



# ***Bacteroides fragilis*** **bacteriophage B40-8**

**51477-B1™**

## **Description**

**Strain designation:** B40-8

**Deposited As:** B40-8

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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 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

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

**Host:** *Bacteroides fragilis* HSP 40 [CIP 104785] (ATCC 51477)

**Medium:**

ATCC Medium 1490: Modified chopped meat medium

**Temperature:** 37°C

**Atmosphere:** Anaerobic

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## Handling Procedures

1. Follow general procedures given below for phage propagation.
2. Use *Bacteroides fragilis* strain HSP 40 (ATCC® 51477™) as host.

### GENERAL PROCEDURES FOR THE PROPAGATION OF BACTERIOPHAGE

To recover phage from freeze-dried or frozen vial:

- a. Prepare an actively growing broth culture of the recommended host strain

- before opening the phage specimen. The host should be 18 to 24 hours old.
- Add 0.25 mL of the recommended broth to the freeze-dried phage vial and aseptically transfer back into 2.25 mL of broth. The rehydrated phage can be serially diluted by passing 0.25 mL of the phage into a tube containing 2.25 mL of the broth medium. Repeat for as many passages as desired.
  - Pre-warm plates of the recommended medium in an incubator.
  - To prepare overlay, boil 0.5% #1490 agar until melted and then cool and maintain at 43°C to 45°C until ready to pour. It may be advisable to use a water bath. When soft agar is cooled to 43°C to 45°C, add one or two drops of the 18 to 24 hour host to each tube. Overlay the surface of the pre-warmed plates with 2.5 mL each of the soft agar. Allow overlay to harden.
  - One drop of each dilution is spotted on the surface of the prepared plates. Allow to dry. One or two dilutions can be placed on each plate. After overnight incubation, lysis should be visible. At the higher dilutions, individual plaques should be countable.
  - Many strains may also be titrated without a soft agar overlay. Pipette approximately 1.0 mL of the host onto the surface of each plate. After tilting plate to ensure the entire surface is covered, the excess liquid is aspirated off. After the surface dries, the various dilutions of the phage are dropped onto the surface as described above.

NOTE: Spotting the phage on plates makes visualizing the lysis easier. If phage is added directly to soft agar before pouring plates, hazy or tiny plaques may be difficult to see. Resistant host bacteria may also mask plaque formation.

To propagate phage:

- Phage may be propagated by preparing plates with the soft agar/host overlay as above and covering the surface with approximately 0.5 mL of the concentrated phage. Or, alternatively, you may add the phage directly to the melted agar/host before pouring over the plates. For larger amounts, large-size T-flasks can be prepared with the recommended agar, and approximately 12.0 mL of melted soft-agar/host poured over the surface. Phage is then allowed to run over hardened surface. Phage may also be added directly to melted softagar before pouring as described above.
- After 24 hours incubation, the soft agar is scraped off the surface of the agar plates. Centrifuge at about 1000 rpm for 25 minutes to sediment the cellular debris and agar. Conserve the supernatant.
- This supernatant is passed through a .22 µm Millipore filter and the filtrate

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stored at 4°C to 8°C. Lysates should remain viable under refrigeration for long periods. They may also be frozen with or without cryoprotectant. If available, liquid nitrogen storage is the best method for long term storage. Most phage can also be freeze-dried. ATCC® uses double-strength skim milk mixed halfandhalf with the filtrate.

NOTE: Broth propagation methods may also be employed with most phage. Unless otherwise noted, ATCC® uses the Adams agaroverlay method as described in M. H. Adams' Bacteriophages (Interscience Publishers, Inc., New York, 1959) for routine phage production.

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## **Notes**

Medium must be kept anaerobic and inoculated plates incubated in a suitable anaerobic jar or chamber.

Plaques are medium to large-size with clear areas of complete lysis.

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

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## **Material Citation**

If use of this material results in a scientific publication, please cite the material in the following manner: *Bacteroides fragilis* bacteriophage B40-8 (ATCC 51477-B1)

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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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