

Genomic DNA from Yersinia pseudotuberculosis, Strain IP2790

Catalog No. NR-4650

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Contributor:

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Product Description:

Genomic DNA was isolated from a preparation of *Yersinia pseudotuberculosis* (*Y. pseudotuberculosis*), strain IP2790. This strain is belongs to serogroup I and was obtained from a clinical isolate in France.¹ The presence of the virulence plasmid pIB1/pYV in this strain was confirmed by low Ca²⁺ response prior to deposition.

Y. pseudotuberculosis is a small rod-shaped, Gram-negative bacterium. The key virulence factors in *Y. pseudotuberculosis* are carried on a plasmid referred to as pCD1 (also known as pIB1 or pYV) which encodes a type III secretion system and the associated effector proteins, known as Yops (*Yersinia* outer proteins). The pCD1 plasmid is present in all three pathogenic species of *Yersinia* and is absolutely necessary for virulence.²

NR-4650 has been qualified for PCR applications by amplification of ~ 1500 bp of the 16S ribosomal RNA gene.

Material Provided:

Each vial contains approximately $4-6 \mu g$ of bacterial genomic DNA in TE buffer (10 mM Tris-HCl, 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-4650 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 pseudotuberculosis*, Strain IP2790, NR-4650."

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. <u>Biosafety in</u> <u>Microbiological and Biomedical Laboratories</u>. 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see <u>www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm</u>.

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References:

- Simonet, M. and S. Falkow. "Invasin Expression in Yersinia pseudotuberculosis." <u>Infect. Immun.</u> 60 (1992): 4414–4417. PubMed: 1398952.
- Huang, X.-Z., M. P. Nikolich, and L. E. Lindler. "Current Trends in Plague Research: From Genomics to Virulence." <u>Clin. Med. Res.</u> 4 (2006): 189–199. PubMed: 16988099.
- Viboud, G. I., E. Mejía, and J. B. Bliska. "Comparison of YopE and YopT Activities in Counteracting Host Signalling Responses to Yersinia pseudotuberculosis Infection." <u>Cell. Microbiol.</u> 8 (2006): 1504–1515. PubMed: 16922868.

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