

Product Information Sheet for NR-2717

Genomic DNA from *Yersinia pestis*, Strain CO92

Catalog No. NR-2717

This reagent is the property of the U.S. Government.

For research use only. Not for human use.

Contributor:

Centers for Disease Control and Prevention, Division of Vector-Borne Infectious Diseases, Fort Collins, Colorado, USA

Manufacturer:

BEI Resources

Product Description:

NR-2717 contains genomic DNA extracted from a preparation of *Yersinia pestis* (*Y. pestis*), strain CO92, biovar Orientalis.

Y. pestis, strain CO92 was isolated from a fatal human case of primary pneumonic plague presumably contracted from an infected cat in Colorado, USA, 1992.¹ It contains three virulence plasmids: 1) pMT1 [pFra; ~ 110 kilobases (kb)], 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.² *Y. pestis*, strain CO92 also contains chromosomal virulence factors located in an unstable locus, *pgm*.³ The complete sequences of the chromosome (4,653,728 bp; GenBank: [NC_003143](#)), pMT1 (96,210 bp; GenBank: [NC_003134](#)), pCD1 (70,305 bp; GenBank: [NC_003131](#)), and pPCP1 (9,612 bp; GenBank: [NC_003132](#)) from *Y. pestis*, strain CO92 have been determined.²

The presence of all three plasmids in NR-2717 has been confirmed by PCR amplification of plasmid specific virulence markers. NR-2717 has been qualified for PCR applications by amplification of approximately 1500 base pairs of the 16S ribosomal RNA gene.

Material Provided:

Each vial of NR-2717 contains 0.7 µg to 1.5 µg of bacterial genomic DNA in TE buffer (10 mM Tris-HCl and 1 mM EDTA, pH ~ 8). The concentration is shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

Packaging/Storage:

NR-2717 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen 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 BEI Resources, NIAID, NIH: Genomic DNA from *Yersinia pestis*, Strain CO92, NR-2717."

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.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:

- Doll, J. M., et al. "Cat-Transmitted Fatal Pneumonic Plague in a Person Who Traveled from Colorado to Arizona." *Am. J. Trop Med Hyg.* 51 (1994): 109-114. PubMed: 8059908.
- Parkhill, J., et al. "Genome Sequence of *Yersinia pestis*,

the Causative Agent of Plague." *Nature* 413 (2001): 523-527. PubMed: 11586360.

3. Hare, J. M. and K. A. McDonough. "High-Frequency RecA-Dependent and -Independent Mechanisms of Congo Red Binding Mutations in *Yersinia pestis*." *J. Bacteriol.* 181 (1999): 4896-4904. PubMed: 10438760.

ATCC® is a trademark of the American Type Culture Collection.

