

Genomic DNA from *Klebsiella pneumoniae*, Isolate 8

Catalog No. NR-15471

For research use only. Not for human use.

Contributor:

NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH

Product Description:

Genomic DNA was obtained from a preparation of *Klebsiella pneumoniae* (*K. pneumoniae*), isolate 8.

K. pneumoniae is a Gram-negative enterobacterium that is a major cause of nosocomial infections of the urinary and respiratory tracts.¹ The primary isolates emerging from these settings contain the plasmid-bound *bla*_{KPC} gene conferring specific resistance to the carbapenem class of antibiotics, as well as other β -lactams.¹⁻³ Virulence is derived from the complex acidic polysaccharide capsules, which provide protection from phagocytosis, and also give the colonies their characteristic mucoid appearance.¹

NR-15471 has been qualified for PCR applications by amplification of approximately 1500 bp of the 16S ribosomal RNA. The presence of the *bla*_{KPC} gene in NR-15471 has been confirmed by PCR amplification of a *bla*_{KPC} gene specific sequence from extracted DNA.

Material Provided:

Each vial contains 4 to 6 μ g of bacterial genomic DNA in TE buffer (10 mM Tris-HCl and 1 mM EDTA, pH ~ 7.4). The concentration is shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

Packaging/Storage:

NR-15471 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen on dry ice and should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be minimized.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Genomic DNA from *Klebsiella pneumoniae*, Isolate 8, NR-15471."

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see

www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Podschun, R. and U. Ullmann. "*Klebsiella* spp. As Nosocomial Pathogens: Epidemiology, Taxonomy, Typing Methods, and Pathogenicity Factors." Clin. Microbiol. Rev. 11 (1998): 589-603. PubMed: 9767057.
2. Endimiani, A., et al. "Characterization of *bla*_{KPC}-Containing *Klebsiella pneumoniae* Isolates Detected in Different Institutions in the Eastern U. S. A." J. Antimicrob. Chemother. 63 (2009): 427-437. PubMed: 19155227.
3. Rasmussen, B. A. and K. Bush. "Carbapenem-Hydrolyzing β -Lactamases." Antimicrob. Agents Chemother. 41 (1997): 223-232. PubMed: 9021171.
4. Walther-Rasmussen, J. and N. Hoiby. "Class A Carbapenemases." J. Antimicrob. Chemother. 60 (2007): 470-482. PubMed: 17595289.

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