Bacteriophage Phi_3244S/Sa1263, Infectious for Staphylococcus aureus

Catalog No. HM-693

For research use only. Not for human use.

Contributor:
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Manufacturer:
BEI Resources

Product Description:

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

**Species:** Bacteriophage Phi_3244S/Sa1263

**Host:** Staphylococcus aureus (S. aureus)

**Original Source:** Bacteriophage phi_3244S/Sa1263 was isolated from Sa06_3244 bacterium derived from a blood culture.¹²

**Comments:** Bacteriophage phi_3244S/Sa1263 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 phi_3244S/Sa1263 is scheduled to be 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 phi_3244S/Sa1263 is a highly selective virus that is extremely effective at lysing S. aureus, a major causative agent for opportunistic and/or nosocomial infections, pyrogenic inflammatory diseases, food-poisoning and toxic shock syndrome.²³ Bacteriophage phi_3244S/Sa1263 belongs to the unclassified Siphoviridae family of viruses, which are non-enveloped and display noncontractile, filamentous tails, linear double-stranded DNA 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 glycerol.

**Packaging/Storage:**
HM-693 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 in the vapor phase of a liquid nitrogen freezer. Freeze-thaw cycles should be avoided.

**Growth Conditions:**
**Host:** S. aureus (strain Sa1263 recommended)

**Growt medium for host:**
Brain Heart Infusion broth or equivalent

**Trypicky condition broth** with 5% defibrinated sheep blood 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 1 day.

**Growth medium for bacteriophage:**
LB agar supplemented with 10 mM MgSO₄ or equivalent

**LB soft agar overlay (0.7%)** 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 (1-day incubation) 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 0.7% 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 1 day.

**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.

**Cytopathic Effect:** Lysis of S. aureus; 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 Phi_3244S/Sa1263, Infectious for Staphylococcus aureus, HM-693.''

**Biosafety Level:** 2


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References:

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