Aciduliprofundum boonei

BAA-1534™

Description

Type strain
Strain designation: T469
Type strain: Yes

Storage Conditions

Product format: Frozen
Storage conditions: -80°C or colder

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 2811: Aciduliprofundum Medium
Temperature: 70°C
Atmosphere: 80% N_2, 20% CO_2

Handling Procedures

1. Sterilize the top of the Balch tube by spraying it with 70% ethanol and then flaming the top.
2. If needed, exchange the gas in the test tube for 80% N_2 - 20% CO_2.
3. If the medium is pink (see discussion about resazurin), add 0.1 mL reducing agent (1.5% Na_2S-$9H_2O$, stock solution) per each 8-10 mL of medium. Let the medium sit at room temperature for a minimum of 10 to 20 minutes - until the resazurin becomes colorless - before inoculating.
4. When the Balch tube is ready to inoculate, allow the vial to thaw under a

stream of oxygen-free gas.

5. For inoculation, use 1.0 mL syringe tipped with 22-gauge needle. Make the syringe anaerobic (see discussion below). Draw the thawed cell suspension up into the syringe and transfer the entire cell suspension into the primary tube of broth and incubate at 70°C. Secondary tube(s) can be inoculated by transferring 0.5 mL of the primary tube using an anaerobic syringe. Alternately, all steps can be performed in an anaerobic chamber. Plate 0.1 mL of the inoculated culture onto a non-selective medium and incubate aerobically at 37°C.
6. Faint turbidity should be detected in the #2811 broth within 1 to 2 days. There should be no growth detected on the aerobic plate. Growth maybe easier to detect using phase microscopy.

ANAEROBIC CONDITIONS

a. Balch tube refers to a specialized type of test tube that is designed to be pressurized and is suited for anaerobic work. The Balch test tubes can be purchased from Bellco Glass (www.bellcoglass.com; stock no. 2048-00150).
b. Resazurin is a commonly used redox indicator that is pink when the redox potential is above -50 mv and colorless when the redox potential is below -110 mv, i.e. highly reducing. Most strict anaerobes require this low redox potential for optimum growth.
c. To obtain a fully reduced medium, it is necessary that the medium anoxic and that a reducing agent is added. Common reducing agents are sodium sulfide, cysteine, dithiothreitol, and titanium citrate.
d. Syringes can be mad 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

Additional information on this culture is available on the ATCC® website at www.atcc.org.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Aciduliprofundum boonei* (ATCC BAA-1534)

References

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

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