Genomic DNA from *Yersinia pestis*, Strain Nepal516

**Catalog No. NR-2720**
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**Contributor:**
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**Product Description:**
Genomic DNA was isolated from a preparation of *Yersinia pestis* (*Y. pestis*), strain Nepal516. The bacterial preparation was produced by propagation of BEI Resources NR-640.

*Y. pestis* is an aerobic, non-spore-forming, gram-negative, rod-shaped bacterium. Virulence-associated genes are located on the chromosome and on three plasmids found in typical virulent *Y. pestis* strains: 1) pMT1 (pFra; ~110kb), which encodes a murine toxin and capsular protein with anti-phagocytic activities, 2) pCD1 (pYV; ~70 kb), which encodes a type III secretion system and is essential for virulence and 3) pPCP1 (pPla; ~9.5 kb monomer or ~19 kb dimer), which encodes a protease that facilitates the initial dissemination of the bacteria to the lymph nodes.1 Virulence factors on the chromosome are located in an unstable locus, pgm.2

Y. pestis Nepal516 was isolated from a human infection in Nepal (possibly from an outbreak of pneumonic plague in 1967).3 It contains all three virulence plasmids as well as the pgm locus.4 The complete sequences of the genome (4,534,590 bp; GenBank: CP000305), pMT1 (100,918 bp; GenBank: NC_008118), and pPCP1 (10,778 bp; GenBank: NC_008119) from *Y. pestis* Nepal516 have been determined.5

The presence of all three plasmids in NR-2720 has been confirmed by PCR amplification of a virulence marker on each plasmid. NR-2720 has been qualified for PCR applications by amplification of ~1500 bp of the 16S ribosomal RNA gene as well as virulence marker sequences of ~1900, 1200 and 400 bp.

**Material Provided:**
Each vial contains approximately 5 µg of bacterial genomic DNA in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH ~ 7.4). The concentration, expressed as µg per µL, is shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

**Packaging/Storage:**
NR-2720 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 *Yersinia pestis*, Strain Nepal516, NR-2720.”

**Biosafety Level: 1**

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References:


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