume of fresh medium required to yield the desired concentration.
3. While cells are centrifuging prepare a 15% (v/v) solution of sterile DMSO as follows: Add the required volume of DMSO to a glass screw-capped test tube and place it in an ice bath. Allow the DMSO to solidify. Add the required volume of refrigerated medium. Dissolve the DMSO by inverting the tube several times.
   *NOTE: If the DMSO solution is not prepared on ice, an exothermic reaction will occur that may precipitate certain components of the medium.
4. Mix the cell preparation and the DMSO in equal portions. Thus, the final concentration will be between $10^6$ and $10^7$ cells/ml and 7.5% (v/v) DMSO. The time from the mixing of the cell preparation and DMSO stock solution before the freezing process is begun should be no less than 15 min and no longer than 30 min.
5. Dispense in 0.5 ml aliquots into 1.0 - 2.0 ml sterile plastic screw-capped cryules (special plastic vials for cryopreservation).
6. Place the vials in a controlled rate freezing unit. From room temperature cool at -1°C/min to -40°C. If the freezing unit can compensate for the heat of fusion, maintain rate at -1°C/min through the heat of fusion. At -40°C plunge into liquid nitrogen. Alternatively, place the vials in a Nalgene 1°C freezing apparatus. Place the apparatus at -80°C for 1.5 to 2 hours and then plunge ampules into liquid nitrogen. (The cooling rate in this apparatus is approximately
   -1°C/min.)
7. The frozen preparations are stored in either the vapor or liquid phase of a nitrogen freezer.

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8. To establish a culture from the frozen state place an ampule in a water bath set at 35°C (2-3 min). Immerse the vial just sufficient to cover the frozen material. Do not agitate the vial.
9. Immediately after thawing, aseptically remove the contents of the ampule and inoculate into 5 ml of fresh ATCC medium 712 in a T-25 tissue culture flask or plastic 16 x 125 mm screw-capped test tube. Incubate at 25°C.

## References

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

## Biosafety Level: 2

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes for Health.

## ATCC Warranty

The viability of ATCC® products is warranted for 30 days from the date of shipment, and is valid only if the product is stored and cultured according to the information included on this product information sheet. ATCC lists the media formulation that has been found to be effective for this strain. While other, unspecified media may also produce satisfactory results, a change in media or the absence of an additive from the ATCC recommended media may affect recovery, growth and/or function of this strain. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

## Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans.

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Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at www.atcc.org

Additional information on this culture is available on the ATCC web site at www.atcc.org.
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