Desulfotomaculum acetoxidans Widdel and Pfennig

49208™

Description

Type strain
Strain designation: DSM 771 [5575]
Deposited As: *Desulfotomaculum acetoxidans* Widdel and Pfennig
Type strain: Yes

Storage Conditions

Product format: Frozen

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 1964: Desulfotomaculum acetoxidans medium
Temperature: 37°C
Atmosphere: Anaerobic
Incubation: With shaking

Handling Procedures

1. Keep cryovial frozen until ready for use.
2. Perform all steps under anaerobic conditions (*see below*).
3. Thaw the vial and aseptically transfer the suspension into a tube of #1964 broth. Inoculate a plate of non-selective medium with 0.1 mL of the culture.
4. Seal the test tube with a rubber stopper and incubate anaerobically at 37ºC in

shaking condition. Incubate the plate(s) aerobically as a purity check.

5. Within 7 to 14 days, growth is evident by moderate to good turbidity in the broth, with sediment in the bottom of the tube. Cells are motile medium rods in singles, and pairs. No growth should occur on the blood agar plate incubated aerobically. Once growth is achieved, transfer the culture to fresh #1964 broth. This culture does not grow well on agar.

ANAEROBIC CONDITIONS:

Anaerobic conditions for transfer may be obtained by either of the following:

- Use of an anaerobic gas chamber, or
- Placement of test tubes under a gassing cannula system connected to anaerobic gas.
- Anaerobic conditions for incubation may be obtained by any of the following:

Loose screw caps on test tubes in anaerobic chamber,

- Loose screw caps on test tubes in an activated anaerobic gas pack jar, or
- Use of sterile butyl rubber stoppers on test tubes so that an anaerobic gas headspace is retained.

Notes

Prior to inoculation, reduce the medium with the addition of 0.1 mL of a 1.5 % $Na_2S \cdot 9H_2O$ (stock solution) for each 10 mL of medium to be inoculated; let the medium sit for minimum of 30 minute before inoculating.

Once growth has been detected, it has been noted that adding 0.1 mL of a 1.5 % $Na_2S \cdot 9H_2O$ stock solution for each 10 mL of medium may enhance growth.

Always use freshly prepared anaerobic media.

For best results, use an anaerobe chamber. If one is not available, use a gassing cannula system. Using an anaerobic jar after rehydration of the freeze-dried pellet is not recommended. Once the culture has been established, using an anaerobic jar will work if the inoculum is 20% or greater.

A culture that has good growth and is fresh can be maintained at 4ºC for up to a week. The cells can be stored at -70ºC to -80ºC by growing a large volume in #1964 broth, harvesting the cells, and then mixing the cell pellet in an equal volume of fresh #1964 and 20% glycerol (10% final glycerol concentration). Distribute the cells into vials (approximately 0.5 to 1.0 mL per vial), and freeze rapidly. Both the #1964 broth and glycerol need to be pre-reduced. This may be accomplished by adding 0.1 mL (for each 5 to 6 mL medium) of a 1.5% sodium sulfide solution.

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: *Desulfotomaculum acetoxidans* Widdel and Pfennig (ATCC 49208)

References

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

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