Acinetobacter baumannii, Strain AB5075-UW

Catalog No. NR-49900

For research use only. Not for human use.

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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Moraxellaceae, Acinetobacter*
Species: *Acinetobacter baumannii*
Strain: AB5075-UW
Original Source: *Acinetobacter baumannii (A. baumannii)*, strain AB5075-UW is a single colony isolate of strain AB5075, which was isolated in 2008 from a human patient with osteomyelitis of the tibia in Maryland, USA.[1-3]
Comments: *A. baumannii*, strain AB5075-UW was deposited to BEI Resources as resistant to ampicillin/sulbactam, amikacin, aztreonam, cefepime, ceftazidime, ciprofloxacin, gentamicin, imipenem, levofloxacin and tobramycin, and sensitive to tetracycline.[2] *A. baumannii*, strain AB5075-UW has demonstrated a phase variation in which it alters between an opaque and translucent appearance when observed under oblique, indirect illumination. The difference in appearance is associated with phenotypical differences in cell shape, motility, biofilm formation, virulence and antibiotic resistance. The ability of this strain to alternate between the opaque and translucent appearance is believed to be due to a yet-to-be identified extracellular signal present in high-density cultures.[4] The complete genome of *A. baumannii*, strain AB5075-UW is available (GenBank: CP008706).

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.[5] 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.[6,7]

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-49900 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 AB5075-UW, NR-49900."

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:

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6. Fournier, P. E., et al. "Comparative Genomics of Multidrug Resistance in *Acinetobacter baumannii*." PLoS Genet. 2 (2006): e7. PubMed: 16415984.
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8. Liu, Q., et al. "Regulation of the *acel* Multidrug Efflux Pump Gene in *Acinetobacter baumannii*." J. Antimicrob. Chemother. 73 (2018): 1492-1500. PubMed: 29481596.
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