

***Acinetobacter baumannii*, Strain MRSN 29908**

**Catalog No. NR-52211**

This reagent is the tangible property of the U.S. Government.

**For research use only. Not for use in humans.**

**Contributor:**

Multidrug-Resistant Organism Repository and Surveillance Network (MRSN), Bacterial Disease Branch, Walter Reed Army Institute of Research, Silver Spring, Maryland, USA

**Manufacturer:**

BEI Resources

**Product Description:**

Bacteria Classification: *Moraxellaceae, Acinetobacter*

Species: *Acinetobacter baumannii*

Strain: MRSN 29908

Original Source: *Acinetobacter baumannii* (*A. baumannii*), strain MRSN 29908 was isolated in 2015 from a human sample in the United States as part of a global surveillance program.<sup>1,2</sup>

Comments: *A. baumannii*, strain MRSN 29908 was deposited as part of the MRSN *Acinetobacter baumannii* Diversity Panel available from BEI Resources as NR-52248. NR-52211 was deposited as multi-locus sequence type (MLST) ST 2, sensitive to ceftazidime and colistin, intermediately resistant to ceftriaxone and resistant to amikacin, ampicillin/sulbactam, cefepime, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, trimethoprim/sulfamethoxazole and tobramycin. Strain MRSN 29908 is reported to have five aminoglycoside transferase genes [*aac*(6')-Ib3, *aadA1*, *aph*(3')-Ib, *aph*(3')-Ia and *aph*(6)-Id; conferring resistance to various aminoglycosides], three beta-lactamase genes (*bla*<sub>ADC-25</sub>, *bla*<sub>OXA-23</sub> and *bla*<sub>OXA-66</sub>; conferring resistance to beta-lactams), one chloramphenicol acetyltransferase gene (*catB8*; conferring resistance to chloramphenicol), one macrolide phosphotransferase gene [*mph*(E); conferring resistance to macrolides], one 16S rRNA methyltransferase gene (*armA*; conferring resistance to aminoglycoside antibiotics), one ABC-F type ribosomal protection protein gene [*msr*(E); conferring resistance to erythromycin and streptogramin B antibiotics], one sulfonamide resistance gene (*su11*; conferring resistance to sulfonamides) and one tetracycline resistance gene [*tet*(B); conferring resistance to tetracycline].<sup>1</sup> The complete genome of *A. baumannii*, strain MRSN 29908 is available (GenBank: [VHGD00000000](https://www.ncbi.nlm.nih.gov/nuccore/VHGD00000000)).

*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.<sup>3</sup> 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.<sup>4,5</sup>

**Material Provided:**

Each vial contains approximately 0.5 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-52211 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:

Nutrient broth or Tryptic Soy broth or equivalent  
Nutrient agar or Tryptic Soy agar or Tryptic Soy agar with 5% defibrinated sheep blood 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 MRSN 29908, NR-52211. This strain is part of the *Acinetobacter baumannii* Diversity Panel provided by the Multidrug-Resistant Organism Repository and Surveillance Network (MRSN) at the Walter Reed Army Institute of Research (WRAIR)."

**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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see [www.cdc.gov/biosafety/publications/bmb15/index.htm](https://www.cdc.gov/biosafety/publications/bmb15/index.htm).

**Disclaimers:**

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at [www.beiresources.org](https://www.beiresources.org).

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

#### Use Restrictions:

**This material is distributed for internal research, non-commercial purposes only.** This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

#### References:

1. McGann, P., Personal Communication.
2. Galac, M. R., et al. "A Diverse Panel of Clinical *Acinetobacter baumannii* for Research and Development." *Antimicrob. Agents Chemother.* 64 (2020): e00840-20. PubMed: 32718956.
3. Howard, A., et al. "*Acinetobacter baumannii*: An Emerging Opportunistic Pathogen." *Virulence* 3 (2012): 243-250. PubMed: 22546906.
4. Fournier, P.-E., et al. "Comparative Genomics of Multidrug Resistance in *Acinetobacter baumannii*." *PLoS Genet.* 2 (2006): e7. PubMed: 16415984.
5. 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.

ATCC® is a trademark of the American Type Culture Collection.

