Product Information Sheet for NR-2644

Genomic DNA from *Yersinia pestis*, Strain A1122

Catalog No. NR-2644

For research use only. Not for human use.

Contributor:
ATCC®

Product Description:
Genomic DNA was isolated from a preparation of *Yersinia pestis (Y. pestis)*, strain A1122.

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; ~ 110 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.[1] Virulence factors on the chromosome are located in an unstable locus, *pgm*.[2]

Y. pestis A1122 was isolated from a California ground squirrel *(Spermophilus beecheyi)* in California in 1939.[3] It contains the 110 kb and the 19 kb plasmids, but lacks the 70 kb plasmid that is essential for virulence as well as the unstable *pgm* locus.[4–6]

The presence of the 110 kb and the 19 kb plasmids in NR-2644 has been confirmed by PCR amplification of a virulence marker on each plasmid. NR-2644 has been qualified for PCR applications by amplification of ~ 1500 bp of the 16S ribosomal RNA gene as well as virulence marker sequences of ~ 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-2644 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 A1122, NR-2644."

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. 4th ed. Washington, DC: U.S. Government Printing Office, 1999. HHS Publication No. (CDC) 93-8395. This text is available online at www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4toc.htm.

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