ATCC

Product Sheet

Scenedesmus quadricauda (ATCC® 11460™)

Please read this FIRST

Biosafety Level
1

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: *Scenedesmus quadricauda* (ATCC® 11460™)

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: CU 276/4b [UTEX 76]
Deposited Name: *Scenedesmus quadricauda* (Turpin) Brebisson
Depositor: RW Krauss
Isolation:
garden pool, Cambridge, England, 1940

Propagation

Growth Conditions
Temperature: 25.0°C
Duration: axenic

Medium
ATCC® Medium 5: Sporulation agar

Instructions for Complete Medium
ATCC Medium 5

Protocols

Frozen ampules packed in dry ice should either be thawed immediately or stored in liquid nitrogen. If liquid nitrogen storage facilities are not available, frozen ampules may be stored at or below -70°C for approximately one week. **Do not under any circumstance store frozen ampules at refrigerator freezer temperatures (generally -20°C).** Storage of frozen material at this temperature will result in the death of the culture.

1. To thaw a frozen ampule, place 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.
2. Immediately after thawing, aseptically transfer contents to a screw-capped borosilicate test tube containing ATCC Medium 5. Incubate the tube on a 15° horizontal slant at 50-100 µEinsteins/m^2/s irradiance at 25°C with the cap loosened one half turn. Maintain under a 14/10 h light-dark photoperiod.

Culture Maintenance

1. For a slant culture, transfer cells with an inoculating loop to a tube of fresh agar medium from a growing culture at or near peak density. For a broth culture, inoculate a tube of fresh broth medium with 0.1 ml from a growing culture at or near peak density.
2. Incubate at 50-100 µEinsteins/m^2/s irradiance at 25° C with the cap loosened one half turn. Maintain under a 14/10 h light-dark photoperiod.

Cryopreservation

1. Harvest cells from a culture which is at or near peak density by adding 3.0 ml fresh ATCC medium 5 broth to the slant and washing cells into suspension.
2. Adjust the concentration of cells to 4 x 10^6/ml with fresh broth medium, then dilute to half this concentration by adding an equal amount of a 10% (v/v) sterile methanol solution in fresh ATCC medium 5 broth.
3. Dispense in 0.5 ml aliquots into 1.0 - 2.0 ml sterile plastic screw-capped cryules (special plastic vials for cryopreservation). The time from mixing of the cell preparation and the methanol solution, before the cooling cycle begins, should be no greater than 15 min.
4. Place vials in a controlled rate freezing unit. 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 -40°C plunge ampules 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.)
5. The frozen preparations should be stored in either the vapor or liquid phase of a nitrogen refrigerator. Frozen preparations stored below -130°C are stabile indefinitely. Those stored at temperatures above -130°C are progressively less stabile as the storage temperature is elevated. Vials can be stored between -80 and -70°C for no longer than one week.
6. To establish a culture from the frozen state place an ampule in a water bath set at 35°C. Immerse the vial to a level just above the surface of the frozen material. Do not agitate the vial.
7. Immediately after thawing, do not leave in the water bath, aseptically remove the contents of the ampule

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and add to a centrifuge tube containing 5 ml of ATCC medium 5 without agar. Centrifuge at 300 x g for 5 min.
10.Remove most of the supernatant (=methanol, which can inhibit growth) and then resuspend the pellet. Transfer the culture to a fresh tube of ATCC medium 5 and incubate on a 15° horizontal slant at 50-100 µEinsteins/m^2/s irradiance at 25°C with the cap loosened one half turn. Maintain under a 14/10 h light-dark photoperiod.

References

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

Biosafety Level: 1

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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