Desulfofundulus solfataricus (Goorissen et al.) Watanabe et al.

BAA-573™

Description

Desulfofundulus solfataricus strain V21 is a bacterial type strain that was isolated from Iceland.

Strain designation: V21 [CIP 107984, DSM 14956]
Deposited As: *Desulfotomaculum solfataricum* Goorissen et al.
Type strain: Yes

Storage Conditions

Product format: Freeze-dried
Storage conditions: 2°C to 8°C

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 2374: D. solfataricum Medium
Temperature: 60°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 flame the top.
2. If needed exchange the gas in the test tube for 100% N_2.
3. If the anaerobic condition of the medium is in question, add 0.1 ml reducing

agent (3% stock solution of cysteine) per each 10 ml of medium. Let the medium sit at room temperature for 20 to 30 minutes before inoculating.

4. When the Balch tube is ready to inoculate, open the vial according to enclosed instructions.
5. For inoculation, use a 1.0 ml syringe tipped with 22 gauge needle. Make the syringe anaerobic (*see discussion below*) and withdraw 0.5 ml of medium #2374 broth and use this to rehydrate the freeze-dried pellet using anaerobic techniques. Transfer the rehydrated cell suspension back to a tube of #2374 broth. Transfer 0.5 ml of the culture into a 2nd test tube of #2374 and incubate both test tubes at 55-60°C. Plate 0.1 ml of the inoculated culture onto a non-selective medium and incubate aerobically at 37°C. Inoculate a nonselective anaerobic and aerobic broth and incubate at 70°C.
6. Growth should be detected in the #2374 broth within 5 to 10 days. After growth has been obtained the culture must be transferred every 4 to 7 days. There should be no growth detected on the aerobic plate. There should be no growth in the nonselective aerobic or anaerobic broth.

ANAEROBIC CONDITIONS:

a. Balch tube refers to a special type of test tube that is designed to be pressurized and is suited for anaerobic work. The Balch test tubes can be purchased form Bellco Glass (www.bellcoglass.com; stock no. 2048-00150).
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, and titanium citrate.
c. 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

The cells are straight rods that occur singly and in pairs, spores are spherical central and distend the cell. The cells stain Gram negative but the cell structure is Gram positive.

Once growth has been established, the culture should be transferred every 4 to 7 days when maintained at 55-60°C. The culture can be maintained at 4°C for up to 2

weeks.

Additional information on this culture is available on the ATCC web site at www.atcc.org.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Desulfofundulus solfataricus* (Goorissen et al.) Watanabe et al. (ATCC BAA-573)

References

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

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