ATCC

Product Sheet

Hyperthermus butylicus (ATCC® 700455™)

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: *Hyperthermus butylicus* (ATCC® 700455™)

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: DSMZ 5456
Deposited Name: *Hyperthermus butylicus* Zillig et al.

Propagation

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 80% H_2 and 20% CO_2. Do not overpressurize at this time.
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 - until the resazurin becomes colorless - before inoculating.
4. When the Balch tube is ready to inoculate, thaw contents of the vial in a 37°C water bath with gentle agitation.
5. For inoculation, use an anaerobic 1.0 ml syringe (*see below*) tipped with 22 gauge needle. Withdraw entire contents of the thawed vial and transfer to the Balch tube containing *Hyperthermus butylicus* broth.
6. Plate 0.1 ml of the inoculated culture onto a non-selective medium and incubate aerobically at 37ºC. Additional tubes of prepared anaerobic broth may be inoculated from the primary broth tube. After inoculation, pressurize the tubes to 1 bar overpressure with 80% H_2 and 20% CO_2 gas mixture. Incubate the inoculated tubes at 90 to 100ºC.
7. Growth should be detected in the broth. There should be no growth detected on the aerobic plate.

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

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

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 Control and Prevention and National Institutes for Health.

ATCC Warranty

ATCC® products are warranted for 30 days from the date of shipment, and this warranty is valid only if the product is stored and handled according to the information included on this product information sheet. If the ATCC® product is a living cell or microorganism, ATCC lists the media formulation that has been found to be effective for this product. 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 product. 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

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