Product Information Sheet for HM-617

**Bacteriophage DO4, Infectious for Pseudomonas aeruginosa**

Catalog No. HM-617

For research use only. Not for human use.

**Contributor:**
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**Manufacturer:**
BEI Resources

**Product Description:**

**Virus Classification:** Caudovirales, Siphoviridae, Unclassified Siphoviridae

**Family:** Siphoviridae

**Strain/Isolate:** DO4

**Host:** Pseudomonas aeruginosa

**Comments:** Bacteriophage DO4 (HMP ID 9933) is a reference genome for The Human Microbiome Project (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of bacteriophage DO4 is currently being sequenced at the J. Craig Venter Institute.

**Note:** HMP material is taxonomically classified by the depositor. Quality control of these materials is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material.

Bacteriophage DO4 is a highly selective virus that is extremely effective at lysing Pseudomonas aeruginosa (P. aeruginosa), the second most common pathogen responsible for hospital-acquired bacterial pneumonia and the first causative agent of morbidity and mortality in cystic fibrosis patients. Bacteriophage DO4 belongs to the unclassified Siphoviridae family of viruses, which are non-enveloped and display long, noncontractile, filamentous tails, linear dsDNA and hexagonal capsids.

**Material Provided:**

Each vial contains approximately 0.5 mL of bacteriophage in Luria-Burtani (LB) broth supplemented with 10 mM MgSO₄ and 10% glycerol.

**Packaging/Storage:**

HM-617 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -20°C or colder immediately upon arrival. For long-term storage, the product should be stored at -80°C or colder or in the vapor phase of a liquid nitrogen freezer. Freeze-thaw cycles should be avoided.

**Growth Conditions:**

**Host:** P. aeruginosa (strain PA14 recommended)

**Growth medium for host:**

Tryptic Soy broth or equivalent
Tryptic Soy agar or equivalent

**Incubation of host:**

Temperature: 37°C
Atmosphere: Aerobic

**Propagation of host:**

1. Keep bacterial stock frozen until ready for use, then thaw.
2. Transfer a thawed aliquot into a single tube of broth.
3. Incubate the tube at 37°C for 24 hours.

**Growth medium for bacteriophage:**

LB agar supplemented with 10 mM MgSO₄ or equivalent
LB soft agar overlay (0.5%) supplemented with 10 mM MgSO₄ or equivalent

**Incubation of host with bacteriophage:**

Temperature: 30°C
Atmosphere: Aerobic

**Propagation of bacteriophage:**

1. Prior to opening the vial, an actively growing broth culture (incubate for 24 hours) of the recommended host strain should be prepared. Keep bacteriophage vial frozen until ready for use, then thaw.
2. Pre-warm plates and overlay the surface with 2.5 mL of melted 0.5% agar containing 1 to 2 drops of the host. Allow overlay to harden.
3. Prepare serial dilutions of thawed bacteriophage (if desired) and spot onto the plate. Allow to dry.
4. Incubate the plate at 30°C for 24 hours.

**Cytopathic Effect:** Lysis of P. aeruginosa; individual plaques should be countable at higher dilutions.

**Citation:**

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: Bacteriophage DO4, Infectious for Pseudomonas aeruginosa, HM-617.”

**Biosafety Level:** 2


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References:
4. HMP ID 9933 (Bacteriophage DO4)

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