



# *Thermus aquaticus* Brock and Freeze

25104™

## Description

*Thermus aquaticus* strain YT-1 is a thermophilic bacterium that was isolated from a hot spring at Yellowstone National Park. This strain is part of the National Park Service (NPS) Special Collection and is cited to produce the restriction endonucleases TaqI and Taq II.

**Strain designation:** YT-1 [DSM 625, JCM 10724, LMG 8924, NCAIM B.01703, NCIB 11243]

**Deposited As:** *Thermus aquaticus* Brock and Freeze

**Type strain:** Yes

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## Storage Conditions

**Product format:** Freeze-dried

**Storage conditions:** 2°C to 8°C

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## 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.

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## 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.

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## Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at [www.atcc.org](http://www.atcc.org).

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## Growth Conditions

**Medium:**

ATCC Medium 461: Castenholz TYE medium

**Temperature:** 70°C

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## Handling Procedures

1. Open vial according to enclosed instructions.
2. Using a single tube of #461 broth (5 to 6 ml), withdraw approximately 0.6 ml

- with a Pasteur or 1.0 ml pipette. Rehydrate the entire pellet.
3. Aseptically transfer 0.3 ml of this suspension back into the broth tube. Mix well.
  4. Use the remaining 0.3 ml of the suspension to inoculate a slant of #461 agar.
  5. Incubate tubes at 70°C. For best results, incubate tubes within a closed jar with a moistened paper towel added to maintain humidity and prevent desiccation.
  6. Once growth is obtained in broth, plates can be inoculated with approximately 0.2 ml per plate. Better growth is achieved on plates when incubated at 60°C rather than 70°C. Plates should be incubated in a jar as described above or taped shut to prevent desiccation.
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## Notes

Yellow growth should be visible in broth and slant tubes after 24 to 48 hours of incubation. At 1000X magnification, cells are long, regular rods occurring singly or occasionally as end-to-end pairs.

After 48 hours, the colonies on plates are circular with a convex elevation, entire margin, and a smooth surface. They are dark yellow in color and can be up to 1 mm in diameter.

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## Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Thermus aquaticus* Brock and Freeze (ATCC 25104)

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## References

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

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