

### ***Brucella neotomae*, Strain 5K33**

#### **Catalog No. NR-684**

(Derived from ATCC® 23459™)

**For research use only. Not for human use.**

#### **Contributor:**

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#### **Product Description:**

Bacteria Classification: *Brucellaceae*, *Brucella*

Agent: *Brucella neotomae*

Strain: Type strain, 5K33 (NCTC 10084)

*Brucella* species are the etiological agents of brucellosis, a zoonotic disease endemic in many areas of the world, and characterized by chronic infections in animals leading to abortion and infertility. Transmission from animal to human via contact with infected animal products or through the air may lead to Malta (or undulant) fever, a long debilitating disease treatable by a prolonged course of antibiotics. *Brucella* species are recognized as potential agricultural, civilian, and military bioterrorism agents.

*B. neotomae* is a non-motile, aerobic, Gram-negative coccobacillus which infects rodents. Infection of humans has not been reported. 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*.<sup>1</sup>

#### **Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X Serum Dextrose Broth supplemented with 10% glycerol.

#### **Packaging/Storage:**

NR-684 was packaged aseptically, in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

#### **Growth Conditions:**

##### Media:

Serum Dextrose Broth or equivalent

Serum Dextrose Agar or equivalent

##### Incubation:

Temperature: 37°C

Atmosphere: Aerobic

##### Propagation:

1. Keep vial frozen until ready for use; thaw slowly.
2. Transfer the entire thawed aliquot into a single tube of

Serum Dextrose Broth.

3. Use several drops of the suspension to inoculate a Serum Dextrose Agar slant and/or plate.
4. Incubate the tubes and plate at 37°C for 48 hours.

#### **Citation:**

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Brucella neotomae*, Strain 5K33, NR-684."

#### **Biosafety Level: 2**

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, 2007; see [www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm](http://www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm).

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### References:

1. Boschirolì, M. L., et al. "Type IV Secretion and *Brucella* Virulence." Vet. Microbiol. 90 (2002): 341–348. PubMed: 12414154.
2. Stoenner, H. G. and D. B. Lackman. "A New Species of *Brucella* Isolated from the Desert Wood Rat, *Neotoma lepida* Thomas." Am. J. Vet. Res. 18 (1957): 947–51. PubMed: 13470254.
3. Stoenner, H. G. and D. B. Lackman. "A Preliminary Report on a *Brucella* Isolated from the Desert Wood Rat, *Neotoma lepida* Thomas." J. Am. Vet. Med. Assoc. 130 (1957): 411–412. PubMed: 13428626.

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