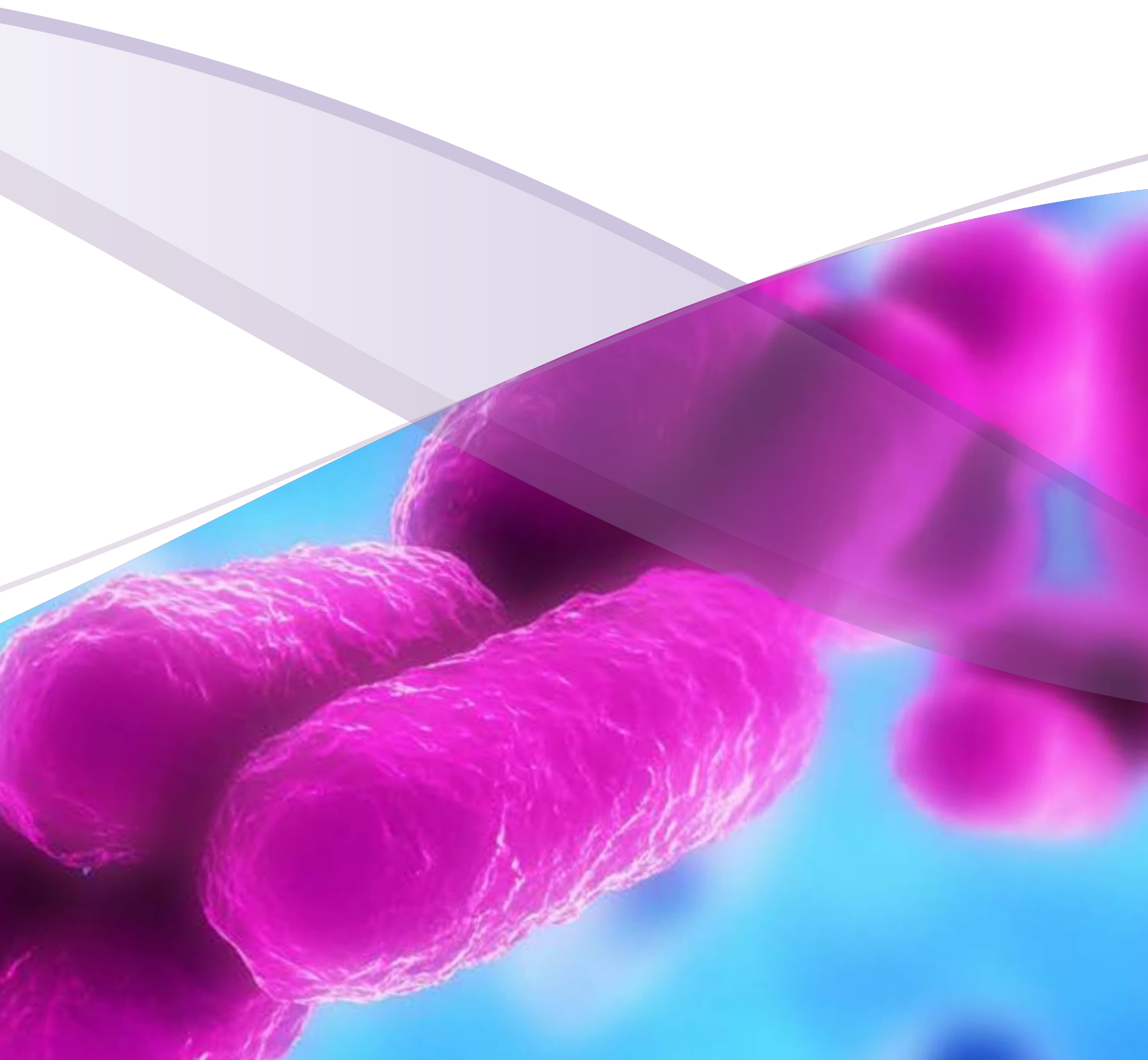


Highly Curated Antimicrobial-Resistant Clinical Isolates



TACKLING THE GLOBAL THREAT OF ANTIMICROBIAL RESISTANCE WITH TRUSTED REFERENCE MATERIALS

Antimicrobial resistance (AMR) is accelerating into a global health crisis, threatening the effectiveness of modern medicine. To drive innovation in next-generation diagnostics, novel therapeutics, and infection control strategies, researchers need access to standardized, well-characterized microbial reference materials.

ATCC has addressed this critical need with a robust portfolio of globally sourced multidrug-resistant (MDR) clinical isolates. Each strain is supported by comprehensive source metadata, phenotypic characterization, and genomic validation, providing essential tools that support the global effort to combat superbugs and emerging resistance mechanisms.

- **Susceptibility data** – Minimal inhibitory concentration (MIC) values and susceptibility profiles for targeted drugs.
- **Genetic data** – Complete de novo hybrid genome assembly with annotated antibiotic resistance genes, accessible via the ATCC Genome Portal.
- **Source metadata** – Geographic origin, year of isolation, and clinical collection site details provided.

Explore these reference strains to accelerate your AMR research and feel free to contact us if you have any questions.

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Table 1: *Acinetobacter baumannii*

Antibiotic Class	Antibiotic Type	BAA-3252™	BAA-3257™	BAA-3275™	BAA-3276™	BAA-3278™	BAA-3282™	BAA-3283™	BAA-3300™	BAA-3301™	BAA-3302™	BAA-3311™	BAA-3320™	BAA-3338™
		<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>
Aminoglycosides	Gentamicin	S	R	S	S	R	S	S	R	R	I	S	S	R
	Tobramycin	S	R	S	S	R	I	S	R	R	I	S	S	I
Carbapenems	Imipenem	R	I	I	R	I	R	R	I	I	R	S	R	R
	Meropenem	R	S	R	R	R	R	R	R	S	I	S	R	R
Cephalosporins	Cefazolin	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefepime	R	S	R	R	R	R	R	R	I	R	S	R	R
	Cefotaxime	R	R	R	R	R	R	R	R	R	R	I	R	R
	Ceftazidime	R	I	R	R	R	R	R	R	R	R	S	I	R
	Ceftriaxone	R	R	R	R	R	R	R	R	R	R	I	R	R
Diaminopyrimidines	Trimethoprim-sulfamethoxazole	R	R	R	R	R	R	R	S	R	R	S	S	R
Fluoroquinolones	Ciprofloxacin	R	R	I	R	R	R	R	R	R	R	S	S	R
	Levofloxacin	R	R	S	R	R	R	R	R	R	R	S	S	R
Penicillins	Ampicilin/Sulbactam	S	I	S	S	I	S	I	I	S	R	S	I	R
	Piperacillin/Tazobactam	R	R	R	R	R	R	R	R	R	R	I	R	R
Tetracyclines	Tetracycline	R	S	R	S	S	R	R	S	S	S	S	S	S
Isolation Information	Country	Spain	Spain	France	United States	Honduras	United States	Taiwan	Singapore	Italy	Italy	Korea	Venezuela	United States
	Year of Origin	2014	2004	2006	2014	2006	2004	2006	2004	2006	2015	2006	2006	2004
	Source	Abscess	Blood	Blood	Sputum	Catheters	Wound	Sputum	Trachea	Blood	Blood	Blood	Blood	Blood
	Patient Gender	Male	Female	Male	Male	Female	Female	Female	Male	Female	Male	Female	Male	Female
	Patient Age	57 years	68 years	84 years	75 years	0 years	51 years	80 years	71 years	53 years	41 years	73 years	19 years	64 years

Click on the ATCC catalog number to view the product information and susceptibility profile on the ATCC website.

Click on the ATCC species name to view the complete de novo hybrid genome assembly with annotated antibiotic resistance genes on the ATCC Genome Portal.

Antibiotic susceptibility was obtained using VITEK 2 AST cards (bioMérieux). Minimum inhibitory concentration (MIC) ranges for resistant (R; red), intermediate (I; yellow), and susceptible (S; green) are based on criteria within the Clinical and Laboratory Standards Institute (CLSI) Performance Standards for Antimicrobial Susceptibility Testing, 27th Edition. The susceptibility profile information for this strain is initial characterization data acquired during the ATCC accessioning process and are batch specific.

Table 2: *Citrobacter* spp.

Antibiotic Class	Antibiotic Type	BAA-3277™	BAA-3249™	BAA-3261™	BAA-3293™	BAA-3295™
		<i>Citrobacter braakii</i>	<i>Citrobacter freundii</i>	<i>Citrobacter freundii</i>	<i>Citrobacter freundii</i>	<i>Citrobacter freundii</i>
Aminoglycosides	Amikacin	S	S	S	S	S
	Gentamicin	R	R	R	S	R
	Tobramycin	R	R	R	R	R
Carbapenems	Ertapenem	R	S	S	R	S
	Imipenem	S	S	S	R	S
	Meropenem	R	S	S	R	S
Cephalosporins	Cefalotin	R	R	R	R	R
	Cefazolin	R	R	R	R	R
	Cefepime	R	R	S	R	S
	Cefotaxime	R	R	R	R	R
	Cefotetan	R	R	R	R	R
	Cefoxitin	R	R	R	R	R
	Cefpodoxime	R	R	R	R	R
	Ceftazidime	R	R	I	R	I
	Ceftazidime/Avibactam	R	S	S	R	S
	Ceftriaxone	R	R	R	R	R
	Cefuroxime	R	R	R	R	R
	Cefuroxime Axetil	R	R	R	R	R
	Ceftolozane/Tazobactam	R	R	R	R	S
Diaminopyrimidines	Trimethoprim-Sulfamethoxazole	R	R	R	S	R
Fluoroquinolones	Ciprofloxacin	R	R	R	S	R
	Levofloxacin	R	R	R	S	R
	Moxifloxacin	R	R	R	S	R
Glycylcyclines	Tigecycline	S	I	S	S	S
Monobactams	Aztreonam	R	R	I	S	I
Nitrofurans	Nitrofurantoin	S	S	R	S	S
Penicillins	Amoxicillin/Clavulanic Acid	R	R	R	R	R
	Piperacillin/Tazobactam	R	R	I	R	I
Quinolone	Nalidixic Acid	R	R	R	S	R
Tetracyclines	Tetracycline	I	R	R	S	R
Isolation Information	Country	China	Brazil	Portugal	United States	Russia
	Year of Origin	2012	2013	2013	2013	2013
	Source	Urine	Skin ulcer	Urine	Urine	Respiratory; bronchoalveolar lavage
	Patient Gender	Male	Male	Female	Female	Male
	Patient Age	82 years	54 years	75 years	25 years	44 years

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Table 3: *Enterobacter* spp.

Antibiotic Class	Antibiotic Type	BAA-3262™	BAA-3263™	BAA-3274™	BAA-3304™	BAA-3245™	BAA-3296™
		<i>Enterobacter asburiae</i>	<i>Enterobacter cloacae</i>	<i>Enterobacter cloacae</i>	<i>Enterobacter hormaechei</i> subsp. <i>steigerwaltii</i>	<i>Enterobacter hormaechei</i> subsp. <i>xiangfangensis</i>	<i>Enterobacter hormaechei</i> subsp. <i>xiangfangensis</i>
Aminoglycosides	Amikacin	S	S	S	S	S	S
	Gentamicin	S	R	S	S	R	S
	Tobramycin	S	R	I	S	R	S
Carbapenems	Ertapenem	R	R	R	S	R	R
	Imipenem	R	R	R	S	R	I
	Meropenem	R	R	R	S	R	S
Cephalosporins	Cefalotin	R	R	R	R	R	R
	Cefazolin	R	R	R	R	R	R
	Cefepime	R	R	S	S	R	S
	Cefotaxime	R	R	R	R	R	R
	Cefotetan	R	R	R	R	R	R
	Cefoxitin	R	R	R	R	R	R
	Cefpodoxime	R	R	R	S	R	R
	Ceftazidime	R	R	R	S	R	R
	Ceftazidime/Avibactam	R	S	R	R	S	S
	Ceftolozane/Tazobactam	R	R	R	R	R	R
	Ceftriaxone	R	R	R	S	R	R
	Cefuroxime	R	R	R	R	R	R
	Cefuroxime Axetil	R	R	R	R	R	R
Diaminopyrimidines	Trimethoprim-Sulfamethoxazole	R	R	R	R	R	S
Fluoroquinolones	Ciprofloxacin	S	R	S	S	R	R
	Levofloxacin	S	R	S	S	R	R
	Moxifloxacin	S	R	S	S	R	R
Glycylcyclines	Tigecycline	S	R	S	S	R	I
Monobactams	Aztreonam	S	R	I	S	R	S
Nitrofurans	Nitrofurantoin	S	S	S	S	S	R
Penicillins	Amoxicillin/Clavulanic Acid	R	R	R	R	R	R
	Piperacillin/Tazobactam	S	R	R	R	R	R
Quinolones	Nalidixic Acid	S	R	S	S	R	R
Tetracyclines	Tetracycline	S	R	R	S	R	R
Isolation Information	Country	Thailand	Russia	Kuwait	Mexico	Russia	Turkey
	Year of Origin	2012	2013	2013	2012	2013	2012
	Source	Wound	Urine	Wound	Skin ulcer	Urine	Urine
	Patient Gender	Female	Male	Female	Male	Male	Female
	Patient Age	77 years	33 years	64 years	23 years	33 years	57 years

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Table 4: *Escherichia coli*

Antibiotic Class	Antibiotic Type	BAA-3244™	BAA-3246™	BAA-3250™	BAA-3251™	BAA-3253™	BAA-3254™	BAA-3260™	BAA-3281™	BAA-3286™	BAA-3287™	BAA-3289™	BAA-3292™	BAA-3303™	BAA-3305™	BAA-3307™	BAA-3310™	BAA-3337™
		<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>
Aminoglycosides	Amikacin	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
	Gentamicin	R	R	S	R	R	R	R	S	R	R	R	S	R	R	R	R	S
	Tobramycin	R	R	S	R	I	R	R	S	R	R	I	S	R	R	I	I	R
Carbapenems	Ertapenem	S	R	S	S	S	S	S	R	R	R	S	R	R	S	R	S	S
	Imipenem	S	R	S	S	S	S	S	R	R	S	S	S	S	S	S	S	S
	Meropenem	S	R	S	S	S	S	S	R	R	R	S	R	S	S	S	S	S
Cephalosporins	Cefalotin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefazolin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefepime	R	S	R	R	R	R	R	S	S	R	R	S	S	R	S	S	R
	Cefotaxime	R	R	R	R	R	R	R	R	R	R	S	R	R	R	R	S	R
	Cefotetan	R	R	S	S	S	I	R	I	R	S	S	S	S	S	R	S	S
	Cefoxitin	R	R	S	S	S	R	R	R	R	S	S	I	I	S	R	R	S
	Cefpodoxime	R	R	R	R	R	R	R	R	R	R	S	R	R	R	R	S	R
	Ceftazidime	R	R	R	R	R	R	R	R	R	R	R	I	I	R	R	S	R
	Ceftazidime/Avibactam	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
	Ceftriaxone	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	S	R
	Cefuroxime	R	R	R	R	R	R	R	R	R	R	I	R	R	R	R	I	R
	Cefuroxime Axetil	R	R	R	R	R	R	R	R	R	R	I	R	R	R	R	I	R
	Ceftolozane/Tazobactam	S	R	S	S	S	I	R	R	R	R	R	R	R	S	R	S	I
Diaminopyrimidines	Trimethoprim-Sulfamethoxazole	S	R	R	R	R	R	R	S	R	R	R	R	S	S	R	R	R
Fluoroquinolones	Ciprofloxacin	R	R	R	R	R	R	R	R	R	R	R	S	R	R	S	R	S
	Levofloxacin	R	R	R	R	R	R	R	R	R	R	R	S	R	R	S	R	S
	Moxifloxacin	R	R	R	R	R	R	R	R	R	R	R	S	R	R	S	R	S
Glycylcyclines	Tigecycline	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Monobactams	Aztreonam	R	R	R	R	R	R	R	R	R	R	S	R	R	R	R	S	R
Nitrofurans	Nitrofurantoin	I	S	S	S	S	S	R	S	S	S	S	S	S	S	S	I	S
Penicillins	Amoxicillin/Clavulanic Acid	I	R	S	I	I	R	R	R	R	I	I	R	R	I	R	I	I
	Ampicilin/Sulbactam	R	R	S	R	R	R	R	R	R	R	R	R	R	I	R	R	R
	Ampicillin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Piperacillin/Tazobactam	S	R	S	S	I	I	R	R	R	R	I	R	R	S	R	R	S
Quinolones	Nalidixic Acid	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	S
Tetracyclines	Tetracycline	R	R	R	R	R	R	R	R	R	R	R	R	S	R	R	S	S
Isolation Information	Country	Argentina	Israel	Turkey	Nigeria	Czech Republic	Mexico	Nigeria	United States	Israel	Italy	Argentina	Mexico	Russia	Mexico	Thailand	Greece	Argentina
	Year of Origin	2014	2014	2014	2014	2014	2014	2014	2014	2014	2013	2012	2014	2014	2012	2013	2013	2014
	Source	Abscess	Urine	Blood	Urine	Urine	Abscess	Urine	Peritoneal fluid	Urine	Respiratory sputum	Urine	Abscess	Pancreas	Urine	Stomach	Urine	Urine
	Patient Gender	Male	Male	Female	Female	Female	Female	Female	Female	Male	Female	Female	Male	Female	Male	Male	Female	Male
	Patient Age	50 years	83 years	51 years	40 years	78 years	70 years	46 years	40 years	83 years	34 years	38 years	48 years	56 years	42 years	18 years	54 years	2 years

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Table 5: *Klebsiella* spp.

		BAA-3290™	BAA-3256™	BAA-3258™	BAA-3264™	BAA-3265™	BAA-3266™	BAA-3267™	BAA-3268™	BAA-3272™	BAA-3273™	BAA-3297™	BAA-3298™	BAA-3309™	BAA-3318™	BAA-3319™	BAA-3269™	BAA-3308™
Antibiotic Class	Antibiotic Type	<i>Klebsiella michiganensis</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella quasipneumoniae</i> subsp. <i>quasipneumoniae</i>	<i>Klebsiella quasipneumoniae</i> subsp. <i>similipneumoniae</i>
Aminoglycosides	Amikacin	R	R	I	R	R	R	R	S	R	S	S	S	S	S	R	S	S
	Gentamicin	R	I	S	R	R	R	S	R	S	I	R	R	R	S	S	S	R
	Tobramycin	R	R	R	R	R	R	R	R	R	I	R	R	R	I	R	I	S
Carbapenems	Ertapenem	S	R	R	R	R	R	R	R	R	R	S	S	S	R	R	R	R
	Imipenem	S	R	R	R	R	I	I	S	R	R	S	S	S	R	S	R	R
	Meropenem	S	R	R	R	R	R	R	R	R	R	S	S	S	R	I	R	R
Cephalosporins	Cefalotin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefazolin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefepime	R	S	S	S	R	I	S	S	R	R	R	R	S	S	R	R	S
	Cefotaxime	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefotetan	R	I	S	S	R	I	S	S	R	R	S	S	S	S	S	R	R
	Cefoxitin	R	R	R	R	R	R	R	R	R	R	I	S	R	R	R	R	R
	Cefpodoxime	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Ceftazidime	R	R	R	R	R	R	R	R	R	R	R	R	I	R	R	R	R
	Ceftazidime/Avibactam	S	S	S	S	R	S	S	S	R	R	S	S	S	R	S	R	S
	Ceftriaxone	R	R	I	R	R	R	R	I	R	R	R	R	S	R	I	R	R
	Cefuroxime	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefuroxime Axetil	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Ceftolozane/Tazobactam	R	R	R	R	R	R	R	R	R	R	R	R	S	R	R	R	R
Diaminopyrimidines	Trimethoprim-Sulfamethoxazole	S	R	S	R	R	R	S	R	S	R	R	R	R	R	R	R	S
Fluoroquinolones	Ciprofloxacin	R	R	R	R	R	R	R	R	R	R	R	R	I	S	R	I	I
	Levofloxacin	I	R	R	R	R	R	R	R	R	R	I	R	S	S	R	S	R
	Moxifloxacin	R	R	R	R	R	R	R	R	R	R	R	R	S	S	R	S	R
Glycylcyclines	Tigecycline	S	S	S	S	S	R	S	R	I	I	I	S	S	S	S	S	R
Monobactams	Aztreonam	I	R	R	R	R	R	R	R	S	R	R	R	R	I	R	R	R
Nitrofuran	Nitrofurantoin	S	R	R	R	R	R	R	R	R	R	I	R	I	I	R	S	R
Penicillins	Amoxicillin/Clavulanic Acid	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	I
	Ampicilin/Sulbactam	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Ampicillin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Piperacillin/Tazobactam	R	R	R	R	R	R	R	R	R	R	R	R	S	R	R	R	R
Quinolones	Nalidixic Acid	R	R	R	R	R	R	R	R	R	R	R	R	R	S	R	R	R
Tetracyclines	Tetracycline	S	S	S	S	S	R	S	I	I	R	R	R	S	S	S	R	R
Isolation Information	Country	South Korea	United States	United States	United States	Greece	United States	United States	United States	United States	Russia	Brazil	Belgium	France	Italy	Argentina	Thailand	Japan
	Year of Origin	2013	2012	2010	2011	2012	2010	2012	2010	2010	2014	2013	2012	2014	2013	2014	2013	2013
	Source	Wound	Blood	Deep wound	Urine	Furuncle	Unknown	Wound	Urine	Deep wound	Urine	Abscess	Endotracheal aspirate	Urine	Urine	Human endotracheal aspirate	Respiratory sputum	Urine
	Patient Gender	Male	Unknown	Unknown	Unknown	Male	Unknown	Unknown	Unknown	Unknown	Female	Female	Female	Female	Male	Male	Male	Male
	Patient Age	52 years	Unknown	Unknown	Unknown	39 years	Unknown	Unknown	Unknown	Unknown	83 years	48 years	40 years	63 years	57 years	63 years	74 years	79 years

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Table 6: *Neisseria gonorrhoeae*

Antibiotic Class	Antibiotic Type	BAA-3438™	BAA-3439™	BAA-3440™	BAA-3441™	BAA-3442™
		<i>Neisseria gonorrhoeae</i>	<i>Neisseria gonorrhoeae</i>	<i>Neisseria gonorrhoeae</i>	<i>Neisseria gonorrhoeae</i>	<i>Neisseria gonorrhoeae</i>
Cephalosporins	Cefixime	S	S	S	S	S
	Ceftriaxone	S	S	S	S	S
Fluoroquinolones	Ciprofloxacin	R	R	R	R	R
Tetracyclines	Tetracycline	R	R	R	R	I
Isolation Information	Country	Israel	Italy	Chile	Belgium	Taiwan
	Year of Origin	2014	2014	2014	2014	2014
	Source	Urethra	Urethra	Urine	Cervix	Reproductive system
	Patient Gender	Male	Male	Male	Female	Male
	Patient Age	37 years	28 years	30 years	28 years	17 years

Click on the ATCC catalog number to view the product information and susceptibility profile on the ATCC website.

Click on the ATCC species name to view the complete de novo hybrid genome assembly with annotated antibiotic resistance genes on the ATCC Genome Portal.

Antibiotic susceptibility was obtained using ETEST Strips (bioMérieux). Minimum inhibitory concentration (MIC) ranges for resistant (R; red), intermediate (I; yellow), and susceptible (S; green) are based on criteria within the Clinical and Laboratory Standards Institute (CLSI) Performance Standards for Antimicrobial Susceptibility Testing, 35th Edition. The susceptibility profile information for this strain is initial characterization data acquired during the ATCC accessioning process and are batch specific.

Table 7: *Proteus mirabilis*

Antibiotic Class	Antibiotic Type	BAA-3247™	BAA-3271™	BAA-3299™
		<i>Proteus mirabilis</i>	<i>Proteus mirabilis</i>	<i>Proteus mirabilis</i>
Aminoglycosides	Amikacin	S	S	S
	Gentamicin	S	S	S
	Tobramycin	I	I	S
Carbapenems	Ertapenem	R	R	S
	Imipenem	R	R	S
	Meropenem	R	I	S
Cephalosporins	Cefalotin	R	R	R
	Cefazolin	R	R	R
	Cefepime	I	I	R
	Cefotaxime	R	R	R
	Cefotetan	S	S	S
	Cefoxitin	R	R	S
	Cefpodoxime	R	R	R
	Ceftazidime	R	R	R
	Ceftazidime/Avibactam	R	R	S
	Ceftriaxone	I	I	R
	Cefuroxime	R	R	R
	Cefuroxime Axetil	R	R	R
	Ceftolozane/Tazobactam	R	R	S
Diaminopyrimidines	Trimethoprim-Sulfamethoxazole	R	R	R
Fluoroquinolones	Ciprofloxacin	R	R	S
	Levofloxacin	R	R	S
	Moxifloxacin	R	R	R
Glycylcyclines	Tigecycline	R	R	R
Monobactams	Aztreonam	S	S	R
Nitrofuran	Nitrofurantoin	R	R	R
Penicillins	Amoxicillin/Clavulanic Acid	R	R	S
	Ampicilin/Sulbactam	R	R	S
	Piperacillin/Tazobactam	I	I	S
Quinolones	Nalidixic Acid	R	R	R
Tetracyclines	Tetracycline	R	R	R
Isolation Information	Country	Greece	Greece	Portugal
	Year of Origin	2014	2014	2013
	Source	Urine	Urine	Wound
	Patient Gender	Male	Male	Male
	Patient Age	50 years	50 years	47 years

Click on the ATCC catalog number to view the product information and susceptibility profile on the ATCC website.

Click on the ATCC species name to view the complete de novo hybrid genome assembly with annotated antibiotic resistance genes on the ATCC Genome Portal.

Antibiotic susceptibility was obtained using VITEK 2 AST cards (bioMérieux). Minimum inhibitory concentration (MIC) ranges for resistant (R; red), intermediate (I; yellow), and susceptible (S; green) are based on criteria within the Clinical and Laboratory Standards Institute (CLSI) Performance Standards for Antimicrobial Susceptibility Testing, 27th Edition. The susceptibility profile information for this strain is initial characterization data acquired during the ATCC accessioning process and are batch specific.

Table 8: *Pseudomonas* spp.

Antibiotic Class	Antibiotic Type	BAA-3248™	BAA-3255™	BAA-3279™	BAA-3280™	BAA-3284™	BAA-3285™	BAA-3291™	BAA-3294™	BAA-3306™	BAA-3312™	BAA-3314™	BAA-3315™	BAA-3316™	BAA-3317™	BAA-3333™	BAA-3270™
		<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas paraaeruginosa</i>
Aminoglycosides	Amikacin	R	S	R	R	R	S	S	S	R	R	S	S	R	R	I	R
	Gentamicin	R	R	I	R	R	R	S	R	R	R	R	R	R	R	R	R
	Tobramycin	R	R	R	R	R	R	S	R	R	R	R	R	R	R	R	R
Carbapenems	Imipenem	R	R	R	R	R	I	S	R	R	R	S	R	R	S	R	R
	Meropenem	R	R	R	R	R	R	S	R	I	R	S	R	R	R	I	R
Cephalosporins	Cefazolin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefepime	I	R	R	R	R	R	S	R	I	I	R	R	I	R	R	R
	Ceftazidime	I	R	R	R	R	R	S	R	R	R	R	R	R	R	R	R
	Ceftazidime/Avibactam	S	S	R	R	R	R	S	R	R	S	S	R	R	R	R	R
	Ceftolozane/Tazobactam	S	S	R	R	R	R	S	R	R	R	I	R	R	R	R	R
Fluoroquinolones	Ciprofloxacin	R	R	R	R	R	R	S	R	S	R	R	S	S	S	S	R
	Levofloxacin	R	R	R	R	R	R	S	R	S	R	R	S	S	S	S	R
Penicillins	Ticarcillin/Avibactam	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	R	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Ticarcillin/Clavulanic Acid	R	R	R	R	R	R	S	R	N/A	R	R	R	R	S	R	R
	Piperacillin/Tazobactam	S	R	R	R	R	S	S	S	R	S	R	S	R	S	S	R
Isolation Information	Country	Thailand	Spain	Hungary	Italy	United States	Germany	United States	Argentina	Portugal	Mexico	Malaysia	United States	Malaysia	Brazil	Chile	Germany
	Year of Origin	2014	2014	2014	2014	2012	2013	2012	2012	2014	2014	2013	2014	2014	2014	2014	2014
	Source	Abscess	Sputum	Abscess	Respiratory; sputum	Skin ulcer	Wound	Urine	Respiratory bronchoalveolar lavage	Respiratory; endotracheal aspirate	Bronchial brushing	Abscess	Endotracheal aspirate	Urine	Blood	Skin ulcer	Peritoneal fluid
	Patient Gender	Female	Male	Male	Female	Male	Male	Female	Male	Male	Male	Female	Female	Male	Male	Female	Male
	Patient Age	28 years	34 years	51 years	34 years	28 years	76 years	70 years	30 years	84 years	80 years	51 years	22 years	76 years	1 year	75 years	21 years

Click on the ATCC catalog number to view the product information and susceptibility profile on the ATCC website.

Click on the ATCC species name to view the complete de novo hybrid genome assembly with annotated antibiotic resistance genes on the ATCC Genome Portal.

Antibiotic susceptibility was obtained using VITEK 2 AST cards (bioMérieux). Minimum inhibitory concentration (MIC) ranges for resistant (R; red), intermediate (I; yellow), and susceptible (S; green) are based on criteria within the Clinical and Laboratory Standards Institute (CLSI) Performance Standards for Antimicrobial Susceptibility Testing, 27th Edition. The susceptibility profile information for this strain is initial characterization data acquired during the ATCC accessioning process and are batch specific.

Table 9: *Serratia surfactantfaciens*

Antibiotic Class	Antibiotic Type	BAA-3259™
		<i>Serratia surfactantfaciens</i>
Aminoglycosides	Amikacin	S
	Gentamicin	R
	Tobramycin	R
Carbapenems	Ertapenem	R
	Meropenem	I
Cephalosporins	Cefalotin	R
	Cefazolin	R
	Cefepime	I
	Cefotaxime	R
	Cefotetan	R
	Cefoxitin	R
	Ceftazidime	R
	Ceftazidime/Avibactam	R
	Ceftriaxone	R
	Cefuroxime	R
	Cefuroxime Axetil	R
	Ceftolozane/Tazobactam	R
Diaminopyrimidines	Trimethoprim-Sulfamethoxazole	R
Fluoroquinolones	Ciprofloxacin	R
	Levofloxacin	R
	Moxifloxacin	R
Glycylcyclines	Tigecycline	R
Monobactams	Aztreonam	S
Nitrofurans	Nitrofurantoin	R
Penicillins	Amoxicillin/Clavulanic Acid	R
Quinolones	Nalidixic Acid	R
Tetracyclines	Tetracycline	R
Isolation Information	Country	Taiwan
	Year of Origin	2012
	Source	Respiratory sputum
	Patient Gender	Male
	Patient Age	67 years

Click on the ATCC catalog number to view the product information and susceptibility profile on the ATCC website.

Click on the ATCC species name to view the complete de novo hybrid genome assembly with annotated antibiotic resistance genes on the ATCC Genome Portal.

Antibiotic susceptibility was obtained using VITEK 2 AST cards (bioMérieux). Minimum inhibitory concentration (MIC) ranges for resistant (R; red), intermediate (I; yellow), and susceptible (S; green) are based on criteria within the Clinical and Laboratory Standards Institute (CLSI) Performance Standards for Antimicrobial Susceptibility Testing, 27th Edition. The susceptibility profile information for this strain is initial characterization data acquired during the ATCC accessioning process and are batch specific.

Table 10: *Staphylococcus aureus*

Antibiotic Class	Antibiotic Type	BAA-3288™	BAA-3336™
		<i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>
Aminoglycosides	Gentamicin	R	S
Chloramphenicols	Chloramphenicol	S	S
Cyclic lipopeptides	Daptomycin	S	S
Diaminopyrimidines	Trimethoprim-sulfamethoxazole	R	S
Fluoroquinolones	Ciprofloxacin	R	S
	Levofloxacin	R	S
	Moxifloxacin	R	S
	Norfloxacin	R	S
Glycopeptides	Vancomycin	S	S
Glycylcyclines	Tigecycline	S	S
Lincosamides	Clindamycin	R	R
Macrolides	Erythromycin	R	R
Nitrofurans	Nitrofurantoin	S	S
Oxazolidinones	Linezolid	S	S
Penicillins	Oxacillin	R	R
Rifamycins	Rifampicin	S	S
Streptogramins	Quinupristin/Dalfopristin	S	S
Tetracyclines	Doxycycline	R	S
	Minocycline	I	S
	Tetracycline	R	R
Isolation Information	Country	United States	Italy
	Year of Origin	2014	2014
	Source	Wound	Decubitus
	Patient Gender	Male	Male
	Patient Age	48 years	57 years

Click on the ATCC catalog number to view the product information and susceptibility profile on the ATCC website.

Click on the ATCC species name to view the complete de novo hybrid genome assembly with annotated antibiotic resistance genes on the ATCC Genome Portal.

Antibiotic susceptibility was obtained using VITEK 2 AST cards (bioMérieux). Minimum inhibitory concentration (MIC) ranges for resistant (R; red), intermediate (I; yellow), and susceptible (S; green) are based on criteria within the Clinical and Laboratory Standards Institute (CLSI) Performance Standards for Antimicrobial Susceptibility Testing, 27th Edition. The susceptibility profile information for this strain is initial characterization data acquired during the ATCC accessioning process and are batch specific.

Table 11: *Streptococcus pneumoniae*

		BAA-3313™	BAA-3321™	BAA-3322™	BAA-3323™	BAA-3324™	BAA-3325™	BAA-3326™	BAA-3327™	BAA-3328™	BAA-3329™	BAA-3330™	BAA-3331™	BAA-3332™	BAA-3334™	BAA-3335™
Antibiotic Class	Antibiotic Type	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>
Cephalosporins	Cefotaxime (Meningitis)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefotaxime (Other)	R	R	R	R	R	R	R	R	R	I	R	R	R	R	R
	Ceftriaxone (Meningitis)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Ceftriaxone (Other)	R	R	R	R	R	R	R	R	R	I	R	R	R	R	R
Diaminopyrimidines	Trimethoprim-Sulfamethoxazole	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Fluoroquinolones	Levofloxacin	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
	Moxifloxacin	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Glycopeptides	Vancomycin	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Glycylcyclines	Tigecycline	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Lincosamides	Clindamycin	R	S	R	R	R	R	S	R	R	R	R	S	S	R	R
Macrolides	Erythromycin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Oxazolidinones	Linezolid	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Penicillins	Benzylpenicillin (Meningitis)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Benzylpenicillin (Oral)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Benzylpenicillin (Other)	N/A	N/A	N/A	N/A	R	N/A	N/A	R	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Benzylpenicillin (Pneumonia)	I	R	S	I	N/A	I	R	N/A	R	I	R	I	R	I	R
Tetracyclines	Tetracycline	R	R	R	R	R	R	R	R	R	R	R	R	S	R	R
Isolation Information	Country	South Korea	Russia	Germany	Hong Kong	South Africa	Austria	United States	United States	Turkey	China	Italy	Spain	Israel	Australia	Kuwait
	Year of Origin	2014	2014	2014	2014	2014	2014	2014	2014	2014	2013	2013	2013	2014	2014	2014
	Source	Respiratory sputum	Respiratory sputum	Respiratory sputum	Respiratory sputum	Respiratory sputum	Respiratory endotracheal aspirate	Respiratory sputum	Respiratory sputum	Respiratory sputum	Respiratory sputum	Respiratory bronchoalveolar lavage	Respiratory sputum	Blood	Abscess	Respiratory sputum
	Patient Gender	Male	Female	Male	Female	Male	Male	Female	Female	Female	Female	Male	Male	Female	Male	Female
	Patient Age	69 years	54 years	14 years	10 years	4 years	1 year	2 years	49 years	12 years	75 years	22 years	46 years	67 years	1 year	30 years

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