Thermotoga maritima Huber et al.

43589™

Description

Type strain. Genome sequencing strain.
Strain designation: DSM 3109 [MSB8]
Deposited As: *Thermotoga maritima* Huber et al.
Type strain: Yes

Storage Conditions

Product format: Frozen
Storage conditions: -80°C or colder

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 2114: Thermotoga medium
Temperature: 70°C
Atmosphere: Anaerobic

Handling Procedures

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 test 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 be inoculated let the frozen vial thaw at room temperature under a gentle stream of sterile oxygen-free gas.
5. Using a 1.0 mL syringe tipped with a 22 gauge needle, withdraw the cell suspension from the vial, transfer it to the broth, and incubate at 70°C. Plate 0.1 mL of the inoculated culture onto a non-selective medium and incubate aerobically at 37°C.
6. Growth should be detected in the broth within 48 to 96 hours. No growth should be detected on the aerobic plate or 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. Balch test tubes can be purchased form Bellco glass (www.bellcoglass.com stock no. 2048-00150).
b. Resazurin is a commonly used redox indicator which 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 optimal 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.

Notes

Cells appear as single or paired rods surrounded with a sheath-like structure which protrudes balloon-like beyond the ends of the cells.

Mercaptoethane sulfonic acid, also known as Co-enzyme M, at a final concentration of 0.05% (Sigma M-1511) can also be used as a reducing agent. It has been found to increase cell recovery.

Hydrogen is inhibitory to growth.

Purified genomic DNA of this strain is available as ATCC® 43589D-2™.
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: *Thermotoga maritima* Huber et al. (ATCC 43589)

References

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

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Contact Information

ATCC
10801 University Boulevard
Manassas, VA 20110-2209
USA
US telephone: 800-638-6597
Worldwide telephone: +1-703-365-2700
Email: tech@atcc.org or contact your local distributor