

Genomic DNA from *Brucella abortus*, Strain 870 (NCTC 10505)

Catalog No. NR-2531

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Contributor:

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Product Description:

Genomic DNA was isolated from a preparation of *Brucella abortus* (*B. abortus*), strain 870 (NCTC 10505).

B. abortus is a non-motile, aerobic, gram-negative coccobacillus which displays a moderate degree of human virulence. Very little is known about the genetics of *Brucella* virulence, largely due to a lack of classical virulence factors. A type IV secretion system has been identified as essential for intracellular survival and multiplication of *Brucella*.¹

B. abortus 870 was isolated from bovine fetus in 1959 by Dr. R. G. Dijkstra.

NR-2531 has been qualified for PCR applications by amplification of ~ 1430 bp of the 16S ribosomal RNA gene.

Material Provided:

Each vial contains approximately 2 µg bacterial genomic DNA, lyophilized from 0.05 mL containing TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH ~ 8.0). The vial should be centrifuged prior to opening.

Packaging/Storage:

NR-2531 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at 4°C or colder immediately upon arrival. For optimal long-term storage, freezing the material at -20°C or colder is recommended. 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 *Brucella abortus*, Strain 870 (NCTC 10505), NR-2531."

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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References:

1. Boschiroli, M. L., et al. "Type IV Secretion and *Brucella* Virulence." Vet. Microbiol. 90 (2002): 341–348. PubMed: 12414154.
2. Halling, S. M., et al. "Completion of the Genome Sequence of *Brucella abortus* and Comparison to the Highly Similar Genomes of *Brucella melitensis* and *Brucella suis*." J. Bacteriol. 187 (2005): 2715–2726. PubMed: 15805518.
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4. Ratushna, V. G., et al. "Molecular Targets for Rapid Identification of *Brucella* spp." BMC Microbiol. 6 (2006): 13. PubMed: 16504063.
5. Ciocchini, A. E., et al. "Identification of Active Site Residues of the Inverting Glycosyltransferase Cgs Required for the Synthesis of Cyclic β-1,2-Glucan, A *Brucella abortus* Virulence Factor." Glycobiology 16 (2006): 679–691. PubMed: 16603625.

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