

***Brucella suis*, Strain 40**

Catalog No. NR-305

(Derived from ATCC® 23447™)

For research use only. Not for use in humans.

Contributor:

ATCC®

Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Brucellaceae*, *Brucella*

Species: *Brucella suis*

Strain: 40 (also referred to as NCTC 10385 and B2853/63)

Original Source: *Brucella suis* (*B. suis*), strain 40 was isolated in 1960 from a reindeer in Russia (USSR) and deposited to ATCC® by W. J. Brinley Morgan from The Central Veterinary Laboratory, Ministry of Agriculture, Fisheries and Food, in Weybridge, Surrey, England.^{1,2}

Comments: The complete genome of *B. suis*, strain 40 has been sequenced (GenBank: [ACJK000000000](https://www.ncbi.nlm.nih.gov/nuccore/ACJK000000000)). *B. suis*, strain 40 is a reference strain for biotype 4.

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. A feature distinguishing *Brucella* species from other pathogenic organisms is the lack of expression of classical virulence factors. Thus, identification of virulence factors has been elusive and some of the identifications are putative.³

B. suis is a non-motile, aerobic, gram-negative coccobacillus that displays moderate to high virulence in humans. Very little is known about the genetics of *Brucella* virulence, largely due to a lack of classical virulence factors.

Material Provided:

Each vial contains approximately 0.7 mL of bacterial culture in Tryptic Soy broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:

NR-305 was packaged aseptically in 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:

Tryptic Soy broth or equivalent

Tryptic Soy agar or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic with or without 5% CO₂

Propagation:

1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 1 to 3 days.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Brucella suis*, Strain 40, NR-305."

Biosafety Level: 3

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 (BMBL). Current Edition. Washington, DC: U.S. Government Printing Office.

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References:

1. Brinley Morgan, W. J., Personal Communication.
2. Meyer, M. E. and W. J. B. Morgan. "Designation of Neotype Strains and of Biotype Reference Strains for Species of the Genus *Brucella* Meyer and Shaw." Internat. J. System. Bacteriol. 23 (1972): 135-141.
3. Seleem, M. N., S. M. Boyle and N. Sriranganathan. "*Brucella*: A Pathogen without Classic Virulence Genes." Vet. Microbiol. 129 (2008): 1-14. PubMed: 18226477.

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