ATCC

Product Sheet

Caldicellulosiruptor kristjanssonii (ATCC® 700853™)

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: *Caldicellulosiruptor kristjanssonii* (ATCC® 700853™)

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: DSM 12137 [I77R1B]
Deposited Name: *Caldicellulosiruptor kristjanssonii* Bredholt et al.

Propagation

Medium
ATCC® Medium 2172: BA medium (DSM 671)

Growth Conditions
Temperature: 70.0°C
Atmosphere: Anaerobic

Propagation Procedure
1. Sterilize the top of the Balch tube by spraying it with 70% ethanol and then flaming the top.
2. If needed exchange the gas in the Balch tube for 100% N_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, until the resazurin becomes colorless, before inoculating.
4. When the Balch tube is ready to inoculate, open the vial according to enclosed instructions. Take an anaerobic
1.0 ml syringe (*see discussion below*) tipped with a 22 gauge needle and withdraw 0.5 ml of medium from the Balch tube and rehydrate the freeze dried pellet. Immediately place the rehydrated vial under a stream of sterile gas to maintain anaerobic conditions.
5. Using the same syringe transfer the rehydrated cell suspension back to a tube of #2172 broth. Plate 0.1 ml of the inoculated culture onto a non-selective agar medium and incubate aerobically at 37°C. Inoculate a nonselective anaerobic and aerobic broth. Incubate these tubes at 37°C. Incubate the #2172 tubes at 70°C.
6. Growth should be detected in the #2172 broth within 24 to 48 hours. No growth should be detected on the aerobic plate, or in the nonselective aerobic or anaerobic broth.
ANAEROBIC CONDITIONS:
a. Balch tubes (available from Bellco Glass, Vineland ,NJ) are specially designed for anaerobic work and use an aluminum crimp cap to hold a rubber stopper in place. Needles can easily be inserted through the stopper, and the tubes can be pressurized to 2 atm. Alternatively, serum vials may be used, or screw cap tubes with butyl rubber stoppers. In the latter case the stopper may be removed and the tube placed under a cannula system that dispenses sterile, oxygen-free gas for the addition of reducing agents or inoculation.
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

Cells appear as long thin rods that occur as single cells, pairs and short chains.
Growth settles to the bottom of the tube but is easily re-suspended when the test tube is inverted.

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

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

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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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