



Helicobacter muridarum **Lee et al.**

51212™

Description

Strain designation: ST2

Deposited As: *Helicobacter muridarum* Lee et al.

Type strain: No

Storage Conditions

Product format: Frozen

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 2

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

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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 1856: *Helicobacter* medium

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ATCC Medium 260: Trypticase soy agar/broth with defibrinated sheep blood

Temperature: 37°C

Atmosphere: Microaerophilic

Handling Procedures

1. Open vial according to enclosed instructions. Thaw and aseptically transfer the entire content of the vial to a tube of fresh #18 broth (5 to 6 ml). Mix well.
2. To obtain a biphasic culture, add 0.4 ml of the suspension to a #260 slant. Add

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remaining 0.1 ml of the suspension to a #260 plate and streak for isolation.

3. Incubate at 37°C under microaerophilic conditions. This organism requires additional free hydrogen for best growth. To obtain this, use an anaerobe jar WITHOUT an active catalyst and an ANAEROBIC gas generator pack, or other acceptable method, to obtain the desired gas mixture. Incubate slant with cap loose.

4. Within 3-5 days of incubation, good growth should be obtained in the broth pool at the bottom of the slant. Additional incubation may be required for colonies to appear on the plate. Further subcultures can be made using broth pool as the inoculum source. Subcultures will require only 24 to 48 hours of incubation.

Notes

This is a slow growing organism that requires moist conditions for best growth. Growth at the broth/agar interface of the biphasic slant should occur within three days, but little turbidity will be seen. To observe growth, examine a wet mount of the broth under phase microscopy. Organisms are thick short, curved, Gram negative motile rods with 2 to 3 spiral turns. The presence of spheroid cells indicates that viability is being lost either due to age or too much exposure to oxygen.

Growth on agar takes longer than with the biphasic culture. Colonies are gray or clear forming a spreading film over the surface of the agar. Once good growth is present, these organisms tend to lose viability, especially if exposed to air for lengthy periods. Viability also decreases with repeated subculturing. The cells do not Gram stain well using traditional procedures. To obtain the best results, use a basic fuchsin counterstain in place of the safranin.

Once good growth is obtained, transfer or freeze the culture. Adding an equal amount of 20% sterile glycerol to pooled broth from several biphasic slants, followed by freezing in liquid nitrogen or *ultra-low temperature* freezer is recommended.

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: *Helicobacter muridarum* Lee et al. (ATCC 51212)

References

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

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