

***Acinetobacter baumannii*, Strain Naval-18**

Catalog No. NR-17785

For research use only. Not for human use.

Contributor:

Mikeljon P. Nikolich, Ph.D., Department of Dangerous Bacterial Pathogens, Walter Reed Army Institute of Research, Silver Spring, Maryland, USA

Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Moraxellaceae, Acinetobacter*

Species: *Acinetobacter baumannii*

Strain: Naval-18

Original Source: *Acinetobacter baumannii* (*A. baumannii*), strain Naval-18 is a human isolate collected in June 2006 from the wound of a patient in Maryland, USA.¹

Comments: *A. baumannii*, strain Naval-18 was deposited as resistant to a number of antibiotics, multilocus sequence type (MLST) ST25, Pulse Field Gel Electrophoresis (PFGE) type 5 and Antimicrobial Susceptibility Testing Type (ASTT) pattern 22-e.²⁻⁴ *A. baumannii*, strain Naval-18 is part of the "Genomic Sequencing of a Diversity of US Military *Acinetobacter baumannii-calcoaceticus* Complex Isolates" project to sequence the genomes of clinical and environmental isolates of medically relevant *Acinetobacter* spp.⁵ The complete genome of *A. baumannii*, strain Naval-18 was sequenced at the J. Craig Venter Institute (GenBank: [AFDA00000000](https://www.ncbi.nlm.nih.gov/nuccore/AFDA00000000)).

A. baumannii is an aerobic, Gram-negative bacillus that exhibits the ability to rapidly develop antibiotic resistance and is a major cause of hospital-acquired infection.⁶ The genomes of multidrug resistant strains of *A. baumannii* contain resistance "islands" that can contain up to 45 resistance genes. Acquisition of these antibiotic resistance genes occurs through genetic exchange of plasmids, transposons and integrons with *Pseudomonas*, *Salmonella* and *Escherichia* species.^{7,8}

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in Nutrient broth supplemented with 10% glycerol.

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

Packaging/Storage:

NR-17785 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:

Tryptic Soy broth or Nutrient broth or Brain Heart Infusion broth or equivalent

Tryptic Soy agar or Tryptic Soy agar with 5% defibrinated sheep blood or Nutrient agar or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic

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 day.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Acinetobacter baumannii*, Strain Naval-18, NR-17785."

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, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Nikolich, M. P., Personal Communication.
2. Huang, X. Z., et al. "Genotypic and Phenotypic Correlations of Multidrug-Resistant *Acinetobacter baumannii*-*A. calcoaceticus* Complex Strains Isolated from Patients at the National Naval Medical Center." J. Clin. Microbiol. 48 (2010): 4333-4336. PubMed: 20739490.
3. Karah, N., et al. "Database for the *ampC* Alleles in *Acinetobacter baumannii*." PLoS One 12 (2017): e0176695. PubMed: 28459877.
4. Falghoush, A., et al. "Osmotic Compounds Enhance Antibiotic Efficacy against *Acinetobacter baumannii* Biofilm Communities." Appl. Environ. Microbiol. 83 (2017). pii: e01297-17. PubMed: 28733283.
5. Nikolich, M. P. "*Acinetobacter baumannii* is an Emerging Nosocomial Pathogen and is an Important Emerging Pathogen in Treatment of Wounds in US Military Practice." J. Craig Venter Institute. (2009) <http://gsc.icvi.org/projects/gsc/a_baumannii/index.php>.
6. Howard, A., et al. "*Acinetobacter baumannii*: An Emerging Opportunistic Pathogen." Virulence 3 (2012): 243-250. PubMed: 22546906.
7. Fournier, P. E., et al. "Comparative Genomics of Multidrug Resistance in *Acinetobacter baumannii*." PLoS Genet. 2 (2006): e7. PubMed: 16415984.
8. Imperi, F., et al. "The Genomics of *Acinetobacter baumannii*: Insights into Genome Plasticity, Antimicrobial Resistance and Pathogenicity." IUBMB Life 63 (2011): 1068-1074. PubMed: 22034231.

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