



Product Sheet

# *Thermotoga maritima* (ATCC® 43589™)

Please read this FIRST



Storage Temp.  
**Frozen: -80°C or colder**  
**Freeze-Dried: 2°C to 8°C**  
**Live Culture: See Propagation Section**

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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: *Thermotoga maritima* (ATCC® 43589™)

American Type Culture Collection  
PO Box 1549  
Manassas, VA 20108 USA  
[www.atcc.org](http://www.atcc.org)

800.638.6597 or 703.365.2700  
Fax: 703.365.2750  
Email: [Tech@atcc.org](mailto:Tech@atcc.org)

Or contact your local distributor

## Description

**Designation:** DSM 3109 [MSB8]

**Deposited Name:** *Thermotoga maritima* Huber et al.

**Product Description:** Type strain. Genome sequencing strain.

## Propagation

### Medium

ATCC® Medium 2114: Thermotoga medium

### Growth Conditions

**Temperature:** 70°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 test tube for 100% N<sub>2</sub>.
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 from Bellco glass ([www.bellcoglass.com](http://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](http://www.atcc.org).

## References

References and other information relating to this product are available online at [www.atcc.org](http://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.



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## 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](http://www.atcc.org)

Additional information on this culture is available on the ATCC web site at [www.atcc.org](http://www.atcc.org).

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