Geobacter sulfurreducens Caccavo et al.

BAA-2815™

Description

Strain designation: KN400
Deposited As: *Geobacter sulfurreducens*
Type strain: No

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 1957: Geobacter medium
Temperature: 30°C
Atmosphere: Anaerobic

Handling Procedures

1. Keep vial frozen until ready to use.
2. To reduce media before inoculation, use 5% coenzyme M (0.2 mL per 10 mL).
3. The additives 1 M Fumarate (0.2 mL per 10 mL of broth and 0.1 mL per plate) and 1.5% Sodium Sulfide solution (0.2 mL per 10 mL broth and 0.1 mL per plate) need to be added before inoculation. If needed, exchange the gas in the Hungate tube for 80% N_2-20% CO_2 or 80% N_2-10% CO_2-10% H_2.

4. Under anaerobic conditions, thaw vial and then quickly transfer entire contents into a single Hungate tube of #1957 broth. A second tube of #1957 broth can also be inoculated with 0.5 mL from the original broth.
5. Incubate at 30°C for 5 to 12 days. Subsequent transfers may grow faster following the initial recovery period. Growth on agar requires a longer incubation period.
6. Growth is evident by light turbidity and an accumulation of cells at the bottom of the broth that are an orange/pink coloration. A wet mount may be necessary to observed the growth.

ANAEROBIC CONDITIONS:
Anaerobic conditions for transfer may be obtained by the use of an anaerobic gas chamber or placement of test tubes under a gassing cannula system connected to anaerobic gas.
Anaerobic conditions for incubation may be obtained by any of the following:

- Loose screw caps on test tubes in an anaerobic chamber
- Loose screw caps on test tubes in an activated anaerobic gas pack jar
- Use of sterile butyl rubber stoppers on test tubes so that an anaerobic gas headspace is retained

Notes

This culture grows well in broth if Hungate tubes are used. For larger volumes, use serum bottles. Incubation of up to 20 days may be required for growth on agar. Add 0.2 mL of 1M Fumarate to each plate prior to inoculation. No growth should occur on nonselective media.

A wet mount may be necessary to observed the growth.

Reference Caccavo *et al.* Appl. Environ. Microbiol. 60: 37523759 (1994) for further information.

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 sulfurreducens* Caccavo et al. (ATCC BAA-2815)

References

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

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Revision

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