



Desulfobulbus propionicus Widdel

33891™

Description

Strain designation: DSM 2032 [1 pr 3]

Deposited As: *Desulfobulbus propionicus* Widdel

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 2821: Modified *Desulfobulbus propionicus* Medium

Temperature: 37°C

Atmosphere: 80% N₂, 20% CO₂

Handling Procedures

1. Sterilize the top of the Balch tube (*see below*) by spraying it with 70% ethanol and then flaming the top.
2. Exchange the gas in the test tube for the appropriate gas mixture.
3. Add 0.1 to 0.2 mL of reducing agent (Cysteine 3% w./v) per 10 mL of medium. Let the medium sit at room temperature overnight before inoculating.
4. When the Balch tube is ready to inoculate, open the vial according to enclosed

instructions.

5. Perform all steps under anaerobic conditions.
6. Aseptically transfer 0.5 mL of #2821 broth to the vial and rehydrate the pellet. Transfer the suspension back into the broth tube. Inoculate a plate of a non-selective medium such as Tryptic Soy, Nutrient, or blood agar with 0.1 mL of the cell suspension.
7. Seal the tube with a rubber stopper and incubate anaerobically at 37°C. Incubate the plate(s) aerobically as a purity check. No growth should occur on the aerobic plate.
8. After two or three days, growth should be evident as indicated by faint turbidity throughout the broth. Once growth has been established the culture should be transferred to fresh broth every 72 to 96 hours.
9. This culture is very sensitive to oxygen when initially rehydrated; therefore steps should be taken to avoid exposure to oxygen. When the culture exhibits good growth it will remain viable for up to 1 week if stored at 4°C under anaerobic condition.

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 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 be anoxic and that a reducing agent be added. Common reducing agents are sodium sulfide, cysteine, dithiothreitol, and titanium citrate.
- 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.
- e. 100% nitrogen or 80% nitrogen-10% carbon dioxide-10% hydrogen gas mixture is typically employed as the oxygen free gas source.

Notes

Cells are short rods with pointed ends.

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: *Desulfobulbus propionicus* Widdel (ATCC 33891)

References

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

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