

Acinetobacter baumannii, Strain AB5075-UW

Catalog No. NR-49900

Product Description: *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.

Lot^{1,2}: 70018226

Manufacturing Date: 15AUG2018

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphologies ²⁻⁴ Growth at 44°C ^{5,6} Motility (wet mount) Biochemical tests: Catalase Oxidase VITEK [®] 2 Compact (GN Card)	Gram-negative rods Report results Growth Report results Positive Negative <i>A. baumannii</i> (≥ 89%)	Gram-negative rods Colony type 1: Circular, convex, entire, smooth and gray (Figure 1) Colony type 2: Irregular, flat, undulate, opaque and gray (Figure 1) Growth Non-motile Positive Negative <i>A. baumannii</i> (≥ 95%)
Antibiotic Susceptibility Profile^{7,8} VITEK [®] (AST-GN69 card) Ampicillin Amoxicillin/Clavulanic Acid Ampicillin/Sulbactam Piperacillin/Tazobactam Cefazolin Ceftazidime Ceftriaxone Imipenem Gentamicin Tobramycin Ciprofloxacin Levofloxacin Nitrofurantoin Trimethoprim/Sulfamethoxazole VITEK [®] (AST-XN06 card) Ticarcillin Piperacillin Meropenem Cefuroxime Cefuroxime Axetil Cefotetan Cefoxitin Cefpodoxime Cefotaxime Ceftizoxime Aztreonam Doripenem Nalidixic Acid Moxifloxacin Norfloxacin	Resistant Resistant Resistant Resistant Resistant Resistant Resistant Intermediate Resistant Sensitive Resistant Report results Resistant	Resistant (≥ 32 µg/mL) Resistant (≥ 32 µg/mL) Resistant (≥ 32 µg/mL) Resistant (≥ 128 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Intermediate (= 8 µg/mL) Resistant (≥ 16 µg/mL) Sensitive (= 2-4 µg/mL) Resistant (≥ 4 µg/mL) Inconclusive ⁹ Resistant (≥ 512 µg/mL) Resistant (≥ 320 µg/mL) Resistant (≥ 128 µg/mL) Resistant (≥ 128 µg/mL) Resistant (≥ 16 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 32 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 16 µg/mL)

TEST	SPECIFICATIONS	RESULTS
Antibiotic Susceptibility Profile^{7,8} VITEK [®] (AST-XN06 card) Tetracycline Tigecycline Etest [®] antibiotic test strips ¹⁰ Doxycycline Rifampicin Erythromycin Levofloxacin Imipenem	Sensitive Sensitive Report results Report results Report results Report results Report results	Sensitive ($\leq 1 \mu\text{g/mL}$) Sensitive ($\leq 0.5 \mu\text{g/mL}$) Sensitive (= $1.5 \mu\text{g/mL}$) 6 $\mu\text{g/mL}$ ^{11,12} 24 $\mu\text{g/mL}$ ^{11,13} Resistant (= $32 \mu\text{g/mL}$) ⁹ Resistant (= $32 \mu\text{g/mL}$) ⁷
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1450 base pairs)	$\geq 99\%$ sequence identity to <i>A. baumannii</i> , strain AB5075-UW (GenBank: CP008706.1)	100% sequence identity to <i>A. baumannii</i> , strain AB5075-UW (GenBank: CP008706.1)
Purity (post-freeze)¹⁴	Consistent with expected colony morphology	Consistent with expected colony Morphology ^{2,15}
Viability (post-freeze)²	Growth	Growth

¹NR-49900 lot 70018226 was produced by the inoculation of BEI Resources NRS-49900 lot 63721373 into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar with 5% defibrinated sheep blood kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot.

²*A. baumannii*, strain AB5075 is known to grow multiple colony types. For more information, please see Tipton, K. A., D. Dimitrova and P. N. Rather. "Phase-Variable Control of Multiple Phenotypes in *Acinetobacter baumannii* Strain AB5075." *J. Bacteriol.* 197 (2015): 2593-2599. PubMed: 26013481.

³1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood

⁴Two colony types were observed. Plating of the individual colony types showed that colony type 1 did not revert to the mixed colony type and colony type 2 reverted to colony type 1. VITEK[®] 2 Compact (GN card) analysis identified cells from both colony types as *A. baumannii*.

⁵1 day at 44°C in an aerobic atmosphere on Nutrient agar

⁶Growth at 44°C differentiates *A. baumannii* from *A. calcoaceticus* and *A. pittii*, which do not grow at 44°C.

⁷Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

⁸Different AST methods may show discrepant results. For more information, please see Fernandez-Cuenca, F., et al. "Reporting Antimicrobial Susceptibilities and Resistance Phenotypes in *Acinetobacter* spp: A Nationwide Proficiency Study." *J. Antimicrob. Chemother.* 73 (2018): 692-697. PubMed: 29244131.

⁹VITEK[®] 2 antibiotic susceptibility testing performed for lot 63721373 and lot 70018226 determined that for strain AB5075-UW, the levofloxacin MICs are 4 $\mu\text{g/mL}$ and 8 $\mu\text{g/mL}$, which is considered as intermediate and resistant, respectively. Etest[®] antibiotic susceptibility testing performed in duplicate determined that for strain AB5075-UW, the levofloxacin MIC is 32 $\mu\text{g/mL}$, which is considered resistant.

¹⁰1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar

¹¹Clinical & Laboratory Standards Institute (CLSI) interpretation for this organism/antibiotic combination is not currently available. *A. baumannii* is known to have an intrinsic resistance to this antibiotic.

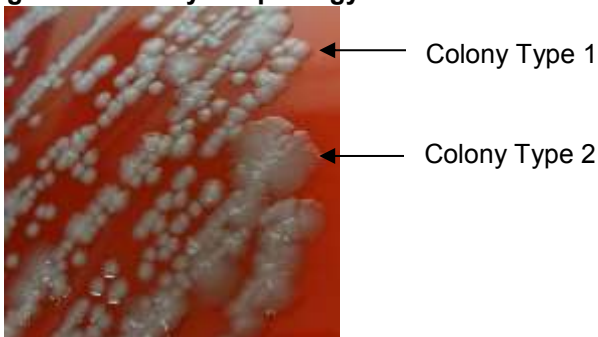
¹²Etest[®] antibiotic susceptibility testing performed on the previous lot, 63721373, determined that the rifampicin MIC was 12 to 16 $\mu\text{g/mL}$.

¹³Etest[®] antibiotic susceptibility testing performed on the previous lot, 63721373, determined that the Erythromycin MIC was 3 $\mu\text{g/mL}$.

¹⁴Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood.

¹⁵Two colony types were observed after 1 day. Plating of the individual colony types showed that colony type 1 did not revert to the mixed colony type and colony type 2 reverted to the mixed colony type. VITEK[®] 2 Compact (GN card) analysis identified cells from both colony types as *A. baumannii*.

Figure 1: Colony Morphology



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