Arthrobacter sulfonivorans Borodina et al.

BAA-112™

Description

Strain designation: ALL [DSM 14002]
Deposited As: *Arthrobacter sulfonivorans* Borodina et al.
Type strain: Yes

Storage Conditions

Product format: Freeze-dried

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 3: Nutrient agar or nutrient broth
Temperature: 26°C
Atmosphere: Aerobic

Handling Procedures

1. Open vial according to enclosed instructions.

2. From a single tube of #3 or #396 broth (5 to 6 ml), withdraw approximately 0.5 to 1.0 ml with a Pasteur or 1.0 ml pipette and use to rehydrate the pellet.

3. Use 0.1 ml of this suspension to inoculate #3 or #396 slants and 0.1ml to inoculate #3 or #396 plates.

4. Incubate tubes and plates at 26ºC, under aerobic conditions for 3 days.

5. After 3 days of incubation, wash cells from the slant and transfer this broth to a new slant and plate. Incubate another 3 days under aerobic conditions. This second transfer and incubation is necessary for complete removal of the cryoprotectant, which can inhibit growth.

Notes

Growth on agar yields convex colonies, 1-2 mm in diameter, with entire margins and an opaque hue.

Cells are Gram positive, nonmotile rods, exhibiting a rod-coccus life cycle with age.

An alternative medium suggested by the depositor for methylotrophic growth is as follows:

$Na_2HPO_4 \cdot 2H_2O$, 7.9 g

KH_2PO_4, 1.5 g

NH_4Cl, 0.8 g

$MgSO_4 \cdot 7H_2O$, 0.1 g

Trace metal sol'n (*see below*), 10 ml

Agar (*if desired*), 15.0 g

Dimethylsulfone, 1.9 g

Distilled water, 1 L

Initial pH 7.3-7.4.

[Also grows on methanol, methylamine, glucose, fructose]

Trace metal stock solution:

1. Dissolve 50 g EDTA (disodium salt) in 400 ml water. Dissolve 9 g NaOH in the EDTA sol'n.

2. Dissolve the following salts individually in 30-40 ml aliquots of water and add to the EDTA-NaOH sol'n (plus 5-10 ml washings).

$ZnSO_4 \cdot 7H_2O$, 1.0 g

$CaCl_2$, 5.0 g

$MnCl_2 \cdot 4H_2O$, 2.5 g

$CoCl_2 \cdot 6H_2O$, 0.5 g

Ammonium molybdate, 0.5 g

$FeSO_4 \cdot 7H_2$ O, 5.0 g

$CuSO_4 \cdot 5H_2O$, 0.2 g

Adjust pH to 6.0 with 1M NaOH (~ 24 ml). Store in an amber bottle.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Arthrobacter sulfonivorans* Borodina et al. (ATCC BAA-112)

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 2025-09-29

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