ATCC

Product Sheet

Geobacter argillaceus (ATCC® BAA-1139™)

Please read this FIRST

Storage Temp.
Frozen: -80°C or colder
Freeze-Dried: 2°C to 8°C
Live Culture: See Propagation Section

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: *Geobacter argillaceus* (ATCC® BAA-1139™)

Description

Designation: G12 [JCM 12999]

Propagation

Medium
ATCC® Medium 1768: Geobacter metallireducens medium

Growth Conditions
Temperature: 30°C
Atmosphere: Anaerobic gas mixture, 80% N_2, 20% CO_2

Propagation Procedure

1. Keep vial frozen until ready to use; then thaw under anaerobic conditions.
2. Under anaerobic conditions, quickly transfer the thawed aliquot into a single tube of anaerobic ATCC® #1768 broth.
3. Additional #1768 broth tubes can also be inoculated with 0.5 mL from the original broth.
4. Incubate at 30°C for 3 to 5 days under a gas mixture of 80% N_2 and 20% CO_2.
5. Growth is evident by slight turbidity in the broth. The medium starts out light orange and then turns darker brown. When this occurs, it should be transferred. As the culture ages, it will eventually lose all the pigmentation. Once the pigment is lost, it is less likely that the cells will survive transfer.

ANAEROBIC CONDITIONS:

A. Balch tubes (available from Bellco Glass, Vineland, NJ; are specially designed for anaerobic work and use an aluminum crimp cap to hold a rubber stopper in place. Needles can easily be inserted through the stopper, and the tubes can be pressurized to 2 atm. Alternatively, serum vials may be used, or screw cap tubes with butyl rubber stoppers, in the latter case the stopper may be removed and the tube placed under a cannula system that dispenses sterile, oxygen free gas for addition of reducing agents or inoculation.
B. To obtain a fully reduced medium, it is necessary that the medium be anoxic and that a reducing agent be added. Common reducing agents are sodium sulfide, cysteine, dithiothreitol, titanium citrate and Co-enzyme M (see D). If good anaerobic techniques are used to make this medium this culture should not need the addition of a reducing agent. If a reducing agent is required we would suggest using Co-enzyme-M (see C).
C. We suggest adding the reducing agent to the medium at least one hour before the medium is to be inoculated. Co-enzyme M (mercaptoethanesulfonic acid) (100 X solution): *Dissolve 5.0 g in 100 mL of deionized water. Distribute into screw cap test tubes, 5–6 mL per tube and seal with rubber stoppers under N_2 gas. Autoclave to sterilize. Excess tubes can be stored at room temperature for up to 2 months.*
D. Syringes can be made anaerobic by one of two methods.
    1. Displace the dead space in the syringe with a sterile oxygen-free gas.
    2. Displace the dead space in the syringe with a reducing agent.

Notes

This culture only grows in broth. Cells are Gram-negative small rods. Some cells are motile. Gas mixture above is important to ensure growth. No growth should occur on nonselective media.
Always use freshly prepared pre-reduced media or pre-reduced media that has been previously prepared but stored under anaerobic conditions.
Additional information on this culture is available on the ATCC® web site at www.atcc.org.

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.

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
Email: Tech@atcc.org

Or contact your local distributor

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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.

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.

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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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