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.

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Revision

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