Geobacter lovleyi

BAA-1151™

Description

Type strain. Genome sequenced strain.
Strain designation: SZ
Deposited As: *Geobacter lovleyi*
Type strain: Yes

Storage Conditions

Product format: Freeze-dried
Storage conditions: 2°C to 8°C

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 2635: *Desulfuromonas michiganensis* Medium
Temperature: 26°C
Atmosphere: 80% N_2, 20% CO_2

Handling Procedures

1. Sterilize the top of the Balch tube by spraying with 70% ethanol and then flaming
2. If needed, exchange the gas in the test tube for 80% N_2-20% CO_2. Supplement the media with 200 µL per 100 mL PCE and 100 µL per 10 mL of fumarate.
3. When the Balch tube is ready to inoculate, open the vial according to enclosed instructions.
4. For inoculation, use an anaerobic 1.0 mL syringe tipped with 22-gauge needle.

Withdraw 0.5 mL of #2635 broth and use this to rehydrate the entire freeze-dried pellet. Immediately place the rehydrated vial under a gentle stream of sterile oxygen-free gas.

5. Using the same syringe, transfer the rehydrated cell suspension to a tube of # 2635 broth. Plate 0.1 mL of the inoculated culture onto a non-selective medium and incubate aerobically at 26°C. Use 0.1 mL of the inoculated culture to inoculate a nonselective aerobic broth and an additional tube of #2635 broth. Incubate the broth tubes at 26°C.
6. Growth should be detected in the #2635 broth within 2 weeks. There should be no growth detected on the aerobic plate or in the aerobic broth.

Notes

After two weeks of incubation, growth can be viewed as motile rods in a wet mount. The broth will not become turbid. An oil slick may form at the surface of the broth due to the addition of PCE.

This organism is capable of degrading a common groundwater contaminant by completely dechlorinating tetrachloroethene (PCE). Growth on PCE yields very low cell numbers, but when supplemented with 10 mM fumarate, cell yields are much higher. Growth on media lacking PCE may decrease the cells' ability to dechlorinate PCE.

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: *Geobacter lovleyi* (ATCC BAA-1151)

References

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

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