Phage DNA Isolation Kit

CAT. 46800,46850

FOR RAPID PURIFICATION OF TOTAL DNA FROM BACTERIOPHAGES

- Isolate high quality DNA from a broad variety of phage strains
- High yields of phage genomic DNA
- Fast and easy processing using a rapid spin-column format
- No phenol or chloroform extractions or cesium chloride banding required
- Purified total phage DNA is of the highest integrity, and can be used in a number of downstream applications including PCR, qPCR, Restriction Fragment Length Polymorphism (RFLP), sequencing, cloning, Southern Blot and more.

NORGEN BIOTEK

Advantages You Will Bring to Your Lab

OPTIMIZED PROTOCOL TO OBTAIN PHAGE DNA WITHOUT HOST gDNA CONTAMINATION

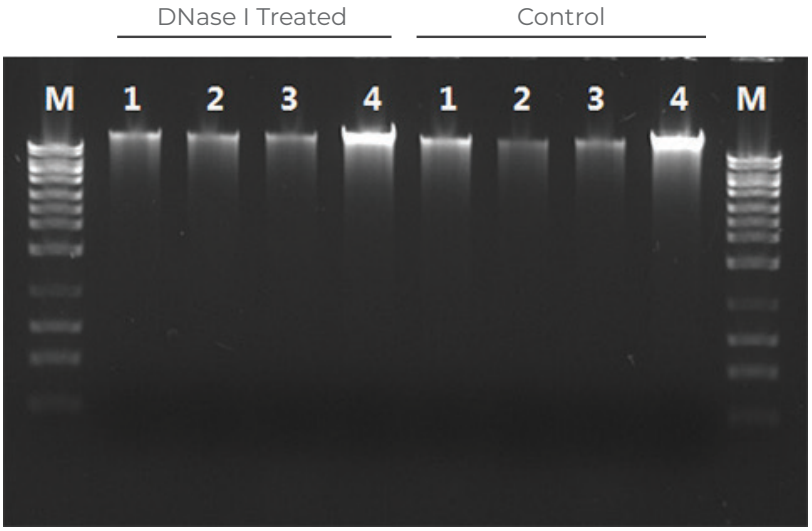
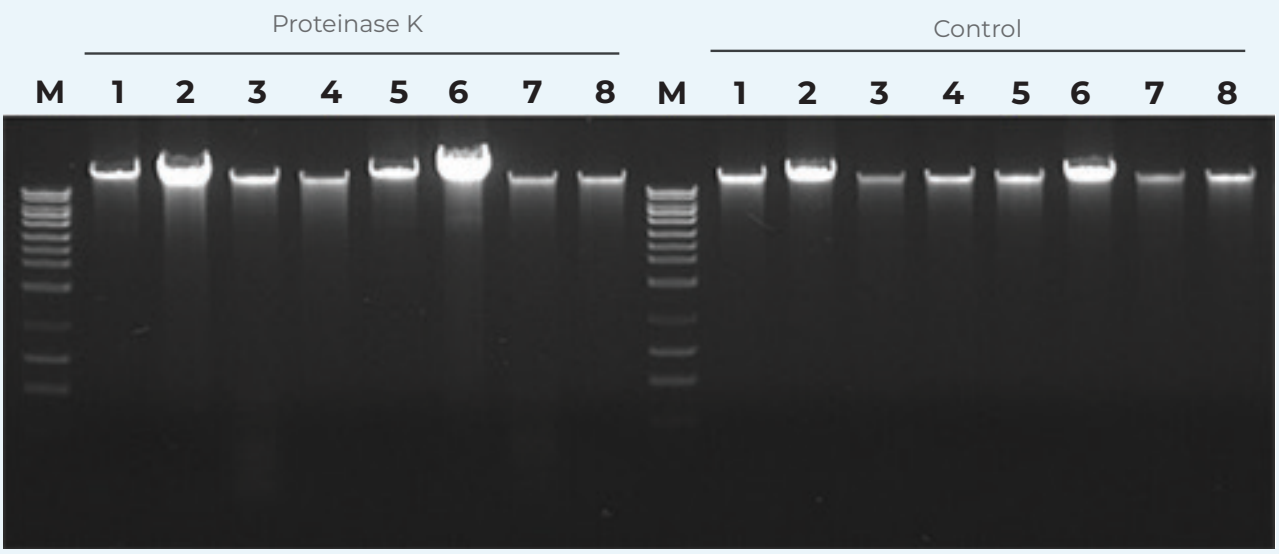


Figure 1. Effective Host Genomic DNA Removal without Reducing Phage DNA Yield. Total DNA was isolated from four enriched phage cultures using Norgen's Phage DNA Isolation Kit. A DNase I pre-treatment was performed prior to adding the provided Lysis Buffer. Briefly, 20 units of DNase I was added to 1 mL of enriched phage culture and the mixture was incubated at room temperature for 20 minutes. After the DNAase I treatment the procedure was followed. As a control, DNA was isolated from aliquots of the same 4 cultures using Norgen's Phage DNA Isolation Kit without performing the DNase I treatment. For DNA analysis 10 µL of each 50 µL elution was loaded onto a 1X TAE agarose gel. As it can be seen, the phage DNA was safely protected from the DNase I treatment by its coat protein, while the host genomic DNA was efficiently degraded by the DNase I. Thus the DNase I pre-treatment resulted in less host gDNA contamination in the final phage elution without influencing the total phage DNA yield. Lane M is Norgen's Highranger 1 kb DNA Ladder (Cat. 11900)



OPTIMIZED PROTOCOL TO IMPROVE PHAGE DNA YIELD USING PROTEINASE K (PURCHASE SEPARATELY)

Figure 2. Optional Proteinase K Treatment Improves DNA Yield for Certain Phage Strains. Total DNA was isolated with and without the optional Proteinase K treatment using Norgen's Phage DNA Isolation Kit. Briefly, 4 µL of Proteinase K (20 mg/mL) was added to 1 mL of enriched phage culture and incubated at 55°C for 15 minutes with the phage Lysis Buffer. After the Proteinase K treatment the procedure was followed. As a control, DNA was isolated from aliquots of the same 8 cultures using Norgen's Phage DNA Isolation Kit without performing the Proteinase K treatment. For DNA analysis 10 µL of each 50 µL elution was loaded onto a 1X TAE agarose gel and the yield of DNA was compared from the eight different phage types (lane 1 to 8). As it can be seen, the optional treatment of Proteinase K improved the phage DNA yield in Lanes 2, 5 and 6 dramatically. Lane M is Norgen's Highranger 1 kb DNA Ladder (Cat. 11900)

Photo : Phage DNA Isolation Kit Cat. 46850 100 prep.

KIT SPECIFICATIONS

Description	Specifications
Column Binding Capacity	50 µg
Maximum Column Loading Volume	650 µL
Size of DNA Purified	All sizes
Maximum Amount of Starting Material	1 x 10^{10} pfu/mL enriched phages
Average Yield*	3-15 µg DNA from 10^{8}-10^{10} pfu/mL of enriched phages
Time to Complete 10 Purifications	45 minutes

SELECT PUBLICATIONS

Publication Title	Authors	Journal	Year
Bacteriophage Cocktail Comprising Fifi044 and Fifi318 for Biocontrol of Erwinia amylovora	Byeori Kim, Seung Yeup Lee, Jungkum Park, Sujin Song, Kwang-Pyo Kim, Eunjung Roh	The Plant Pathology Journal https://doi.org/10.5423/PPJ.OA.01.2024.0005	2024
Genomic and Proteomic Analysis of Six Vi01-like Phages Reveals Wide Host Range and Multiple Tail Spike Proteins	Harris, E.B.; Ewool, K.K.K.; Bowden, L.C.; Fierro, J.; Johnson, D.; Meinzer, M.; Tayler, S.; Grose, J.H	Viruses	2024
Bacteriophages for Controlling Staphylococcus spp. Pathogens on Dairy Cattle Farms: In Vitro Assessment	Pyzik, E.; Urban-Chmiel, R.; Kurek, Ł.; Herman, K.; Stachura, R.; Marek, A.	Animals : an Open Access Journal from MDPI	2024
Investigating the viral ecology and contribution to the microbial ecology in full-scale mesophilic anaerobic digesters.	Bishav Bhattarai, Ananda Shankar Bhattacharjee, Felipe H Coutinho, Ramesh Goel	Chemosphere	2024

Ordering Information

Description	Preps	Cat. #
Phage DNA Isolation Kit	50 Prep	46800
Phage DNA Isolation Kit	100 Prep	46850

Order Today!

Order Norgen's Phage DNA Isolation Kit today to help improve your research performance and workflow.

Three ways to order

Visit **norgenbiotek.com**
Call at **1-866-NORGENB** or **905-227-8848**
Email at **orders@norgenbiotek.com**

Enhance your lab with the complete workflow solutions from Norgen.

Related Products	Prep Size	Cat. #
Bacterial Genomic DNA Isolation Kit	50 Prep	17900
RNase-Free DNase I Kit	50 Reactions	25710
Norgen Next Generation Sequencing Services	Call 1-866-NORGENB or Visit norgenbiotek.com	

For more information
SCAN HERE

NORGEN BIOTEK

ISO 9001:2015 CERTIFIED QUALITY · ISO 13485:2016 CERTIFIED QUALITY · ISO 15189:2022 CERTIFIED QUALITY · GMP

norgenbiotek.com