ATCC

Product Sheet

Desulfurococcus mobilis (ATCC® 35582™)

Please read this FIRST

Biosafety Level
1

Intended Use

This product is intended for research use only. It is not intended for any animal or human therapeutic or diagnostic use.

Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: *Desulfurococcus mobilis* (ATCC® 35582™)

American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

Or contact your local distributor

Description

Designation: Hv3(9) [DSM 2161]
Deposited Name: *Desulfurococcus mobilis* Zillig and Stetter

Propagation

Medium
ATCC® Medium 1558: Desulfurococcus medium

Growth Conditions
Temperature: 88.0°C
Atmosphere: Anaerobic

Propagation Procedure
1. Sterilize the top of the Balch tube (see below) by spraying it with 70% ethanol and then flaming the top.
2. If needed exchange the gas in the test tube for 100% N_2 or 80% N_2 20% CO_2.
3. If the medium is pink (see discussion about resazurin) add 2.0 ml of reducing agent (3% cysteine, stock solution) per 100 ml of medium. Let the medium sit at room temperature for 10 to 20 minutes do not inoculate until the resazurin becomes colorless.
4. When the Balch tube is ready to inoculate, open the vial according to enclosed instructions.
5. For inoculation, use an anaerobic 1.0 ml syringe (*see below*) tipped with 22 gauge needle. Withdraw 0.5 ml of #1558 broth and use this to rehydrate the freeze dried pellet. Immediately place the rehydrated vial under a stream of sterile oxygen-free gas.
6. Using the same syringe, transfer the rehydrated cell suspension back to a tube of #1558 broth. 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. Incubate the inoculated tubes at 75 to 85°C.
7. Growth should be detected in the #1558 broth within 24 to 48 hours. 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. 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

Notes

When examined microscopically, the cells appear as typical single (some pairs), cocci.
Always use freshly prepared anaerobic medium. If there is any question about the anaerobic condition of the medium, the medium can be reduced with the addition of 3.0% cysteine (1.0 ml per 100 ml of medium).
Other commonly used reducing agents are sodium sulfide, cysteine, dithiothreitol, and titanium citrate. Cysteine is the reducing agent of choice since it does not cause the ferrous ammonium sulfate to precipitate.

References

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

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease

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Control and Prevention and National Institutes for Health.

ATCC Warranty

The viability of ATCC® products is warranted for 30 days from the date of shipment, and is valid only if the product is stored and cultured according to the information included on this product information sheet. ATCC lists the media formulation that has been found to be effective for this strain. While other, unspecified media may also produce satisfactory results, a change in media or the absence of an additive from the ATCC recommended media may affect recovery, growth and/or function of this strain. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans.

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Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at www.atcc.org

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

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