SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii MRSN Diversity Panel

Catalog No. NR-52248

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

Product Description:

The *Acinetobacter baumannii (A. baumannii)* MRSN strains that comprise NR-52248 were isolated between 2003 and 2017 as part of a surveillance program in the United States.

Lot: 70048242

Manufacturing Date: 2020 and 2021

QC testing was performed, and the results are provided on the Certificate of Analysis for each isolate.

/Heather Couch/ Heather Couch Program Manager or designee, ATCC Federal Solutions

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08 FEB 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 334

Catalog No. NR-52148

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 334 was isolated in 2010 from a human respiratory specimen in the United States as part of a global surveillance program. A. baumannii, strain MRSN 334 was deposited as sensitive to amikacin, colistin and tobramycin, intermediately resistant to tetracycline and resistant to ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem and ampicillin/sulbactam. NR-52148 lot 70038244 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038244

Manufacturing Date: 20AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
Soy agar		
Motility	Report results	Non-motile
Remei TM Motility Test Medium W/TTC Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 to 16 µg/mL)
Cefepime	Resistant	Intermediate to Resistant (24 µg/mL) ⁴
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 μg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (> 32 µg/mL)
Meropenem	Resistant	Resistant (≥ 8 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Ampicillin/sulbactam	Resistant	Intermediate (6 to 8 µg/mL) ⁴
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Tetracycline	Intermediate	Resistant (≥ 256 µg/mL) ⁵
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(1470 base pairs)	A. baumannii, strain MRSN 334	A. baumannii, strain MRSN 334
	(GenBank: VHFA01000109.1)	(GenBank: VHFA01000109.1)

Certificate of Analysis for NR-52148

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®] 2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁵A. baumannii, strain MRSN 334 was deposited as intermediately resistant to tetracycline but showed a MIC of ≥ 256 μg/mL (interpreted as resistant) for this antibiotic during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee, ATCC Federal Solutions

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03 JUN 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 843

Catalog No. NR-52149

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 843 was isolated in 2010 from a human wound sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 843 was deposited as multi-locus sequence type (MLST) ST 417, sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, colistin and imipenem, intermediately resistant to ceftriaxone and tobramycin and resistant to ciprofloxacin, gentamicin, levofloxacin, meropenem, trimethoprim/sulfamethoxazole and tetracycline. NR-52149 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038245

Manufacturing Date: 19AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, raised, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility BBL™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] GN card	A. baumannii (≥ 89%)	A. baumannii (99%)
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 μg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 to 2 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 2 μg/mL
Ceftriaxone	Intermediate	Intermediate (32 µg/mL)
Ceftazidime	Sensitive	Intermediate (16 µg/mL) ⁴
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (0.125 µg/mL)
Gentamicin	Resistant	Resistant (24 to 32 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 2 μg/mL)
Levofloxacin	Resistant	Resistant (> 8 µg/mL)
Meropenem	Resistant	Resistant (8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Intermediate	Intermediate (8 to 12 µg/mL)
Tetracycline	Resistant	Resistant (256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to A. baumannii, strain MRSN 843 (GenBank: VHDU01000088.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 843 (GenBank: VHDU01000088.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52149

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴Susceptibility results for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee, ATCC Federal Solutions

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05 FEB 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 918

Catalog No. NR-52150

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 918 was isolated in 2008 from a human wound sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 918 was deposited as sensitive to colistin and tobramycin and resistant to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline and trimethoprim/sulfamethoxazole. NR-52150 lot 70038246 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038246

Manufacturing Date: 19AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
VITEK [®] 2 (GN card)	A. baumannii (≥ 89%)	A. baumannii (99%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (48 to 64 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis	≥ 99% sequence identity to	99.9% sequence identity to
Sequencing of 16S ribosomal RNA gene	A. baumannii, strain MRSN 918	A. baumannii, strain MRSN 918
(~ 1380 base pairs)	(GenBank: VHDT01000102.1)	(GenBank: VHDT01000102.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
8 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52150

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

16 NOV 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 959

Catalog No. NR-52151

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 959 was isolated in 2008 from a human wound in the United States as part of a global surveillance program. A. baumannii, strain MRSN 959 was deposited as sensitive to colistin and tetracycline and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin and ampicillin/sulbactam. NR-52151 lot 70038247 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038247

Manufacturing Date: 26AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, raised, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy	Growth	Growth
agar		
Motility	Report results	Motile
BBL™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] GN card	A. baumannii (≥ 89%)	A. baumannii (99%)
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (256 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (≥ 8 µg/mL)
Levofloxacin	Resistant	Resistant (12 µg/mL)
Meropenem	Resistant	Resistant (≥ 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (32 µg/mL)
Tetracycline	Sensitive	Intermediate (6 to 8 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 959 (GenBank: VHDS01000075.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 959 (GenBank: VHDS01000075.1)

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Certificate of Analysis for NR-52151

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 8 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®] 2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴Susceptibility results for this antibiotic are within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology

/Heather Couch/

Heather Couch

Program Manager or designee, ATCC Federal Solutions

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28 MAY 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 960

Catalog No. NR-52152

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 960 was isolated in 2008 from a human wound sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 960 was deposited as sensitive to colistin and tobramycin and resistant to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline and trimethoprim/sulfamethoxazole. NR-52152 lot 70038528 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038528

Manufacturing Date: 26AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
Remel [™] Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aeropic atmosphere		
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Intermediate (24 µg/mL)⁴
Ampicillin/sulbactam	Resistant	Resistant (32 µg/mL)
Cefepime	Resistant	Resistant (32 to 48 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (≥ 8 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Resistant	Resistant (128 µg/mL)
Genotypic Analysis	≥ 99% sequence identity to	99.9% sequence identity to
Sequencing of 16S ribosomal RNA gene	A. baumannii, strain MRSN 960	A. baumannii, strain MRSN 960
(~ 1490 base pairs)	(GenBank: VHDR01000076.1)	(GenBank: VHDR01000076.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

Certificate of Analysis for NR-52152

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

17 NOV 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 1171

Catalog No. NR-52153

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 1171 was isolated in 2006 from a human respiratory sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 1171 was deposited as sensitive to amikacin, colistin, imipenem and meropenem, intermediately resistant to tobramycin and resistant to ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin, tetracycline and trimethoprim/sulfamethoxazole. NR-52153 lot 70038529 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038529

Manufacturing Date: 26AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, low convex, entire, smooth
		and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel ^{IM} Motility Lest Medium w/LLC		
atmosphere		
	A have a n i (> 000()	A have an ii (00%)
	A. baumannii (289%)	A. baumannii (99%)
VITER® INS (INALDI-TOP)	A. Daumannii	A. Daumannii (99.9%)
Antibiotic Susceptibility Profile-,*	O an a iti wa	
	Sensitive	Sensitive ($\leq 16 \ \mu g/mL$)
Ampicillin/sulbactam	Resistant	Resistant (96 µg/mL)
Cetepime	Resistant	Resistant (48 µg/mL)
Cettriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (> 32 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 4 µg/mL)
Tobramycin	Intermediate	Intermediate (6 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(1480 base pairs)	A. baumannii, strain MRSN 1171	A. baumannii, strain MRSN 1171
	(GenBank: VHHG01000066.1)	(GenBank: VHHG01000066.1)

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Certificate of Analysis for NR-52153

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®] 2 GN82, Sensititre™ GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/

06 APR 2021

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Acinetobacter baumannii, Strain MRSN 1174

Catalog No. NR-52154

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 1174 was isolated in 2006 from a human blood sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 1174 was deposited as multi-locus sequence type (MLST) ST 2, sensitive to colistin and ampicillin/sulbactam, intermediately resistant to tetracycline and resistant to amikacin, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin and trimethoprim/sulfamethoxazole. NR-52154 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038530

Manufacturing Date: 26AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Intermediate (24 µg/mL) ⁴
Ampicillin/sulbactam	Sensitive	Resistant (96 µg/mL) ⁵
Cefepime	Resistant	Resistant (32 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (12 to 16 µg/mL)
Levofloxacin	Resistant	Resistant (4 to 8 µg/mL)
Meropenem	Resistant	Resistant (> 32 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Sensitive (4 µg/mL) ⁶
Tetracycline	Intermediate	Resistant (≥ 256 µg/mL) ⁷
Genotypic Analysis		· · · · · · · · · · · · · · · · · · ·
Sequencing of 16S ribosomal RNA gene (1480 base pairs)	≥ 99% sequence identity to A. baumannii, strain MRSN 1174 (GenBank: VHHF01000099.1)	99.9% sequence identity to <i>A. baumannii</i> , strain MRSN 1174 (GenBank: VHHF01000099.1)

Certificate of Analysis for NR-52154

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 8 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 1174 was deposited as being resistant to amikacin. Repeated antibiotic susceptibility testing determined that for strain MRSN 1174, the amikacin MIC is 24 µg per mL, which is interpreted as intermediately resistant. Testing was performed in duplicate.

⁵A. baumannii strain MRSN 1174 was deposited as being sensitive to ampicillin/sulbactam. Repeated antibiotic susceptibility testing determined that for strain MRSN 1174, the ampicillin/sulbactam MIC is 96 µg per mL, which is interpreted as resistant. Testing was performed in duplicate.

⁶A. baumannii, strain MRSN 1174 was deposited as being resistant to tobramycin. Repeated antibiotic susceptibility testing determined that for strain MRSN 1174, the tobramycin MIC is 4 μg per mL, which is interpreted as sensitive. Testing was performed in duplicate.

⁷A. baumannii, strain MRSN 1174 was deposited as being intermediately resistant to tetracycline. Repeated antibiotic susceptibility testing determined that for strain MRSN 1174, the tetracycline MIC is ≥ 256 µg per mL, which is interpreted as resistant. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

21 JAN 2022

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 1183

Catalog No. NR-52155

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 1183 was isolated in 2010 from a human wound sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 1183 was deposited as sensitive to ampicillin/sulbactam, ceftazidime, cefepime, colistin, imipenem and meropenem, intermediately resistant to ceftriaxone, and resistant to amikacin, ciprofloxacin, gentamicin, levofloxacin, tetracycline, trimethoprim/sulfamethoxazole and tobramycin. NR-52155 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039384

Manufacturing Date: 15OCT2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (192 µg/mL)
Ampicillin/sulbactam	Sensitive	Resistant (12 to 24 µg/mL) ⁴
Cefepime	Sensitive	Sensitive (4 µg/mL)
Ceftriaxone	Intermediate	Resistant (> 32 µg/mL) ⁵
Ceftazidime	Sensitive	Inconclusive ⁶
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 1183	A. baumannii, strain MRSN 1183
	(GenBank: VHHD01000091.1)	(GenBank: VHHD01000091.1)

Certificate of Analysis for NR-52155

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 9 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii strain MRSN 1183 was deposited as being sensitive to ampicillin-sulbactam. Repeated antibiotic susceptibility testing determined that for strain MRSN 1183, the ampicillin/sulbactam MIC is 12 to 24 µg per mL, which is interpreted as resistant. Testing was performed in duplicate. ⁵A. baumannii strain MRSN 1183 was deposited as being intermediately resistant to ceftriaxone. Repeated antibiotic susceptibility testing determined that for strain MRSN 1183 was deposited as being intermediately resistant to ceftriaxone. Repeated antibiotic susceptibility testing determined that for strain MRSN 1183 was deposited as being intermediately resistant to ceftriaxone. Repeated antibiotic susceptibility testing determined that for strain MRSN 1182 the ceftriaxone MIC is 2.20 µm per mL, which is interpreted as resistant. Testing was performed in duplicate.

that for strain MRSN 1183, the ceftriaxone MIC is > 32 μg per mL, which is interpreted as resistant. Testing was performed in duplicate.
⁶A. baumannii strain MRSN 1183 was deposited as being sensitive to ceftazidime. Repeated antibiotic susceptibility testing determined that for strain MRSN 1183, the ceftazidime MICs are 1.5 μg per mL and 32 μg per mL, which are interpreted as sensitive and resistant, respectively.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

19 NOV 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 1187

Catalog No. NR-52156

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 1187 was isolated in 2010 from a human wound in the United States as part of a global surveillance program. A. baumannii, strain MRSN 1187 was deposited as sensitive to colistin, imipenem, meropenem and tetracycline and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, gentamicin, trimethoprim/sulfamethoxazole, levofloxacin, tobramycin and ampicillin/sulbactam, with intermediate resistance to cefepime. NR-52156 lot 70039386 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039386

Manufacturing Date: 24SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel ^{IM} Motility Lest Medium w/LLC		
atmosphere		
	A boumonnii	h hourson ii (00.0%)
	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}	De sisterat	$\mathbf{D}_{\mathbf{r}} = \frac{1}{2} \left(\frac{1}{2} \left(\frac{1}{2} \right) + \frac{1}{2} \left(\frac{1}{2} \right) \right)$
	Resistant	Resistant (128 µg/mL)
Ampicillin/sulbactam	Resistant	Sensitive (8 µg/mL) ⁴
Cetepime	Intermediate	Intermediate (12 to 16 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (> 4 µg/mL)
Meropenem	Sensitive	Sensitive to Intermediate (2 to 3 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (64 µg/mL)
Tetracycline	Sensitive	Resistant (> 256 µg/mL) ⁵
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(1480 base pairs)	A. baumannii, strain MRSN 1187	A. baumannii, strain MRSN 1187
	(GenBank: VHHC01000094.1)	(GenBank: VHHC01000094.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
12 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52156

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 1187 was deposited as resistant to ampicillin/sulbactam but showed a MIC of 8 µg/mL (interpreted as sensitive) for ampicillin/sulbactam during QC testing. Testing was performed in duplicate.

⁵A. baumannii, strain MRSN 1187 was deposited as sensitive to tetracycline but showed a MIC of > 256 μg/mL (interpreted as resistant) for tetracycline during QC testing. Testing was performed in quadruplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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23 JUN 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 1196

Catalog No. NR-52157

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 1196 was isolated in 2010 from a human wound sample in the United States as part of a global surveillance program. NR-52157 was deposited as multi-locus sequence type (MLST) ST 108, resistant to cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin and trimethoprim/sulfamethoxazole, sensitive to ampicillin/sulbactam, colistin, imipenem, meropenem and tetracycline and intermediately resistant to amikacin and tobramycin. NR-52157 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039388

Manufacturing Date: 15OCT2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 35°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Intermediate	Intermediate (32 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (4 µg/mL)
Cefepime	Resistant	Resistant (48 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (32 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (≥ 32 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Intermediate	Sensitive (4 µg/mL) ⁴
Tetracycline	Sensitive	Resistant (16 µg/mL) ⁵
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 1196	A. baumannii, strain MRSN 1196
	(GenBank: VHHB01000067.1)	(GenBank: VHHB01000067.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52157

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁵A. baumannii, strain MRSN 1196 was deposited as sensitive to tetracycline but showed a MIC of 16 µg per mL (interpreted as resistant) for tetracycline during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

31 AUG 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 1311

Catalog No. NR-52158

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 1311 was isolated in 2007 from a human blood sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 1311 was deposited as sensitive to amikacin, colistin and tobramycin, and resistant to trimethoprim/sulfamethoxazole, ceftazidime, levofloxacin, ciprofloxacin, gentamicin, ceftriaxone, cefepime, imipenem, meropenem, tetracycline and ampicillin/sulbactam. NR-52158 lot 70038531 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038531

Manufacturing Date: 26AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Sov agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (32 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (> 32 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Resistant	Resistant (256 µg/mL)
Genotypic Analysis		, . ,
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 1311 (GenBank: VHHA01000072.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 1311 (GenBank: VHHA01000072.1)

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Certificate of Analysis for NR-52158

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre[™] GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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20 APR 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 1551

Catalog No. NR-52159

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 1551 was isolated in 2010 from a human specimen in the USA as part of a global surveillance program. A. baumannii, strain MRSN 1551 was deposited as multi-locus sequence type (MLST) ST 10, sensitive to amikacin, ceftazidime, colistin, cefepime, imipenem, levofloxacin, meropenem, ampicillin/sulbactam and tobramycin, resistant to ciprofloxacin, trimethoprim/sulfamethoxazole and tetracycline and intermediately resistant to ceftriaxone and gentamicin. NR-52159 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040776

Manufacturing Date: 09DEC2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
	A hoursenii	
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
	Sensitive	Sensitive ($\leq 4 \ \mu g/mL$)
Ampiciliin/sulbactam	Sensitive	Sensitive (2 µg/mL)
Cetepime	Sensitive	Sensitive ($\leq 2 \mu g/mL$)
Ceftriaxone	Intermediate	Intermediate (≥ 32 µg/mL)
Ceftazidime	Sensitive	Sensitive (8 µg/mL)
Ciprofloxacin	Resistant	Intermediate (2 µg/mL)⁴
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Intermediate	Sensitive (3 µg/mL) ⁵
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 μg/mL)
Tetracycline	Resistant	Resistant (≥ 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 1551	A. baumannii, strain MRSN 1551
	(GenBank: VHGQ01000056.1)	(GenBank: VHGQ01000056.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52159

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁵*A. baumannii*, strain MRSN 1551 was deposited as being intermediately resistant to gentamicin. Antibiotic susceptibility testing determined that for strain MRSN 1551, the gentamicin MIC is 3 μg per mL, which is interpreted as sensitive. Testing was performed in duplicate.

Figure 1: Colony Morphology

/Heather Couch/ Heather Couch

31 AUG 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 2821

Catalog No. NR-52160

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 2821 was isolated in 2009 from a human wound sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 2821 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin and trimethoprim/sulfamethoxazole and intermediately resistant to ceftriaxone and tetracycline. NR-52160 lot 70041720 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041720

Manufacturing Date: 05FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aeropic		
	A (A () () () () () () () () () (
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (4 to 6 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1 µg/mL)
Cefepime	Sensitive	Sensitive (1.5 to 2 μg/mL)
Ceftriaxone	Intermediate	Intermediate (16 µg/mL)
Ceftazidime	Sensitive	Sensitive (8 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 μg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Intermediate	Intermediate (8 to 12 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 820 base pairs)	A. baumannii, strain MRSN 2821	A. baumannii, strain MRSN 2821
	(GenBank: VHGE01000050.1)	(GenBank: VHGE01000050.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52160

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

04 FEB 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 3360

Catalog No. NR-52161

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 3360 was isolated in 2011 from a human blood sample in the United States as part of a global surveillance program. NR-52161 was deposited as multi-locus sequence type (MLST) ST 499, sensitive to amikacin, ceftazidime, colistin and ceftriaxone, intermediately resistant to tobramycin and tetracycline and resistant to ciprofloxacin, cefepime, gentamicin, imipenem, levofloxacin, meropenem, ampicillin/sulbactam and trimethoprim/sulfamethoxazole. NR-52161 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038551

Manufacturing Date: 26AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, raised, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility BBL™ Motility Test Medium w/TTC Indicator for 1 day at 35°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
VITEK [®] 2 GN card	A. baumannii (≥ 89%)	A. baumannii (99%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Resistant	Intermediate (12 µg/mL) ⁴
Cefepime	Resistant	Resistant (≥ 32 µg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (≥ 8 µg/mL)
Levofloxacin	Resistant	Resistant (> 8 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Intermediate	Inconclusive ⁵
Tetracycline	Intermediate	Resistant (256 µg/mL) ⁶
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 3360 (GenBank: VHEZ01000039.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 3360 (GenBank: VHEZ01000039.1)

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Certificate of Analysis for NR-52161

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TEST	SPECIFICATIONS	RESULTS
Purity 8 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 3360 was deposited as resistant to ampicillin/sulbactam but showed a MIC of 12 µg per mL (interpreted as intermediately resistant) for ampicillin/sulbactam during QC testing. Testing was performed in quadruplicate.

⁵A. baumannii, strain MRSN 3360 was deposited as being intermediate to tobramycin. Antibiotic susceptibility testing performed in quadruplicate determined that for strain MRSN 3360, the tobramycin MICs are 2 µg per mL, 3 µg per mL, 6 µg per mL and 8 µg per mL, which are interpreted as sensitive, sensitive, intermediate and intermediate, respectively.

⁶A. baumannii, strain MRSN 3360 was deposited as intermediately resistant to tetracycline but showed a MIC of 256 μg per mL (interpreted as resistant) for tetracycline during QC testing. Testing was performed in quadruplicate.

Figure 1: Colony Morphology

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/Heather Couch/

Heather Couch Program Manager or designee, ATCC Federal Solutions

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31 AUG 2021

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Acinetobacter baumannii, Strain MRSN 3658

Catalog No. NR-52162

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 3658 was isolated in 2010 from a human specimen in Europe as part of a global surveillance program. A. baumannii, strain MRSN 3658 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, trimethoprim/sulfamethoxazole and tobramycin. NR-52162 lot 70041722 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041722

Manufacturing Date: 05FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2 °C'	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agai	Den ext requilte	Matila
Motility Demotil Metility Test Medium w/TTC	Report results	Motile
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (4 to 6 ug/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1 µg/mL)
Cefepime	Sensitive	Sensitive (1.5 µg/mL)
Ceftriaxone	Sensitive	Intermediate (12 to 16 μ g/mL) ⁴
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 1 μg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 μg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 μg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 μg/mL)
Meropenem	Sensitive	Sensitive (0.38 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 2 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (1.5 μg/mL)
Genotypic Analysis	≥ 99% sequence identity to	100% sequence identity to
Sequencing of 16S ribosomal RNA gene	A. baumannii, strain MRSN 3658	A. baumannii, strain MRSN 3658
(1470 base pairs)	(GenBank: VHEV01000059.1)	(GenBank: VHEV01000059.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

Certificate of Analysis for NR-52162

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TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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22 NOV 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 3692

Catalog No. NR-52163

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 3692 was isolated in in 2010 from a human wound sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 3692 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin and trimethoprim/sulfamethoxazole and intermediately resistant to ceftriaxone. NR-52163 lot 70041724 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041724

Manufacturing Date: 03FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel [™] Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
	A (A
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (2 µg/mL)
Cefepime	Sensitive	Sensitive (4 µg/mL)
Ceftriaxone	Intermediate	Intermediate (16 µg/mL)
Ceftazidime	Sensitive	Sensitive (8 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (0.5 μg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 2 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Intermediate (8 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 3692	A. baumannii, strain MRSN 3692
	(GenBank: VHEU01000083.1)	(GenBank: VHEU01000083.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52163

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TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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23 NOV 2021

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Acinetobacter baumannii, Strain MRSN 3874

Catalog No. NR-52164

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 3874 was isolated in 2010 from a human wound in Europe as part of a global surveillance program. A. baumannii, strain MRSN 3874 was deposited as sensitive to colistin and tetracycline and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin and ampicillin/sulbactam. NR-52164 lot 70038533 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038533

Manufacturing Date: 26AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel [™] Motility Lest Medium w/LLC		
atmosphere		
	Λ boumonnii (> 80%)	$\Lambda_{\rm baumannii}(00\%)$
	A. baumannii ($\geq 0.9\%$)	A. baumannii (99%)
Antibiotic Succentibility Profile2.3	A. Daumannii	A. baumannii (99.976)
	Desistant	Decision (> 256 up/ml)
Annikacin	Resistant	Resistant (> 250 µg/mL)
	Resistant	Resistant (64 µg/mL)
	Resistant	Resistant ($\geq 64 \ \mu g/mL$)
	Resistant	Resistant ($\ge 4 \ \mu g/mL$)
Collstin	Sensitive	Sensitive ($\leq 0.25 \mu\text{g/mL}$)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Impenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (> 8 µg/mL)
Meropenem	Resistant	Resistant (≥ 16 µg/mL)
Tobramycin	Resistant	Resistant (48 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (48 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Tetracycline	Sensitive	Sensitive (12 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 3874	A. baumannii, strain MRSN 3874
	(GenBank: VHET01000101.1)	(GenBank: VHET01000101.1)

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TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

28 APR 2021

Program Manager or designee, ATCC Federal Solutions

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Acinetobacter baumannii, Strain MRSN 4484

Catalog No. NR-52165

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 4484 was isolated in 2011 from a human tissue sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 4484 was deposited as sensitive to colistin and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tetracycline, tobramycin and ampicillin/sulbactam. NR-52165 lot 70038534 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038534

Manufacturing Date: 26AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, mucoid and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remei Motility Test Medium W/TTC		
atmosphere		
	Λ baumannii (> 80%)	Λ baumannii (00%)
	A. baumannii ($\geq 05\%$)	A. baumannii (99.76)
Antibiotic Suscentibility Profile ^{2,3}		A. baumannii (33.376)
	Provintent	Projectant (> 256 ug/ml)
Cofonimo	Resistant	Resistant (2 250 µg/IIIL)
	Resistant	Resistant (48 to 64 μ g/mL)
	Resistant	Resistant ($\ge 64 \ \mu g/mL$)
Ciprofloxacin	Resistant	Resistant ($\geq 4 \ \mu g/mL$)
Colistin	Sensitive	Sensitive ($\leq 0.25 \mu\text{g/mL}$)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Intermediate (4 µg/mL)⁴
Meropenem	Resistant	Resistant (≥ 16 µg/mL)
Tobramycin	Resistant	Sensitive (≤1 to 2 µg/mL) ⁵
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (48 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Tetracycline	Resistant	Resistant (≥ 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 4484	A. baumannii, strain MRSN 4484
	(GenBank: VHER01000112.1)	(GenBank: VHER01000112.1)

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Certificate of Analysis for NR-52165

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁵A. baumannii, strain MRSN 4484 was deposited as resistant to tobramycin, but showed a MIC of ≤ 2 μg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/

Heather Couch

28 APR 2021

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 4943

Catalog No. NR-52166

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 4943 was isolated in 2011 from a human respiratory sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 4943 was deposited as sensitive to colistin, imipenem and meropenem, intermediately resistant to amikacin and tobramycin, and resistant to ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin, tetracycline and trimethoprim/sulfamethoxazole. NR-52166 lot 70038535 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038535

Manufacturing Date: 27AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
Growth at 11° C + 2° C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Sov	Clowin	Clowin
agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC	•	
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Intermediate	Intermediate (32 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (32 µg/mL)
Cefepime	Resistant	Resistant (32 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (32 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (8 to 16 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Intermediate	Intermediate (8 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis	≥ 99% sequence identity to	100% sequence identity to
Sequencing of 16S ribosomal RNA gene	A. baumannii, strain MRSN 4943	A. baumannii, strain MRSN 4943
(1480 base pairs)	(GenBank: VHEM01000084.1)	(GenBank: VHEM01000084.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52166

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee ATCC

23 NOV 2021

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 5969

Catalog No. NR-52167

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

Product Description:

Acinetobacter baumannii (A. baumannii), MRSN 5969 was isolated in 2011 from a human wound sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 5969 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, trimethoprim/sulfamethoxazole and tetracycline. NR-52167 lot 70041726 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041726

Manufacturing Date: 03FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1 µg/mL)
Cefepime	Sensitive	Sensitive (1.5 μg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.5 μg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 1 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Resistant (> 256 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1110 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 5969 (GenBank: VHEL01000119.1)	99.8% sequence identity to <i>A. baumannii</i> , strain MRSN 5969 (GenBank: VHEL01000119.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Sov agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52167

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 5969 was deposited as sensitive to tetracycline, but showed a MIC of > 256 µg per mL (interpreted as resistant) for this antibiotic during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

08 FEB 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 6541

Catalog No. NR-52168

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 6541 was isolated in 2012 from a human wound in the United States as part of a global surveillance program. A. baumannii, strain MRSN 6541 was deposited as sensitive to amikacin, ceftazidime, colistin, gentamicin, tobramycin and tetracycline and resistant to ciprofloxacin, cefepime, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole and ampicillin/sulbactam, with intermediate resistance to ceftriaxone. NR-52168 lot 70040778 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040778

Manufacturing Date: 11DEC2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Motile
Remel ^M Motility Lest Medium w/LLC		
Indicator for 1 day at 37°C in an aerobic		
VITEK [®] GN card	A. baumannıı complex	A. baumannıı complex ²
VITEK® MS (MALDI-TOF)	A. baumannıı	A. baumannıı (99.9%)
Antibiotic Susceptibility Profile ^{3,4}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Resistant	Intermediate (12 µg/mL) ⁵
Cefepime	Resistant	Resistant (≥ 16 µg/mL)
Ceftriaxone	Intermediate	Resistant (≥ 16 µg/mL) ⁶
Ceftazidime	Sensitive	Intermediate (16 µg/mL) ⁵
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 μg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (> 8 µg/mL)
Meropenem	Resistant	Resistant (>8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Intermediate (8 to 12 µg/mL) ⁵
Genotypic Analysis	≥ 99% sequence identity to	99.9% sequence identity to
Sequencing of 16S ribosomal RNA gene	A. baumannii, strain MRSN 6541	A. baumannii, strain MRSN 6541
(~1470 base pairs)	(GenBank: VHEK01000095.1)	(GenBank: VHEK01000095.1)

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Certificate of Analysis for NR-52168

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²VITEK[®] GN card was used to confirm to genus.

³Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

⁴Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁵The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁶A. baumannii, strain MRSN 6541 was deposited as intermediate to ceftriaxone but showed a MIC of ≥ 16 μg/mL (interpreted as resistant) for ceftriaxone during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

20 DEC 2021

Program Manager or designee, ATCC Federal Solutions

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DICIÍ RESOURCES

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7067

Catalog No. NR-52169

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7067 was isolated in 2003 from a human blood sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 7067 was deposited as sensitive to amikacin, colistin, imipenem, meropenem and ampicillin/sulbactam, intermediately resistant to cefepime and resistant to ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-52169 lot 70040780 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040780

Manufacturing Date: 11DEC2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 µg/mL)
Cefepime	Intermediate	Intermediate (16 to 24 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (2 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 2 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Sensitive (4 µg/mL) ⁴
Tetracycline	Resistant	Resistant (48 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 7067	A. baumannii, strain MRSN 7067
	(GenBank: VHEJ01000075.1)	(GenBank: VHEJ01000075.1)

Certificate of Analysis for NR-52169

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 7067 was deposited as being resistant to tobramycin. Repeated antibiotic susceptibility testing determined that for strain MRSN 7067, the tobramycin MIC is 4 μg per mL, which is interpreted as sensitive.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee, ATCC Federal Solutions

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29 NOV 2021

DICIÍ RESOURCES

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7113

Catalog No. NR-52170

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7113 was isolated in 2004 from a wound in the United States as part of a global surveillance program. A. baumannii, strain MRSN 7113 was deposited as sensitive to amikacin, ceftazidime, colistin, ciprofloxacin, cefepime, gentamicin, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole, tobramycin, tetracycline and ampicillin/sulbactam and intermediately resistant to ceftriaxone. NR-52170 lot 70041728 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041728

Manufacturing Date: 03FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Motile
Remel [®] Motility Lest Medium w/LLC Indicator		
I or 1 day at 37 C in an aerobic atmosphere	A (A (
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (2 µg/mL)
Cefepime	Sensitive	Sensitive (3 µg/mL)
Ceftriaxone	Intermediate	Intermediate (32 µg/mL)
Ceftazidime	Sensitive	Intermediate (16 µg/mL) ⁴
Ciprofloxacin	Sensitive	Sensitive (1 µg/mL)
Colistin	Sensitive	Sensitive (≤ 2 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 μg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 7113	A. baumannii, strain MRSN 7113
	(GenBank: VHEI01000069.1)	(GenBank: VHEI01000069.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52170

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴Susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

23 APR 2021

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7124

Catalog No. NR-52171

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7124 was isolated in 2004 from a human wound sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 7124 was deposited as sensitive to amikacin, cefepime, ciprofloxacin, colistin, imipenem, levofloxacin, meropenem and ampicillin/sulbactam, intermediately resistant to ceftazidime and resistant to ceftriaxone, gentamicin, tobramvcin. tetracvcline and trimethoprim/sulfamethoxazole. NR-52171 lot 70040782 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040782

Manufacturing Date: 09DEC2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
	Report results	Motile
Remei Motility Test Medium W/TTC		
atmosphere		
	A baumannii	Λ baumannii (00.0%)
Antibiotic Succentibility Profile2-3	A. baumannii	A. baumannin (99.976)
	Sanaitiva	Sanaitiva (<16 ug/ml)
Aminillin/outhootom	Sensitive	Sensitive ($\geq 10 \ \mu g/mL$)
Ampicium/subaciam Cofonimo	Sensitive	Sensitive (S to 6 µg/IIIL)
		Sensitive (o µg/mL)
		Resistant (> $32 \mu g/mL$)
Ciprofloxacin	Sensitive	Sensitive (0.5 µg/mL)
Colistin	Sensitive	Sensitive (0.5 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (32 to 48 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis	≥ 99% sequence identity to	100% sequence identity to
Sequencing of 16S ribosomal RNA gene	A. baumannii, strain MRSN 7124	A. baumannii, strain MRSN 7124
(~ 1470 base pairs)	(GenBank: VHEH01000094.1)	(GenBank: VHEH01000094.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52171

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee, ATCC Federal Solutions

r rogram manager of designee, Arroo r ederal coldions

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20 DEC 2021

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Acinetobacter baumannii, Strain MRSN 7137

Catalog No. NR-52172

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7137 was isolated in in 2004 from a human wound sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 7137 was deposited as sensitive to amikacin, ampicillin/sulbactam, colistin, imipenem, levofloxacin and tetracycline, intermediately resistant to ceftazidime, ciprofloxacin and cefepime and resistant to ceftriaxone, gentamicin, meropenem, tobramycin and trimethoprim/sulfamethoxazole. NR-52172 lot 70040784 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040784

Manufacturing Date: 06JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
for 1 day at 27°C in an aprehia atmosphere		
	A 1	A . L
VITER® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Intermediate (12 µg/mL) ⁴
Cefepime	Intermediate	Sensitive (8 µg/mL)⁴
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Intermediate	Intermediate (16 µg/mL)
Ciprofloxacin	Intermediate	Sensitive (1 µg/mL) ⁴
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (2 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Resistant	Resistant (16 to 24 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 256 µg/mL)
Tetracycline	Sensitive	Sensitive (8 µg/mL)
Genotypic Analysis	≥ 99% sequence identity to	99.9% sequence identity to
Sequencing of 16S ribosomal RNA gene	A. baumannii, strain MRSN 7137	A. baumannii, strain MRSN 7137
(~ 1400 base pairs)	(GenBank: VHEG01000054.1)	(GenBank: VHEG01000054.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52172

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

29 NOV 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7153

Catalog No. NR-52173

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7153 was isolated in 2004 from a human wound in the United States as part of a global surveillance program. A. baumannii, strain MRSN 7153 was deposited as sensitive to colistin, amikacin, ceftazidime, ciprofloxacin, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin, tetracycline and ampicillin/sulbactam and intermediately resistant to ceftriaxone. NR-52173 lot 70041730 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041730

Manufacturing Date: 29JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, low convex, entire, smooth
		and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
BBL™ Motility Lest Medium w/LLC Indicator		
	A . h	A have a set (00,00())
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (4 to 6 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 µg/mL)
Cefepime	Sensitive	Sensitive (1.5 to 2 µg/mL)
Ceftriaxone	Intermediate	Intermediate (16 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 μg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(1470 base pairs)	A. baumannii, strain MRSN 7153	A. baumannii, strain MRSN 7153
	(GenBank: VHEF01000128.1)	(GenBank: VHEF01000128.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52173

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee, ATCC Federal Solutions

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19 AUG 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7213

Catalog No. NR-52174

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7213 was isolated in 2003 from a human wound specimen in the USA as part of a global surveillance program. NR-52174 was deposited as sensitive to amikacin, ciprofloxacin, colistin, cefepime, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole, ampicillin/sulbactam and tetracycline and resistant to ceftazidime, ceftriaxone, gentamicin and tobramycin. NR-52174 lot 70041733 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041733

Manufacturing Date: 29JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
for 1 day at 27°C in an acrobic atmosphere		
	A haumannii	A haumannii (99.9%)
Antibiotic Suscentibility Profile ^{2,3}		7. bullium (00.076)
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (3 µg/mL)
Cefenime	Sensitive	Sensitive (4 to 6 μ g/mL)
Ceftriaxone	Resistant	Resistant (> 64 μ g/mL)
Ceftazidime	Resistant	Resistant (32 ug/mL)
Ciprofloxacin	Sensitive	Sensitive ($\leq 0.25 \text{ µg/mL}$)
Colistin	Sensitive	Sensitive ($\leq 0.25 \text{ µg/mL}$)
Gentamicin	Resistant	Resistant ($\geq 256 \text{ µg/mL}$)
Imipenem	Sensitive	Sensitive ($\leq 1 \text{ µg/mL}$)
Levofloxacin	Sensitive	Sensitive (≤ 1µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Resistant	Resistant (128 µg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 7213	A. baumannii, strain MRSN 7213
	(GenBank: VHEE01000054.1)	(GenBank: VHEE01000054.1)
Purity	Growth consistent with expected	Growth consistent with expected
/ days at 3/°C in an aerobic atmosphere with	colony morphology	colony morphology
Ciprofloxacin Colistin Gentamicin Imipenem Levofloxacin Meropenem Trimethoprim/sulfamethoxazole Tobramycin Tetracycline Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs) Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Sensitive Sensitive Resistant Sensitive Sensitive Sensitive Resistant Sensitive ≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 7213 (GenBank: VHEE01000054.1) Growth consistent with expected colony morphology	Sensitive ($\leq 0.25 \ \mu g/mL$) Sensitive ($\leq 0.25 \ \mu g/mL$) Resistant ($\geq 256 \ \mu g/mL$) Sensitive ($\leq 1 \ \mu g/mL$) Sensitive ($\leq 1 \ \mu g/mL$) Sensitive ($\leq 1 \ \mu g/mL$) Sensitive ($\leq 0.5 \ \mu g/mL$) Resistant (128 $\ \mu g/mL$) Sensitive ($4 \ \mu g/mL$) 100% sequence identity to <i>A. baumannii</i> , strain MRSN 7213 (GenBank: VHEE01000054.1) Growth consistent with expected colony morphology

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Certificate of Analysis for NR-52174

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/

Heather Couch Program Manager or designee, ATCC Federal Solutions

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30 NOV 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7251

Catalog No. NR-52175

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7251 was isolated in 2004 from a human wound sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 7251 was deposited as multi-locus sequence sensitive to amikacin, colistin, imipenem, levofloxacin, type (MLST) 32, meropenem and ST trimethoprim/sulfamethoxazole and resistant to cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, ampicillin/sulbactam, tetracycline and tobramycin. NR-52175 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040786

Manufacturing Date: 06JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
Remel [™] Motility Test Medium w/TTC		
indicator for 1 day at 37 C in an aeropic		
	1. houmonnii	A houmonnii (00.0%)
VITER® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,8}	O an a iti wa	
	Sensitive	
Ampiciliin/sulbactam	Resistant	Resistant (24 to 32 µg/mL)
Cetepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (128 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (< 0.5 μg/mL)
Tobramycin	Resistant	Resistant (32 to 48 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 7251	A. baumannii, strain MRSN 7251
	(GenBank: VHED01000109.1)	(GenBank: VHED01000109.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Sov agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52175

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

05 DEC 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7431

Catalog No. NR-52176

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

Product Description:

Acinetobacter baumannii (A. baumannii), MRSN 7431 was isolated in 2005 from a human respiratory sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 7431 was deposited as multi-locus sequence type (MLST) ST 2, sensitive to amikacin, ampicillin/sulbactam, colistin, imipenem, meropenem and tobramycin, intermediately resistant to ceftazidime and resistant to cefepime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin, trimethoprim/sulfamethoxazole and tetracycline. NR-52176 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040788

Manufacturing Date: 11DEC2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
BBL [™] Motility Lest Medium w/LLC Indicator		
I of 1 day at 37 C in an aerobic atmosphere	A (A () () () () () () () () () (
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (16 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (2 µg/mL)
Cefepime	Resistant	Resistant (≥ 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Intermediate	Intermediate (16 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Sensitive (≤ 1 µg/mL) ⁴
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 μg/mL)
Tetracycline	Resistant	Resistant (≥ 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 7431	A. baumannii, strain MRSN 7431
	(GenBank: VHEC01000098.1)	(GenBank: VHEC01000098.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

Certificate of Analysis for NR-52176

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 7431 was deposited as resistant to gentamicin, but showed a MIC of ≤ 1 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

05 FEB 2022

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7446

Catalog No. NR-52177

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7446 was isolated in 2005 from a human wound sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 7446 was deposited as multi-locus sequence type (MLST) ST 963, sensitive to amikacin, ampicillin/sulbactam, cefepime, colistin, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, meropenem, levofloxacin, tetracycline and tobramycin and resistant to trimethoprim/sulfamethoxazole. NR-52177 lot 70041735 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041735

Manufacturing Date: 29JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy agar		
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC Indicator	•	
for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 μg/mL)
Cefepime	Sensitive	Sensitive (2 µg/mL)
Ceftriaxone	Sensitive	Intermediate (12 µg/mL) ⁴
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 μg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 μg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 μg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 μg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 μg/mL)
Tetracycline	Sensitive	Intermediate (8 µg/mL) ⁴
Genotypic Analysis	≥ 99% sequence identity to	99.8% sequence identity to
Sequencing of 16S ribosomal RNA gene	A. baumannii, strain MRSN 7446	A. baumannii, strain MRSN 7446
(~ 1470 base pairs)	(GenBank: VHEB01000054.1)	(GenBank: VHEB01000054.1)
Purity	Growth consistent with expected	Growth consistent with expected
8 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52177

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

27 DEC 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7460

Catalog No. NR-52178

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7460 was isolated in 2005 from a wound in the United States as part of a global surveillance program. A. baumannii, strain MRSN 7460 was deposited as sensitive to amikacin, ciprofloxacin, colistin, cefepime, imipenem, levofloxacin, meropenem, ceftazidime, tobramycin and ampicillin/sulbactam and resistant to trimethoprim/sulfamethoxazole and tetracycline, with intermediate resistance to gentamicin and ceftriaxone. NR-52178 lot 70040790 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040790

Manufacturing Date: 11DEC2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1 µg/mL)
Cefepime	Sensitive	Sensitive (2 µg/mL)
Ceftriaxone	Intermediate	Resistant (≥ 16 µg/mL) ⁴
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (0.25 µg/mL)
Gentamicin	Intermediate	Intermediate (4 µg/mL)
Imipenem	Sensitive	Sensitive (1 µg/mL)
Levofloxacin	Sensitive	Sensitive (1 µg/mL)
Meropenem	Sensitive	Sensitive (1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Resistant	Resistant (≥ 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1340 base pairs)	A. baumannii, strain MRSN 7460	A. baumannii, strain MRSN 7460
	(GenBank: VHEA01000103.1)	(GenBank: VHEA01000103.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52178

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 7460 was deposited as intermediate to ceftriaxone, but showed a MIC of ≥ 16 µg/mL (interpreted as resistant) for ceftriaxone during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

10 MAY 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7521

Catalog No. NR-52179

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7521 was isolated in 2005 from a urine specimen in the USA as part of a global surveillance program. NR-52179 was deposited as sensitive to colistin and ampicillin/sulbactam, resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, gentamicin, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole, tobramycin and tetracycline, and intermediately resistant to cefepime. NR-52179 lot 70038536 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038536

Manufacturing Date: 27AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy agar		
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (96 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (6 µg/mL)
Cefepime	Intermediate	Intermediate (24 µg/mL)
Ceftriaxone	Resistant	Resistant (32 µg/mL)
Ceftazidime	Resistant	Resistant (> 16 µg/mL)
Ciprofloxacin	Resistant	Resistant (> 2 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (> 8 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (> 8 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (> 8 µg/mL)
Tetracycline	Resistant	Resistant (256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 7521	A. baumannii, strain MRSN 7521
	(GenBank: VHDZ01000101.1)	(GenBank: VHDZ01000101.1)

Certificate of Analysis for NR-52179

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of Sensititre™ GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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09 NOV 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7576

Catalog No. NR-52180

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7576 was isolated in 2005 from a human wound sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 7576 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-52180 lot 70041737 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041737

Manufacturing Date: 05FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
Growth at 44° C + 2° C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Sov	Glowan	Glowin
agar		
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (6 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 μg/mL)
Cefepime	Sensitive	Sensitive (1.5 to 2 µg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Intermediate (6 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~1470 base pairs)	A. baumannii, strain MRSN 7576	A. baumannii, strain MRSN 7576
	(GenBank: VHDY01000049.1)	(GenBank: VHDY01000049.1)
Purity	Growth consistent with expected	Growth consistent with expected
without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52180

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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04 FEB 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7690

Catalog No. NR-52181

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7690 was isolated in 2006 from a human wound sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 7690 was deposited as sensitive to amikacin, colistin, imipenem, levofloxacin, meropenem and tetracycline and resistant to ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, trimethoprim/sulfamethoxazole and tobramycin. NR-52181 lot 70040792 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040792

Manufacturing Date: 09DEC2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
	1 houmonnii	A houmonnii (00.0%)
VITER [®] MIS (MALDI-TOF)	A. Daumannii	A. baumannii (99.9%)
Amikacin	Sensitive	Sensitive (16 µg/mL)
Ampicillin/sulbactam	Resistant	Sensitive (4 to 6 µg/mL) ⁴
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Intermediate (2 to 3 µg/mL) ⁵
Colistin	Sensitive	Sensitive (0.5 μg/mL)
Gentamicin	Resistant	Resistant (64 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (32 µg/mL)
Tetracycline	Sensitive	Intermediate (4 to 6 µg/mL) ⁵
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1390 base pairs)	A. baumannii, strain MRSN 7690	A. baumannii, strain MRSN 7690
	(GenBank: VHDX01000080.1)	(GenBank: VHDX01000080.1)

Certificate of Analysis for NR-52181

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 7690 was deposited as resistant to ampicillin/sulbactam, but showed a MIC of 4 to 6 μg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

⁵The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

/Heather Couch/

Heather Couch

Program Manager or designee, ATCC Federal Solutions

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05 FEB 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7725

Catalog No. NR-52182

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7725 was isolated in 2006 from a human wound sample in the United States as part of a global surveillance program. NR-52182 was deposited as multi-locus sequence type (MLST) ST 412, resistant to trimethoprim/sulfamethoxazole, sensitive to amikacin, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline and tobramycin and intermediately resistant to ampicillin/sulbactam. NR-52182 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041739

Manufacturing Date: 05FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Motile
BBL Motility lest Medium W/ IIC Indicator		
NITEL MAR MAL DI TOE	A	
VITER® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
		Sensitive (4 µg/mL)
Ampiciliin/suibactam		Sensitive (3 to 4 µg/mL)*
Cetepime	Sensitive	Sensitive (1.5 µg/mL)
Cettriaxone	Sensitive	Intermediate (16 µg/mL) ³
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (1 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (1 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 7725	A. baumannii, strain MRSN 7725
	(GenBank: VHDW01000073.1)	(GenBank: VHDW01000073.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52182

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 7725 was deposited as intermediately resistant to ampicillin/sulbactam but showed a MIC of 3 to 4 μg per mL (interpreted as sensitive) for ampicillin/sulbactam during QC testing. Testing was performed in quadruplicate.

⁵The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

31 AUG 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 7735

Catalog No. NR-52183

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 7735 was isolated in 2006 from a human wound sample in the United States as part of a global surveillance program. NR-52183 was deposited as sensitive to amikacin, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, tetracycline, ampicillin/sulbactam and trimethoprim/sulfamethoxazole. NR-52183 lot 70042453 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042453

Manufacturing Date: 24FEB2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy agar		
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1 to 1.5 µg/mL)
Cefepime	Sensitive	Sensitive (1.5 to 2 µg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Inconclusive ⁴
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 7735 (GenBank: VHDV01000051.1)	99.9% sequence identity to <i>A. baumannii</i> , strain MRSN 7735 (GenBank: VHDV01000051.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52183

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 7735 was deposited as being resistant to levofloxacin. Repeated antibiotic susceptibility testing determined that for strain MRSN 7735, the levofloxacin MICs are ≥ 8 µg/mL and ≤ 1 µg/mL, which are interpreted as resistant and sensitive, respectively.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

10 JAN 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 10372

Catalog No. NR-52184

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 10372 was isolated in 2007 from a human urine sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 10372 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ciprofloxacin, colistin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin and trimethoprim/sulfamethoxazole and intermediately resistant to gentamicin and ceftriaxone. NR-52184 lot 70042455 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042455

Manufacturing Date: 24FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 μg/mL)
Cefepime	Sensitive	Sensitive (2 µg/mL)
Ceftriaxone	Intermediate	Intermediate (16 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Intermediate	Sensitive (2 µg/mL) ⁴
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (2 to 4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 10372 (GenBank: VHHM01000032.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 10372 (GenBank: VHHM01000032.1)

Certificate of Analysis for NR-52184

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 10372 was deposited as being intermediately resistant to gentamicin. Repeated antibiotic susceptibility testing determined that for strain MRSN 10372 the gentamicin MIC is 2 µg/mL, which is interpreted as sensitive. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

Program Manager or designee, ATCC Federal Solutions

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Acinetobacter baumannii, Strain MRSN 11224

Catalog No. NR-52185

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 11224 was isolated in 2012 from a human wound in the United States as part of a global surveillance program. A. baumannii, strain MRSN 11224 was deposited as sensitive to colistin and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin, tetracycline and ampicillin/sulbactam. NR-52185 lot 70038538 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038538

Manufacturing Date: 28AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
	A houmonnii	h hourson ii (00.0%)
VITER [®] MIS (MALDI-TOF)	A. Daumannii	A. Daumannii (99.9%)
Antibiotic Susceptibility Profile ^{-,*}	Desistant	$\mathbf{D}_{\mathbf{r}}$ = intervet (CA + \mathbf{r} (rest.)
	Resistant	Resistant (64 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (48 µg/mL)
	Resistant	Resistant (> 256 µg/mL)
Cettriaxone	Resistant	Resistant ($\geq 64 \ \mu g/mL$)
	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Meropenem	Resistant	Resistant (≥ 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (24 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1400 base pairs)	A. baumannii, strain MRSN 11224	A. baumannii, strain MRSN 11224
	(GenBank: VHHL01000097.1)	(GenBank: VHHL01000097.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52185

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee ATCC

28 APR 2021

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 11663

Catalog No. NR-52186

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 11663 was isolated in 2009 from a human tissue sample in the USA as part of a global surveillance program. A. baumannii, strain MRSN 11663 was deposited as sensitive to colistin, intermediately resistant to ampicillin/sulbactam, and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin and tetracycline. NR-52186 lot 70038539 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038539

Manufacturing Date: 28AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, raised, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
Soy agar		
Motility	Report results	Motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
VITEK [®] 2 GN card	A. baumannii (≥ 89%)	A. baumannii (99%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Intermediate	Intermediate (8 to 12 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (≥ 8 µg/mL)
Levofloxacin	Resistant	Intermediate (4 µg/mL) ⁴
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1490 base pairs)	A. baumannii, strain MRSN 11663	A. baumannii, strain MRSN 11663
	(GenBank: VHHK01000038.1)	(GenBank: VHHK01000038.1)

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Certificate of Analysis for NR-52186

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 8 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/

Heather Couch

Program Manager or designee, ATCC Federal Solutions

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19 MAY 2021

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Acinetobacter baumannii, Strain MRSN 11669

Catalog No. NR-52187

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 11669 was isolated in 2009 from a human urine sample in the United States as part of a global surveillance program. NR-52187 was deposited as multi-locus sequence type (MLST) ST 16, resistant to cefepime, ceftazidime, ciprofloxacin, gentamicin, levofloxacin and trimethoprim/sulfamethoxazole, sensitive to amikacin, colistin, imipenem, meropenem, tobramycin, ampicillin/sulbactam and tetracycline and intermediately resistant to ceftriaxone. NR-52187 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040794

Manufacturing Date: 09DEC2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
BBL ^{IM} Motility Test Medium w/TTC Indicator		
NITEL® NO (MAL DI TOE)	A . h =	A have a set (00.0%)
VITEK® MS (MALDI-TOF)	A. paumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (16 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (4 µg/mL)
Cefepime	Resistant	Intermediate (12 to 16 µg/mL)⁴
Ceftriaxone	Intermediate	Intermediate (32 µg/mL)
Ceftazidime	Resistant	Intermediate (16 µg/mL) ⁴
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (8 to 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (4 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Resistant (16 to 24 µg/mL) ⁵
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 11669	A. baumannii, strain MRSN 11669
	(GenBank: VHHJ01000060.1)	(GenBank: VHHJ01000060.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52187

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁵A. baumannii, strain MRSN 11669 was deposited as sensitive to tetracycline but showed a MIC of 16 to 24 μg per mL (interpreted as resistant) for tetracycline during QC testing. Testing was performed in quadruplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

31 AUG 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 11695

Catalog No. NR-52188

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 11695 was isolated in 2007 from a human urine sample in USA as part of a global surveillance program. A. baumannii, strain MRSN 11695 was deposited as sensitive to colistin, intermediately resistant to tetracycline, and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, tobramycin, trimethoprim/sulfamethoxazole, levofloxacin, meropenem and ampicillin/sulbactam. NR-52188 lot 70039038 was produced by inoculation of the depositor material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039038

Manufacturing Date: 10SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel [™] Motility Lest Medium w/LLC		
atmosphere		
	A. have a no ii	
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 μg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Meropenem	Resistant	Resistant (≥ 16 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Inconclusive (2 to 4 µg/mL) ⁴
Ampicillin/sulbactam	Resistant	Sensitive (4 to 6 µg/mL) ⁵
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Tetracycline	Intermediate	Resistant (≥ 256 µg/mL) ⁶
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(1480 base pairs)	A. baumannii, strain MRSN 11695	A. baumannii, strain MRSN 11695
	(GenBank: VHHI01000080.1)	(GenBank: VHHI01000080.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52188

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX3F AST and E-test strips.

⁴A. baumannii strain MRSN 11695 was deposited as being resistant to trimethoprim/sulfamethoxazole. Repeated antibiotic susceptibility testing determined that for strain MRSN 11695, the trimethoprim/sulfamethoxazole MICs are 2 μg per mL and 4 μg per mL, which are interpreted as sensitive and resistant, respectively. Testing was performed in duplicate.

⁵A. baumannii, strain MRSN 11695 was deposited as resistant to ampicillin/subactam, but showed a MIC of 4 to 6 μg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in quadruplicate.

⁶A. baumannii, strain MRSN 11695 was deposited as intermediately resistant to tetracycline, but showed a MIC of ≥ 256 μg per mL (interpreted as resistant) for this antibiotic during QC testing. Testing was performed in quadruplicate.

Figure 1: Colony Morphology

/Heather Couch/

Heather Couch

Program Manager or designee, ATCC Federal Solutions

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08 APR 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 11703

Catalog No. NR-52189

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 11703 was isolated in in 2007 from a human wound sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 11703 was deposited as sensitive to ampicillin/sulbactam, colistin and imipenem, intermediately resistant to meropenem, and resistant to amikacin, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-52189 lot 70039040 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039040

Manufacturing Date: 10SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (4 µg/mL)
Cefepime	Resistant	Resistant (32 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 2 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Intermediate	Intermediate (2 to 4 µg/mL) ⁴
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1140 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 11703 (GenBank: VHHH01000055.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 11703 (GenBank: VHHH01000055.1)

Certificate of Analysis for NR-52189

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee, ATCC Federal Solutions

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12 JAN 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 11816

Catalog No. NR-52190

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 11816 was isolated in 2008 from a human wound sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 11816 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, imipenem, levofloxacin, meropenem, tobramycin, trimethoprim/sulfamethoxazole and tetracycline, and intermediately resistant to gentamicin. NR-52190 lot 70042457 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042457

Manufacturing Date: 24FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (≤ 2 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 2 µg/mL)
Ceftriaxone	Sensitive	Intermediate (12 µg/mL) ⁴
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Intermediate	Sensitive (1.5 µg/mL) ⁵
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (3 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 11816 (GenBank: VHHE01000051.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 11816 (GenBank: VHHE01000051.1)

Certificate of Analysis for NR-52190

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁵A. baumannii, strain MRSN 11816 was deposited as being intermediately resistant to gentamicin. Repeated antibiotic susceptibility testing determined that for strain MRSN 11816 the gentamicin MIC is 1.5 µg per mL, which is interpreted as sensitive. Testing was performed in duplicate.

/Heather Couch/

Heather Couch

Program Manager or designee, ATCC Federal Solutions

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Acinetobacter baumannii, Strain MRSN 14193

Catalog No. NR-52191

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 14193 was isolated in 2012 from a human wound sample in Central America as part of a global surveillance program. A. baumannii, strain MRSN 14193 was deposited as sensitive to colistin, intermediately resistant to tobramycin, and resistant to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline and trimethoprim/sulfamethoxazole. NR-52191 lot 70039042 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039042

Manufacturing Date: 10SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (48 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 2 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (≥ 32 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (4 µg/mL)
Tobramycin	Intermediate	Intermediate (8 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 14193 (GenBank: VHGZ01000068.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 14193 (GenBank: VHGZ01000068.1)

Certificate of Analysis for NR-52191

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TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology

/Heather Couch/

Heather Couch

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Acinetobacter baumannii, Strain MRSN 14237

Catalog No. NR-52192

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 14237 was isolated in 2012 from a human wound in Central America as part of a global surveillance program. A. baumannii, strain MRSN 14237 was deposited as sensitive to colistin and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin, tetracycline and ampicillin/sulbactam. NR-52192 lot 70039044 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039044

Manufacturing Date: 10SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel [™] Motility Lest Medium w/LLC		
atmosphere		
	A baumannii	A boumonnii (00.0%)
VITER® INS (MALDI-TOF)	A. Daumannii	A. Daumannii (99.9%)
	Desistant	Desistant (> 256 ug/ml)
Amikacin	Resistant	Resistant ($\geq 250 \ \mu g/mL$)
Ampiciliin/subaciam		Resistant $(32 \mu\text{g/mL})$
	Resistant	Resistant (64 µg/mL)
Cettriaxone	Resistant	Resistant ($\geq 64 \ \mu g/mL$)
Cettazidime	Resistant	Resistant ($\geq 64 \ \mu g/mL$)
Ciprofloxacin	Resistant	Resistant ($\geq 4 \ \mu g/mL$)
Colistin	Sensitive	Sensitive ($\leq 0.25 \mu$ g/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (≥ 32 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1400 base pairs)	A. baumannii, strain MRSN 14237	A. baumannii, strain MRSN 14237
	(GenBank: VHGY01000102.1)	(GenBank: VHGY01000102.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
/ days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO2 on Tryptic Soy agar		

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TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

23 JUL 2021

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Acinetobacter baumannii, Strain MRSN 14427

Catalog No. NR-52193

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 14427 was isolated in 2012 from human blood in Afghanistan as part of a global surveillance program. NR-52193 was deposited as multi-locus sequence type (MLST) ST 622, sensitive to colistin and tetracycline and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin and ampicillin/sulbactam. NR-52193 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038240

Manufacturing Date: 19AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (64 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (≥ 16 µg/mL)
Levofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Sensitive	Resistant (> 12 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 14427	A. baumannii, strain MRSN 14427
	(GenBank: VHGX01000082.1)	(GenBank: VHGX01000082.1)
Purity	Growth consistent with expected	Growth consistent with expected
8 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52193

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TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 14427 was deposited as sensitive to tetracycline, but showed a MIC of > 12 µg/mL (interpreted as resistant) for tetracycline during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



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Acinetobacter baumannii, Strain MRSN 15049

Catalog No. NR-52194

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 15049 was isolated in 2013 from a respiratory specimen in Asia as part of a global surveillance program. A. baumannii, strain MRSN 15049 was deposited as sensitive to colistin and tobramycin, resistant to amikacin, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole and tetracycline, and intermediately resistant to ampicillin/sulbactam. NR-52194 lot 70039045 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039045

Manufacturing Date: 23SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy agar		
Motility	Report results	Non-motile
Remel [™] Motility Test Medium w/TTC		
atmosphere		
VITEK [®] MS (MAI DI-TOF)	A baumannii	A baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (≥ 256 µg/mL)
Ampicillin/sulbactam	Intermediate	Intermediate (16 µg/mL)
Cefepime	Resistant	Resistant (≥ 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (0.5 to 1 µg/mL)
Gentamicin	Resistant	Sensitive (4 µg/mL) ⁴
Imipenem	Resistant	Resistant (8 µg/mL)
Levofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Meropenem	Resistant	Resistant (≥ 16 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1µg/mL)
Tetracycline	Resistant	Resistant (≥ 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 15049 (GenBank: VHGW01000106.1)	A. baumannii, strain MRSN 15049 (GenBank: VHGW01000106.1)

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Certificate of Analysis for NR-52194

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 15049 was deposited as resistant to gentamicin, but showed a MIC of 4 µg/mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



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Acinetobacter baumannii, Strain MRSN 15070

Catalog No. NR-52195

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 15070 was isolated in 2003 from a human wound in the United States as part of a global surveillance program. NR-52195 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, tetracycline and trimethoprim/sulfamethoxazole. NR-52195 lot 70042461 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042461

Manufacturing Date: 04MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
BBL Motility lest Medium W/ IIC Indicator		
	A baumannii	Λ baumannii (00.0%)
Antibiotic Succentibility Profile2.3	A. baumannii	A. baumannii (99.976)
	Sonaitivo	Sonaitivo (< 1 ug/mL)
Amiaillin/aulbaatam	Sensitive	Sensitive ($\leq 4 \mu g/mL$)
Cofonimo	Sensitive	Sensitive $(7.5 \mu\text{g/mL})$
Cetepine	Sensitive	Sensitive ($\leq 2 \mu g/mL$)
Celtraxone	Sensitive	Consistive (1 v m/mL)
Centazidime	Sensitive	Sensitive (4 µg/mL)
	Sensitive	Sensitive ($\leq 0.25 \ \mu g/mL$)
Constin	Sensitive	Sensitive ($\leq 0.25 \mu$ g/mL)
	Sensitive	Sensitive ($\leq 1 \ \mu g/mL$)
Imipenem	Sensitive	Sensitive ($\leq 1 \ \mu g/mL$)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive ($\leq 1 \ \mu g/mL$)
I rimethoprim/sulfamethoxazole	Sensitive	Sensitive ($\leq 0.5 \mu\text{g/mL}$)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Intermediate (6 µg/mL)⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(1470 base pairs)	A. baumannii, strain MRSN 15070	A. baumannii, strain MRSN 15070
Duritu		
7 days at 27°C in an aprohia atmosphere with	Growin consistent with expected	Growin consistent with expected
and without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52195

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



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17 JAN 2022

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Acinetobacter baumannii, Strain MRSN 15075

Catalog No. NR-52196

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 15075 was isolated in 2003 from a human wound in the United States as part of a global surveillance program. NR-52196 was deposited as sensitive to amikacin, ampicillin/sulbactam, ciprofloxacin, colistin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin cefepime, and trimethoprim/sulfamethoxazole, intermediately resistant to ceftriaxone and gentamicin and resistant to ceftazidime. NR-52196 lot 70042459 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042459

Manufacturing Date: 04MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 35°C in an aerobic atmosphere	.	
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (≤ 2 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 2 µg/mL)
Ceftriaxone	Intermediate	Intermediate (16 µg/mL)
Ceftazidime	Resistant	Sensitive (2 to 3 µg/mL) ⁴
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Intermediate	Sensitive (2 to 3 µg/mL) ⁵
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 μg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 μg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 μg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 15075	A. baumannii, strain MRSN 15075
	(GenBank: VHGU01000069.1)	(GenBank: VHGU01000069.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO2 on Tryptic Soy agar		

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Certificate of Analysis for NR-52196

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 15075 was deposited as resistant to ceftazidime, but showed a MIC of 2 to 3 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

⁵A. baumannii, strain MRSN 15075 was deposited as intermediately resistant to gentamicin, but showed a MIC of 2 to 3 μg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.



Figure 1: Colony Morphology

/Heather Couch/ Heather Couch Program Manager or designee, ATCC Federal Solutions

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03 FEB 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 15088

Catalog No. NR-52197

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 15088 was isolated in 2003 from a human wound in the United States as part of a global surveillance program. A. baumannii, strain MRSN 15088 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, tetracycline and trimethoprim/sulfamethoxazole. NR-52197 lot 70042463 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042463

Manufacturing Date: 04MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
Remel [™] Motility Lest Medium w/LLC		
atmosphere		
	A. haumanaii	A have an ii (00.0%)
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}	O an a iti ya	
	Sensitive	
Ampiciliin/sulbactam	Sensitive	Sensitive (0.75 µg/mL)
Cetepime	Sensitive	Sensitive (0.75 to 1 μ g/mL)
Cettriaxone	Sensitive	Sensitive to Intermediate (8 to 16 μ g/mL) ⁴
Cettazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (2 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1490 base pairs)	A. baumannii, strain MRSN 15088	A. baumannii, strain MRSN 15088
	(GenBank: VHGT01000047.1)	(GenBank: VHGT01000047.1)
Purity	Growth consistent with expected	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	colony morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52197

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴Susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

07 JUL 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 15093

Catalog No. NR-52198

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 15093 was isolated in 2012 from a human wound in South America as part of a global surveillance program. A. baumannii, strain MRSN 15093 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, trimethoprim/sulfamethoxazole and tobramycin. NR-52198 lot 70042466 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042466

Manufacturing Date: 26FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar	_	
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37 °C in an aerobic		
	A 1	A () (00 00()
VITER® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1 µg/mL)
Cefepime	Sensitive	Sensitive (1.5 µg/mL)
Ceftriaxone	Sensitive	Intermediate (12 to 16 µg/mL)⁴
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (3 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1250 base pairs)	A. baumannii, strain MRSN 15093	A. baumannii, strain MRSN 15093
	(GenBank: VHGS01000083.1)	(GenBank: VHGS01000083.1)
Purity	Growth consistent with expected	Growth consistent with expected
/ days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology

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Certificate of Analysis for NR-52198

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee, ATCC Federal Solutions

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18 JAN 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 15129

Catalog No. NR-52199

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 15129 was isolated in 2012 from a human respiratory sample in South America as part of a global surveillance program. *A. baumannii*, strain MRSN 15129 was deposited as sensitive to amikacin, ceftazidime, colistin, imipenem, meropenem and ampicillin/sulbactam, intermediately resistant to ceftriaxone, cefepime and tobramycin and resistant to ciprofloxacin, gentamicin, trimethoprim/sulfamethoxazole, levofloxacin and tetracycline. NR-52199 lot 70040796 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70040796

Manufacturing Date: 23DEC2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
Remel ^{IM} Motility Lest Medium w/LIC		
Indicator for 1 day at 37°C in an aerobic		
	A houronnii	A have an ii (00.0%)
	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}	O an a thing	
	Sensitive	
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 µg/mL)
Cetepime	Intermediate	Intermediate (12 µg/mL)
Ceftriaxone	Intermediate	Intermediate (16 µg/mL)
Ceftazidime	Sensitive	Sensitive (8 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Resistant	Resistant (16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (> 32 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 4 µg/mL)
Tobramycin	Intermediate	Sensitive (4 µg/mL) ⁴
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 15129	A. baumannii, strain MRSN 15129
	(GenBank: VHGR01000048.1)	(GenBank: VHGR01000048.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52199

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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26 JUL 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 15574

Catalog No. NR-52200

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 15574 was isolated in 2012 from a human respiratory sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 15574 was deposited as sensitive to amikacin and colistin, and resistant to ampicillin/sulbactam, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin and tetracycline. NR-52200 lot 70038241 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038241

Manufacturing Date: 20AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator		
I or I day at 37 C in an aerobic atmosphere	A (A
VITEK®2 GN	A. baumannii (≥ 89%)	A. baumannii (99%)
VITEK® MS (MALDI-TOF)	A. baumannıı	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (4 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (256 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 1 µg/mL)
Gentamicin	Resistant	Intermediate (8 µg/mL) ⁴
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Intermediate (4 µg/mL) ⁴
Meropenem	Resistant	Resistant (> 8 μg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (64 µg/mL)
Tetracycline	Resistant	Resistant (≥ 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(1480 base pairs)	A. baumannii, strain MRSN 15574	A. baumannii, strain MRSN 15574
	(GenBank: VHGP01000080.1)	(GenBank: VHGP01000080.1)

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Certificate of Analysis for NR-52200

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁴Susceptibility results for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

27 APR 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 16880

Catalog No. NR-52201

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 16880 was isolated in 2011 from a human blood sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 16880 was deposited as sensitive to ceftazidime, colistin, ceftriaxone, cefepime, imipenem, ampicillin/sulbactam and meropenem, intermediately resistant to amikacin and tobramycin, and resistant to ciprofloxacin, gentamicin, levofloxacin, tetracycline and trimethoprim/sulfamethoxazole. NR-52201 lot 70041122 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041122

Manufacturing Date: 08JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Intermediate	Intermediate (32 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (3 µg/mL)
Cefepime	Sensitive	Sensitive (4 to 8 µg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (0.5 µg/mL)
Gentamicin	Resistant	Resistant (≥ 256 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 2 µg/mL)
Levofloxacin	Resistant	Resistant (12 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Intermediate	Sensitive (4 µg/mL) ⁴
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 16880 (GenBank: VHGO01000077.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 16880 (GenBank: VHGO01000077.1)
Certificate of Analysis for NR-52201

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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Acinetobacter baumannii, Strain MRSN 17493

Catalog No. NR-52202

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 17493 was isolated in 2013 from a human respiratory sample in the United States as part of a global surveillance program. A. baumannii, strain MRSN 17493 was deposited as resistant to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, trimethoprim/sulfamethoxazole and tobramycin. NR-52202 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039047

Manufacturing Date: 23SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy agar		
Motility	Report results	Non-motile
BBL [™] Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (≥ 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (48 µg/mL)
Cefepime	Resistant	Resistant (64 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Resistant	Resistant (> 4 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Meropenem	Resistant	Resistant (> 8 μg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (≥ 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 17493 (GenBank: VHGN01000093.1)	A. baumannii, strain MRSN 17493 (GenBank: VHGN01000093.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	morphology	morphology
Viability	Growth	Growth

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Certificate of Analysis for NR-52202

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¹Growth at 44°C differentiates *A. baumannii* from *A. calcoaceticus and A. pittii*, which do not grow at 44°C. ²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018) ³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/

Heather Couch

30 AUG 2021

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 19482

Catalog No. NR-52203

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 19482 was isolated in 2013 from a human respiratory sample in South America as part of a global surveillance program. NR-52203 was deposited as sensitive to colistin, ampicillin/sulbactam and tetracycline and resistant to amikacin, cefepime, ceftazidime, ciprofloxacin, ceftriaxone, gentamicin, imipenem, levofloxacin, meropenem, tobramycin and trimethoprim/sulfamethoxazole. NR-52203 lot 70041124 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041124

Manufacturing Date: 08JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel [™] Motility lest Medium w/IIC		
atmosphere		
	A haumannii	A baumannii (99.9%)
Antibiotic Suscentibility Profile ^{2,3}		A. baamamm (33.376)
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (6 µg/mL)
Cefenime	Resistant	Resistant (> 256 μ g/mL)
Ceftriavone	Resistant	Resistant (> $200 \mu g/m L)$
Ceftazidime	Resistant	Resistant (> 62 μ g/mL)
Ciprofloyacin	Resistant	Resistant (> 4 μ g/mL)
Colistin	Sensitive	Sensitive (< $0.5 \mu g/mL$)
Gentamicin	Resistant	Sensitive $(4 \text{ ug/mL})^4$
Iminenem	Resistant	Resistant (> 8 μ g/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Resistant	Resistant (> 8 μ g/mL)
Trimethonrim/sulfamethoxazole	Resistant	Resistant (> 4 $\mu g/mL$)
Tohramycin	Resistant	Resistant (> 16 μ g/mL)
Tetracycline	Sensitive	Resistant ($\geq 256 \text{ µg/m}$) ⁵
Genotynic Analysis		
Sequencing of 16S ribosomal RNA gene	> 99% sequence identity to	99.9% sequence identity to
(~ 1480 base pairs)	A. baumannii. strain MRSN 19482	A. baumannii. strain MRSN 19482
	(GenBank: VHGM01000083.1)	(GenBank: VHGM01000083.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52203

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 19482 was deposited as resistant to gentamicin, but showed a MIC of 4 µg/mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

⁵A. baumannii, strain MRSN 19482 was deposited as sensitive to tetracycline, but showed a MIC of > 256 μg/mL (interpreted as resistant) for this antibiotic during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 21660

Catalog No. NR-52204

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 21660 was isolated in 2013 from a human wound in Central America as part of a global surveillance program. A. baumannii, strain MRSN 21660 was deposited as sensitive to colistin and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin, tetracycline and ampicillin/sulbactam. NR-52204 lot 70038242 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038242

Manufacturing Date: 20AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
for 1 doy at 27°C in an acrobia atmosphere		
	A hourson $ii (> 900())$	1 houmonnii (00%)
	A. baumannii (209%)	
VITER [®] INS (INALDI-TOF)	A. Daumannii	A. Daumannii (99.9%)
Amiloolic Susceptibility Prome-	Desistant	Desistant (> 250 un/ml)
	Resistant	Resistant ($> 250 \mu g/mL$)
Ampiciliin/suibactam	Resistant	Resistant ($32 \mu g/mL$)
	Resistant	Resistant (> 256 µg/mL)
Cettriaxone	Resistant	Resistant ($\geq 64 \ \mu g/mL$)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (32 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (≥ 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene		
(~ 980 base pairs)	≥ 99% sequence identity to	100% sequence identity to
	A. baumannii, strain MRSN 21660	A. baumannii, strain MRSN 21660
	(GenBank: VHGL01000086.1)	(GenBank: VHGL01000086.1)

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Certificate of Analysis for NR-52204

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
(~ 500 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 21660 (GenBank: VHGL01000087.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 21660 (GenBank: VHGL01000087.1)
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology

/Heather Couch/ Heather Couch

26 APR 2021

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 21681

Catalog No. NR-52205

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 21681 was isolated in 2013 from a human catheter sample in Central America as part of a global surveillance program. A. baumannii, strain MRSN 21681 was deposited as sensitive to colistin and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin, tetracycline and ampicillin/sulbactam. NR-52205 lot 70038243 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038243

Manufacturing Date: 20AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator		
In a aerobic almosphere	A (A /
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (128 to 256 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 μg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Resistant	Resistant (> 8 μg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 μg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 21681	A. baumannii, strain MRSN 21681
	(GenBank: VHGK01000126.1)	(GenBank: VHGK01000126.1)
Purity	Growth consistent with expected	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	colony morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52205

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS	
Viability	Growth	Growth	

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®] 2 GN82, Sensititre™ GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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19 APR 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 22112

Catalog No. NR-52206

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 22112 was isolated in 2013 from a human blood sample in South America as part of a global surveillance program. A. baumannii, strain MRSN 22112 was deposited as sensitive to ampicillin/sulbactam, ciprofloxacin, colistin and levofloxacin, intermediately resistant to amikacin and tobramycin, and resistant to ceftazidime, ceftriaxone, cefepime, gentamicin, imipenem, tetracycline, meropenem and trimethoprim/sulfamethoxazole. NR-52206 lot 70038239 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70038239

Manufacturing Date: 19AUG2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at $44^{\circ}C \pm 2^{\circ}C^{1}$	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		N I
MOTINITY RPL TM Matility Test Madium w/TTC Indicator	Report results	Non-motile
for 1 day at 37°C in an aerobic atmosphere		
	A boumonnii (> 80%)	Λ boumonnii (00%)
	A. baumannii ($\geq 09\%$)	A. baumannii (99%)
Antibiotic Succentibility Profile ^{2,3}	A. baumannii	A. baumannii (99.976)
	Intermediate	Desistant (256 ug/ml.)4
		Resistant (256 µg/mL)
Ampiciliin/suibactam	Sensitive	Sensitive (8 µg/mL)
	Resistant	Resistant (64 µg/mL)
Centriaxone	Resistant	Resistant ($\geq 64 \ \mu g/mL$)
	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Resistant	Resistant (48 µg/mL)
Imipenem	Resistant	Resistant (12 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Resistant	Resistant (8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Intermediate	Intermediate (8 µg/mL)
Tetracycline	Resistant	Resistant (≥ 64 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 22112	A. baumannii, strain MRSN 22112
	(GenBank: VHGJ01000149.1)	(GenBank: VHGJ01000149.1)

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Certificate of Analysis for NR-52206

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 8 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®] 2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 22112 was deposited as intermediate to amikacin, but showed a MIC of 256 µg per mL (interpreted as resistant) for amikacin during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

28 APR 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 23390

Catalog No. NR-52207

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 23390 was isolated in 2014 from an intravenous line in Asia as part of a global surveillance program. NR-52207 was deposited as multi-locus sequence type (MLST) ST 15, sensitive to colistin, cefepime, imipenem, meropenem, ampicillin/sulbactam and tetracycline and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, gentamicin, levofloxacin, tobramycin and trimethoprim/sulfamethoxazole. NR-52207 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041126

Manufacturing Date: 08JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
BBL [™] Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aerobic atmosphere	A 1	A () (00 00()
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (2 µg/mL)
Cefepime	Sensitive	Sensitive (8 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 32 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (> 32 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (> 256 µg/mL)
Tetracycline	Sensitive	Resistant (16 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 23390	A. baumannii, strain MRSN 23390
	(GenBank: VHGI01000070.1)	(GenBank: VHGI01000070.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52207

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 23390 was deposited as sensitive to tetracycline, but showed a MIC of 16 µg/mL (interpreted as resistant) for tetracycline during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

01 JUN 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 24008

Catalog No. NR-52208

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 24008 was isolated in 2014 in the USA as part of a global surveillance program. A. baumannii, strain MRSN 24008 was deposited as multi-locus sequence type (MLST) ST 2, sensitive to amikacin, ampicillin/sulbactam, colistin, imipenem, meropenem and tobramycin and resistant to cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin, tetracycline and trimethoprim/sulfamethoxazole. NR-52208 lot 70041128 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041128

Manufacturing Date: 08JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (8 µg/mL)
Cefepime	Resistant	Resistant (128 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (0.125 µg/mL)
Gentamicin	Resistant	Resistant (12 to 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 2 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Sensitive	Sensitive (1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Sensitive	Sensitive (2 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		· · · · · · · · · · · · · · · · · · ·
Sequencing of 16S ribosomal RNA gene (1480 base pairs)	≥ 99% sequence identity to A. baumannii, strain MRSN 24008 (GenBank: VHGH01000058.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 24008 (GenBank: VHGH01000058.1)

Certificate of Analysis for NR-52208

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology

/Heather Couch/

Heather Couch

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27 DEC 2021



SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 24603

Catalog No. NR-52209

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 24603 was isolated in 2014 from human blood in Europe as part of a global surveillance program. NR-52209 was deposited as multi-locus sequence type (MLST) ST 428, sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ciprofloxacin, ceftriaxone, colistin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, tetracycline and trimethoprim/sulfamethoxazole. NR-52209 lot 70042468 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042468

Manufacturing Date: 26FEB2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (4 to 6 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (0.85 µg/mL)
Cefepime	Sensitive	Sensitive (1.5 μg/mL)
Ceftriaxone	Sensitive	Inconclusive (8 to 16 µg/mL) ⁴
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 24603	A. baumannii, strain MRSN 24603
	(GenBank: VHGG01000121.1)	(GenBank: VHGG01000121.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52209

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii strain MRSN 24603 was deposited as being sensitive to ceftriaxone. Repeated antibiotic susceptibility testing determined that for strain MRSN 24603, the ceftriaxone MICs are 8 μg per mL and 16 μg per mL, which are interpreted as sensitive and intermediately resistant, respectively. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

11 OCT 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 25547

Catalog No. NR-52210

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 25547 was isolated in 2014 from a human wound in Europe as part of a global surveillance program. A. baumannii, strain MRSN 25547 was deposited as sensitive to colistin and ciprofloxacin, ceftazidime, ceftriaxone, cefepime, resistant to amikacin, gentamicin, imipenem, trimethoprim/sulfamethoxazole, levofloxacin, meropenem, tobramycin, tetracycline and ampicillin/sulbactam. NR-52210 lot 70039049 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039049

Manufacturing Date: 11SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (48 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (> 8 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1260 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 25547 (GenBank: VHGF01000110.1)	99.9% sequence identity to <i>A. baumannii</i> , strain MRSN 25547 (GenBank: VHGF01000110.1)

Certificate of Analysis for NR-52210

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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23 JUN 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 29908

Catalog No. NR-52211

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

Product Description:

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. A. baumannii, strain MRSN 29908 was deposited as 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. NR-52211 lot 70039051 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039051

Manufacturing Date: 11SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
	A hoursensii	
VITER® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}	Desistant	
	Resistant	Resistant (> 256 μ g/mL)
Ampicillin/subactam	Resistant	Resistant (48 to 64 μ g/mL)
Cetepime	Resistant	Resistant (48 to 64 µg/mL)
Ceftriaxone	Intermediate	Intermediate (32 µg/mL)
Ceftazidime	Sensitive	Resistant (64 µg/mL)⁴
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (> 8 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 29908	A. baumannii, strain MRSN 29908
	(GenBank: VHGD01000064.1)	(GenBank: VHGD01000064.1)
Purity	Growth consistent with expected	Growth consistent with expected
/ days at 3/°C in an aerobic atmosphere with	colony morphology	colony morphology

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Certificate of Analysis for NR-52211

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 29908 was deposited as being sensitive to ceftazidime. Repeated antibiotic susceptibility testing determined that for strain MRSN 29908, the ceftazidime MIC is 64 µg per mL, which is interpreted as resistant. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

22 JAN 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 29999

Catalog No. NR-52212

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 29999 was isolated in 2009 from a human respiratory sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 29999 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-52212 lot 70042479 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042474

Manufacturing Date: 10MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
BBL Motility lest Medium w/ IIC Indicator		
	A boumonnii	1 houmonnii (00 0%)
VITER® MS (MALDI-TOF)	A. Daumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile-,*	Constitute	
	Sensitive	Sensitive ($12 \mu g/mL$)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 µg/mL)
	Sensitive	Sensitive (2 µg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive ($\leq 0.25 \mu\text{g/mL}$)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (2 to 3 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~1470 base pairs)	A. baumannii, strain MRSN 29999	A. baumannii, strain MRSN 29999
	(GenBank: VHGC01000093.1)	(GenBank: VHGC01000093.1)
Purity	Growth consistent with expected	Growth consistent with expected
without 5% CO ₂ on Tryptic Soy ager	colony morphology	colony morphology

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Certificate of Analysis for NR-52212

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

/Heather Couch/

Heather Couch

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05 FEB 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 30000

Catalog No. NR-52213

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 30000 was isolated in 2009 from a human in Europe as part of a global surveillance program. NR-52213 was deposited as sensitive to colistin, imipenem, meropenem and ampicillin/sulbactam and resistant to amikacin, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin, tobramycin, trimethoprim/sulfamethoxazole and tetracycline. NR-52213 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041130

Manufacturing Date: 30DEC2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (3 to 4 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 to 0.5 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 μg/mL)
Levofloxacin	Resistant	Intermediate (4 µg/mL) ⁴
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis	≥ 99% sequence identity to	100% sequence identity to
Sequencing of 16S ribosomal RNA gene	A. baumannii, strain MRSN 30000	A. baumannii, strain MRSN 30000
(~ 1470 base pairs)	(GenBank: VHGB01000062.1)	(GenBank: VHGB01000062.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52213

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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15 NOV 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 30885

Catalog No. NR-52214

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 30885 was isolated in 2003 from a human respiratory sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 30885 was deposited as sensitive to amikacin, ceftazidime, ciprofloxacin, colistin, ceftriaxone, cefepime, gentamicin, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole, tobramycin, ampicillin/sulbactam and tetracycline. NR-52214 lot 70042470 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042470

Manufacturing Date: 10MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Sov agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (≤ 2 μg/mL)
Cefepime	Sensitive	Sensitive (1.5 μg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (8 μg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 μg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (1 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Intermediate (6 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 30885	A. baumannii, strain MRSN 30885
	(GenBank: VHGA01000107.1)	(GenBank: VHGA01000107.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
/ days at 3/°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52214

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 30885 was deposited as sensitive to tetracycline, but showed a MIC of 6 μg/mL (interpreted as intermediate) for tetracycline during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

12 AUG 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 30896

Catalog No. NR-52215

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 30896 was isolated in 2003 from a wound specimen in Europe as part of a global surveillance program. A. baumannii, strain MRSN 30896 was deposited as sensitive to amikacin, ceftazidime, ciprofloxacin, colistin, cefepime, imipenem, levofloxacin, meropenem, ampicillin/sulbactam and trimethoprim/sulfamethoxazole and resistant to gentamicin, tobramycin and tetracycline, with intermediate resistance to ceftriaxone. NR-52215 lot 70041132 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041132

Manufacturing Date: 06JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
Remel [™] Motility Lest Medium w/LLC		
atmosphere		
	A houronnii	A have an ii (00.0%)
	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}	O an a thing	
	Sensitive	Sensitive (4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (2 µg/mL)
Cetepime	Sensitive	Sensitive (3 µg/mL)
Ceftriaxone	Intermediate	Resistant (≥ 32 µg/mL)⁴
Ceftazidime	Sensitive	Sensitive (8 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 μg/mL)
Colistin	Sensitive	Sensitive (0.5 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (2 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 30896	A. baumannii, strain MRSN 30896
	(GenBank: VHFZ01000068.1)	(GenBank: VHFZ01000068.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52215

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 30896 was deposited as intermediate to ceftriaxone, but showed a MIC of ≥ 32 µg/mL (interpreted as resistant) for ceftriaxone during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

06 MAY 2021

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 30909

Catalog No. NR-52216

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 30909 was isolated in 2003 from a human specimen in Europe as part of a global surveillance program. A. baumannii, strain MRSN 30909 was deposited as multi-locus sequence type (MLST) ST 32, sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, trimethoprim/sulfamethoxazole and tobramycin and intermediately resistant to ceftriaxone. NR-52216 lot 70042472 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042472

Manufacturing Date: 03MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
	Report results	Non-motile
for 1 day at 27°C in an aprobio atmosphere		
	A. houmonaii	A houmonaii (00.0%)
VITER® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
	Sensitive	Sensitive (8 µg/mL)
Ampiciliin/sulbactam	Sensitive	Sensitive (1.5 µg/mL)
Cetepime	Sensitive	Sensitive (4 µg/mL)
Ceftriaxone	Intermediate	Intermediate (32 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (0.5 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (1 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Intermediate (8 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1400 base pairs)	A. baumannii, strain MRSN 30909	A. baumannii, strain MRSN 30909
	(GenBank: VHFY01000082.1)	(GenBank: VHFY01000082.1)
Purity	Growth consistent with expected	Growth consistent with expected
/ days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology

Certificate of Analysis for NR-52216

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 30909 was deposited as being sensitive to tetracycline. Repeated antibiotic susceptibility testing determined that for strain MRSN 30909, the tetracycline MIC is 8 µg per mL, which is interpreted as intermediately resistant. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

24 JAN 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 30912

Catalog No. NR-52217

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 30912 was isolated in 2003 from a human in Europe as part of a global surveillance program. A. baumannii, strain MRSN 30912 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-52217 lot 70042476 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042476

Manufacturing Date: 03MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel [™] Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aeropic		
	A boumonnii	Λ boumonnii (00.0%)
Antibiotio Succentibility Profile ^{2,3}	A. Daumannii	A. baumannii (99.9%)
	Sensitive	Sanaitiva (12 ug/ml)
Amisillin authostom	Sensitive	Sensitive $(12 \mu g/mL)$
Ampicinin/subactam	Sensitive	Sensitive (1.5 µg/mL)
	Sensitive	Sensitive (2 µg/mL)
Cettriaxone	Sensitive	Resistant (> 32 µg/mL) ⁺
Cettazidime	Sensitive	Sensitive (4 μ g/mL)
Ciprofloxacin	Sensitive	Sensitive ($\leq 0.25 \mu\text{g/mL}$)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (3 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1420 base pairs)	A. baumannii, strain MRSN 30912	A. baumannii, strain MRSN 30912
	(GenBank: VHFX01000049.1)	(GenBank: VHFX01000049.1)
Purity	Growth consistent with expected	Growth consistent with expected
/ days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Sov agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52217

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 30912 was deposited as sensitive to ceftriaxone, but showed a MIC of > 32 µg per mL (interpreted as resistant) for ceftriaxone during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

15 JUL 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 30945

Catalog No. NR-52218

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 30945 was isolated in 2003 from a human in Europe as part of a global surveillance program. A. baumannii, strain MRSN 30945 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, trimethoprim/sulfamethoxazole and tetracycline. NR-52218 lot 70042831 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042831

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
BBL ^{IM} Motility Test Medium W/TTC Indicator		
	A havenanii	
VITER [®] MS (MALDI-TOF)	A. Daumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,0}		
Amikacin Amariaillia (autharatara		Sensitive (4 µg/mL)
Ampiciliin/sulbactam	Sensitive	Sensitive (1.5 µg/mL)
Cetepime	Sensitive	Sensitive (2 to 3 µg/mL)
	Sensitive	Sensitive (8 µg/mL)
Cettazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 μg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 μg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	\geq 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 30945	A. baumannii, strain MRSN 30945
Durite		
Purity $7 days at 27^{\circ}$ C in an aprohim atmosphere with and	Growin consistent with expected	Growin consistent with expected
without 5% CO ₂ on Tryptic Soy ager		
Antibiotic Susceptibility Profile ^{2,3} Amikacin Ampicillin/sulbactam Cefepime Ceftriaxone Ceftazidime Ciprofloxacin Colistin Gentamicin Imipenem Levofloxacin Meropenem Trimethoprim/sulfamethoxazole Tobramycin Tetracycline Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs) Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Sensitive Sensi	Sensitive (4 μ g/mL) Sensitive (1.5 μ g/mL) Sensitive (2 to 3 μ g/mL) Sensitive (2 to 3 μ g/mL) Sensitive (8 μ g/mL) Sensitive (4 μ g/mL) Sensitive ($\leq 0.25 \mu$ g/mL) Sensitive ($\leq 1 \mu$ g/mL) Se

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Certificate of Analysis for NR-52218

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee, ATCC Feder

05 FEB 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 31159

Catalog No. NR-52219

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 31159 was isolated in 2004 from a human tissue sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 31159 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, trimethoprim/sulfamethoxazole and tetracycline. NR-52219 lot 70042835 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042835

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aerobic atmosphere		A /
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1 µg/mL)
Cefepime	Sensitive	Sensitive (1.5 μg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (3 to 4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 31159	A. baumannii, strain MRSN 31159
	(GenBank: VHFV01000151.1)	(GenBank: VHFV01000151.1)
Purity	Growth consistent with expected	Growth consistent with expected
/ days at 3/°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52219

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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05 FEB 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 31196

Catalog No. NR-52220

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 31196 was isolated in 2015 from a human in Europe as part of a global surveillance program. A. baumannii, strain MRSN 31196 was deposited as sensitive to colistin, intermediately resistant to tobramycin and resistant to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole and tetracycline. NR-52220 lot 70039053 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039053

Manufacturing Date: 11SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (48 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 1 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (≥ 8 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Intermediate	Intermediate (8 µg/mL)
Tetracycline	Resistant	Resistant (256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(1470 base pairs)	A. baumannii, strain MRSN 31196	A. baumannii, strain MRSN 31196
	(GenBank: VHFU01000076.1)	(GenBank: VHFU01000076.1)
Purity	Growth consistent with expected	Growth consistent with expected
without 5% CO ₂ on Tryptic Sov agar		

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Certificate of Analysis for NR-52220

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

24 JAN 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 31461

Catalog No. NR-52221

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 31461 was isolated in 2003 from a human in Europe as part of a global surveillance program. A. baumannii, strain MRSN 31461 was deposited as multi-locus sequence type (MLST) ST 49, sensitive to amikacin, colistin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, trimethoprim/sulfamethoxazole and tetracycline. NR-52221 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042839

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at $44^{\circ}C \pm 2^{\circ}C'$	Growth	Growth
agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC	•	
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (12 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 μg/mL)
Cefepime	Sensitive	Sensitive (2 µg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 μg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (3 to 4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(780 base pairs)	A. baumannii, strain MRSN 31461	A. baumannii, strain MRSN 31461
	(GenBank: VHF101000057.1)	(GenBank: VHF101000057.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52221

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch Program Manager or designee ATCC Fede

25 JAN 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 31468

Catalog No. NR-52222

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 31468 was isolated in 2003 from a human sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 31468 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, trimethoprim/sulfamethoxazole and tetracycline and intermediately resistant to ceftriaxone. NR-52222 lot 70042842 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042842

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
BBL [™] Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aerobic atmosphere		
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (3 µg/mL)
Cefepime	Sensitive	Sensitive (4 µg/mL)
Ceftriaxone	Intermediate	Intermediate (24 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (1 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 2 μg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (1 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 μg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 31468	A. baumannii, strain MRSN 31468
	(GenBank: VHFS01000069.1)	(GenBank: VHFS01000069.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52222

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TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

/Heather Couch/

Heather Couch

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Acinetobacter baumannii, Strain MRSN 31523

Catalog No. NR-52223

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 31523 was isolated in 2004 from a human sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 31523 was deposited as sensitive to amikacin, ciprofloxacin, colistin, imipenem, levofloxacin, meropenem and tetracycline, intermediately resistant to ampicillin/sulbactam and resistant to cefepime, ceftazidime, ceftriaxone, gentamicin, trimethoprim/sulfamethoxazole and tobramycin. NR-52223 lot 70041134 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041134

Manufacturing Date: 30DEC2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Intermediate	Sensitive (3 µg/mL) ⁴
Cefepime	Resistant	Resistant (48 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (1 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (48 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (16 µg/mL)
Tetracycline	Sensitive	Intermediate (8 µg/mL) ⁵
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 31523 (GenBank: VHFR01000050.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 31523 (GenBank: VHFR01000050.1)

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TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴*A. baumannii*, strain MRSN 31523 was deposited as intermediately resistant to ampicillin/sulbactam, but showed a MIC of 3 μg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

⁵The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

/Heather Couch/

Heather Couch

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 31915

Catalog No. NR-52224

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 31915 was isolated in 2004 from a human in Europe as part of a global surveillance program. A. baumannii, strain MRSN 31915 was deposited as sensitive to amikacin, ampicillin/sulbactam, colistin, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole, tetracycline and tobramycin. NR-52224 lot 70042844 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042844

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 2 µg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 μg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (3 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 31915 (GenBank: VHFQ01000075.1)	<i>A. baumannii</i> , strain MRSN 31915 (GenBank: VHFQ01000075.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology
Viability	Growth	Growth

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¹Growth at 44°C differentiates *A. baumannii* from *A. calcoaceticus and A. pittii*, which do not grow at 44°C. ²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018) ³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

Figure 1: Colony Morphology



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15 JUL 2021

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Acinetobacter baumannii, Strain MRSN 31937

Catalog No. NR-52225

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 31937 was isolated in 2004 from a human wound in Europe as part of a global surveillance program. A. baumannii, strain MRSN 31937 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-52225 lot 70042846 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042846

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
BBL [™] Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aeropic atmosphere		
	A baumannii	A haumannii (99.9%)
Antibiotic Suscentibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (< 1 µg/mL)
Amnicillin/sulbactam	Sensitive	Sensitive (< $1.5 \mu g/mL$)
Cefenime	Sensitive	Sensitive ($\leq 2 \mu g/mL$)
Ceffriavone	Sensitive	Sensitive (3 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciproflovacin	Sonsitivo	Sensitive ($4 \mu g/mL$)
Colistin	Sensitive	Sensitive ($\leq 0.5 \ \mu g/mL$)
Contamicin	Sensitive	Sensitive ($\leq 0.5 \ \mu g/mL$)
	Sensitive	Sensitive ($\leq 1 \mu g/mL$)
	Sensitive	Sensitive ($\leq 1 \mu g/mL$)
Moroponom	Sensitive	Sensitive ($\leq 1 \mu g/mL$)
Trimethoprim/oulfomethoxozolo	Sensitive	Sensitive ($\leq 1 \mu g/mL$)
Thineinophin/sultamethoxazole	Sensitive	Sensitive ($\leq 0.5 \ \mu g/mL$)
Toblaniych	Sensitive	Sensitive ($\leq 1 \mu g/mL$)
	Sensitive	
Sequencing of 16S ribosomal RNA gene	> 00% sequence identity to	99.6% sequence identity to
(~ 1480 hase nairs)	A haumannii strain MRSN 31937	A baumannii strain MRSN 31937
	(GenBank: VHFP01000152.1)	(GenBank: VHFP01000152.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology

/Heather Couch/

Heather Couch

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26 JAN 2022

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Acinetobacter baumannii, Strain MRSN 31942

Catalog No. NR-52226

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 31942 was isolated in 2004 from a human in Europe as part of a global surveillance program. A. baumannii, strain MRSN 31942 was deposited as multi-locus sequence type (MLST) ST 32, sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole and tobramycin, with intermediate resistance to tetracycline. NR-52226 lot 70042848 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042848

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Sov agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1 to 1.5 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 4 µg/mL)
Ceftriaxone	Sensitive	Resistant (> 32 µg/mL) ⁴
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 μg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Intermediate	Resistant (16 μg/mL) ⁵
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 31942	A. baumannii, strain MRSN 31942
	(GenBank: VHFO01000079.1)	(GenBank: VHFO01000079.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
/ days at 3/°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO2 on Tryptic Soy agar		

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Certificate of Analysis for NR-52226

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TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 31942 was deposited as sensitive to ceftriaxone, but showed a MIC of > 32 µg/mL (interpreted as resistant) for ceftriaxone during QC testing. Testing was performed in duplicate.

⁵Susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/

Heather Couch Program Manager or designee, ATCC Federal Solutions

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Acinetobacter baumannii, Strain MRSN 31947

Catalog No. NR-52227

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 31947 was isolated in 2004 from a human in Europe as part of a global surveillance program. A. baumannii, strain MRSN 31947 was deposited as multi-locus sequence type (MLST) ST 32, sensitive to amikacin, colistin, ampicillin/sulbactam, cefepime, ceftazidime, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, trimethoprim/sulfamethoxazole and tetracycline and intermediately resistant to ceftriaxone. NR-52227 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042850

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (4 µg/mL)
Cefepime	Sensitive	Sensitive (4 µg/mL)
Ceftriaxone	Intermediate	Resistant (32 µg/mL) ⁴
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (1 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 2 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Inconclusive (8 to 12 µg/mL) ⁵
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to A. baumannii, strain MRSN 31947 (GenBank: VHFN01000065.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 31947 (GenBank: VHFN01000065.1)

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TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴Susceptibilty results for this antibiotic are within one doubling dilution of specification, which is considered an equivalent result.

⁵A. baumannii, strain MRSN 31947 was deposited as being sensitive to tetracycline. Antibiotic susceptibility testing performed in duplicate determined that for strain MRSN 31947, the tetracycline MICs are 8 μg per mL and 12 μg per mL, which are interpreted as intermediate and resistant, respectively.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

02 FEB 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 32076

Catalog No. NR-52228

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32076 was isolated in 2006 from a human blood sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 32076 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, trimethoprim/sulfamethoxazole and tobramycin. NR-52228 lot 70042852 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042852

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
BBL [™] Motility Lest Medium w/LLC Indicator		
I or I day at 37 C in an aerobic atmosphere		
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (≤ 2 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 2 µg/mL)
Ceftriaxone	Sensitive	Intermediate (16 µg/mL) ⁴
Ceftazidime	Sensitive	Sensitive (8 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1410 base pairs)	A. baumannii, strain MRSN 32076	A. baumannii, strain MRSN 32076
	(GenBank: VHFM01000076.1)	(GenBank: VHFM01000076.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52228

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TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

⁴Susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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23 JUL 2021

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 32104

Catalog No. NR-52229

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32104 was isolated in 2006 from a human respiratory sample in Europe as part of a global surveillance program. NR-52229 was deposited as resistant to amikacin, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin and trimethoprim/sulfamethoxazole, sensitive to ceftazidime and colistin, and intermediately resistant to cefepime and ampicillin/sulbactam. NR-52229 lot 70039055 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039055

Manufacturing Date: 11SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44° C ± 2° C ¹	Growth	Growth
Soy agar		
Motility	Report results	Motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (96 to 128 µg/mL)
Ampicillin/sulbactam	Intermediate	Intermediate (12 µg/mL)
Cefepime	Intermediate	Intermediate (16 to 24 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Sensitive	Intermediate (16 µg/mL) ⁴
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (12 to 16 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 256 µg/mL)
Tetracycline	Resistant	Resistant (≥ 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 32104 (GenBank: VHFL01000097.1)	A. baumannii, strain MRSN 32104 (GenBank: VHFL01000097.1)

Certificate of Analysis for NR-52229

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 12 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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Acinetobacter baumannii, Strain MRSN 32108

Catalog No. NR-52230

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32108 was isolated in 2006 from a human wound sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 32108 was deposited as sensitive to colistin, cefepime, imipenem and meropenem, intermediately resistant to ampicillin/sulbactam and resistant to amikacin, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin, trimethoprim/sulfamethoxazole, tetracycline and tobramycin. NR-52230 lot 70039370 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039370

Manufacturing Date: 30SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Non-motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Intermediate	Intermediate (16 µg/mL)
Cefepime	Sensitive	Sensitive (8 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (32 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (2 µg/mL)
Levofloxacin	Resistant	Intermediate (4 µg/mL) ⁴
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (192 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 32108 (GenBank: VHFK01000061.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 32108 (GenBank: VHFK01000061.1)

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TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/

Heather Couch

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05 FEB 2022

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Acinetobacter baumannii, Strain MRSN 32142

Catalog No. NR-52231

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32142 was isolated in 2006 from a human wound sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 32142 was deposited as sensitive to amikacin, ampicillin/sulbactam, ciprofloxacin, colistin, imipenem, levofloxacin, meropenem and tetracycline and resistant to cefepime, ceftazidime, ceftriaxone, gentamicin, trimethoprim/sulfamethoxazole and tobramycin. NR-52231 lot 70041136 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041136

Manufacturing Date: 06JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
Growth at 44° C + 2° C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Sov		
agar		
Motility	Report results	Motile
Remel [™] Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (8 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (2 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (4 µg/mL)
Tobramycin	Resistant	Intermediate (8 to 12 µg/mL) ⁴
Tetracycline	Sensitive	Sensitive (3 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 32142	A. baumannii, strain MRSN 32142
	(GenBank: VHFJ01000099.1)	(GenBank: VHFJ01000099.1)

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SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

/Heather Couch/

Heather Couch

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Acinetobacter baumannii, Strain MRSN 32304

Catalog No. NR-52232

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32304 was isolated in 2015 from a human sterile body fluid sample in the United States as part of a global surveillance program. NR-52232 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-52232 lot 70042854 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042854

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
BBL Motility lest Medium W/IIC Indicator		
	A baumannii	Λ baumannii (00.0%)
Antibiotio Succentibility Profile ^{2,3}	A. Daumannii	A. baumannii (99.9%)
	Sonaitivo	Sonaitivo (1 ug/mL)
Amiaillin/aulbaatam	Sensitive	Sensitive (4 µg/IIL)
Cofonimo	Sensitive	Sensitive (1.0 to 1.5 μ g/mL)
Cetepine	Sensitive	Sensitive ($\leq 2 \mu g/mL$)
Celtraxone	Sensitive	Consistive (1 v m/mL)
Centazidime	Sensitive	Sensitive (4 µg/mL)
	Sensitive	Sensitive ($\leq 0.25 \ \mu g/mL$)
Constin	Sensitive	Sensitive ($\leq 0.25 \mu$ g/mL)
	Sensitive	Sensitive ($\leq 1 \ \mu g/mL$)
Imipenem	Sensitive	Sensitive ($\leq 1 \ \mu g/mL$)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive ($\leq 1 \ \mu g/mL$)
I rimethoprim/sulfamethoxazole	Sensitive	Sensitive ($\leq 0.5 \mu\text{g/mL}$)
Tobramycin	Sensitive	Sensitive (≤ 1 μg/mL)
Tetracycline	Sensitive	Sensitive (4 to 6 µg/mL)
Genotypic Analysis		1000/
Sequencing of 16S ribosomal RNA gene	\geq 99% sequence identity to	100% sequence identity to
(~ 1460 base pairs)	A. Daumannii, strain MRSN 32304	A. Daumannii, strain MRSN 32304
Durity		
7 days at 27°C in an acrobic atmosphere with		
and without 5% CO ₂ on Tryptic Sov adar		

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TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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Acinetobacter baumannii, Strain MRSN 32797

Catalog No. NR-52233

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32797 was isolated in 2005 from a human in Europe as part of a global surveillance program. A. baumannii, strain MRSN 32797 was deposited as sensitive to amikacin, ceftazidime, ciprofloxacin, colistin, cefepime, gentamicin, imipenem, levofloxacin, meropenem, tobramycin, tetracycline and ampicillin/sulbactam, resistant to trimethoprim/sulfamethoxazole and intermediately resistant to ceftriaxone. NR-52233 lot 70042856 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042856

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Motile
BBL Motility lest Medium W/ IIC Indicator		
	A	A have an ii (00.0%)
VITER® MS (MALDI-TOF)	A. Daumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive ($\leq 4 \ \mu g/mL$)
Ampicillin/sulbactam	Sensitive	Sensitive (1 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 2 µg/mL)
Ceftriaxone	Intermediate	Intermediate (16 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (2 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 32797	A. baumannii, strain MRSN 32797
	(GenBank: VHFH01000049.1)	(GenBank: VHFH01000049.1)
Purity	Growth consistent with expected colony	Growth consistent with expected colony
7 days at 37°C in an aerobic atmosphere with	morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52233

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TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre™ GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

03 AUG 2021

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Acinetobacter baumannii, Strain MRSN 32842

Catalog No. NR-52234

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32842 was isolated in 2005 from a human wound sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 32842 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, imipenem, levofloxacin, meropenem, tetracycline, trimethoprim/sulfamethoxazole and tobramycin and intermediately resistant to gentamicin. NR-52234 lot 70042858 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042858

Manufacturing Date: 17MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Motile
BBL [™] Motility Lest Medium w/LLC Indicator		
for 1 day at 37°C in an aerobic atmosphere		
VITEK® MS (MALDI-TOF)	A. baumannıı	A. baumannıı (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 16 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 2 µg/mL)
Ceftriaxone	Sensitive	Intermediate (12 to 16 µg/mL) ⁴
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (0.5 μg/mL)
Gentamicin	Intermediate	Sensitive (≤ 3 µg/mL) ⁵
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 μg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 μg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Intermediate (6 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 32842	A. baumannii, strain MRSN 32842
	(GenBank: VHFG01000046.1)	(GenBank: VHFG01000046.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52234

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁵A. baumannii, strain MRSN 32842 was deposited as being intermediately resistant to gentamicin. Repeated antibiotic susceptibility testing determined that for strain MRSN 32842, the gentamicin MIC is ≤ 3 µg per mL, which is interpreted as sensitive. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

29 JAN 2022

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 32865

Catalog No. NR-52235

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32865 was isolated in 2007 from a human wound sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 32865 was deposited as sensitive to colistin, imipenem, ampicillin/sulbactam, meropenem and tetracycline and resistant to amikacin, ceftazidime, ceftriaxone, cefepime, ciprofloxacin, gentamicin, levofloxacin, tobramycin and trimethoprim/sulfamethoxazole. NR-52235 lot 70041140 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041140

Manufacturing Date: 13JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Motile
BBL [™] Motility Lest Medium w/LLC Indicator		
for 1 day at 37°C in an aerobic atmosphere		
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (6 µg/mL)
Cefepime	Resistant	Resistant (64 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Sensitive	Sensitive (2 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Sensitive	Resistant (12 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 32865	A. baumannii, strain MRSN 32865
	(GenBank: VHFF01000098.1)	(GenBank: VHFF01000098.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52235

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 32865 was deposited as being sensitive to tetracycline. Repeated antibiotic susceptibility testing determined that for strain MRSN 32865, the tetracycline MIC is 12 µg per mL, which is interpreted as resistant. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

30 JAN 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 32866

Catalog No. NR-52236

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32866 was isolated in 2007 from a human sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 32866 was deposited as sensitive to colistin, imipenem, meropenem and tobramycin and resistant to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin, tetracycline and trimethoprim/sulfamethoxazole. NR-52236 lot 70039372 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039372

Manufacturing Date: 30SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
Growth at 11° C + 2° C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Sov	Glowin	Glowan
agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC	•	
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (> 256 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (> 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Inconclusive (2 to 8 µg/mL) ⁴
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Sensitive	Resistant (8 µg/mL) ⁵
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 32866	A. baumannii, strain MRSN 32866
Purity	Growth consistent with expected	Growth consistent with expected
and without 5% CO ₂ on Tryptic Sov agar	colony morphology	

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Certificate of Analysis for NR-52236

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 32866 was deposited as being sensitive to imipenem. Repeated antibiotic susceptibility testing determined that for strain MRSN 32866, the imipenem MICs are 2 µg/mL and > 8 µg/mL, which are interpreted as sensitive and resistant, respectively.

⁵A. baumannii, strain MRSN 32866 was deposited as sensitive to meropenem, but showed a MIC of 8 µg/mL (interpreted as resistant) for meropenem during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

31 JAN 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 32875

Catalog No. NR-52237

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32875 was isolated in 2007 from a human in Europe as part of a global surveillance program. NR-52237 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, colistin, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-52237 lot 70042860 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042860

Manufacturing Date: 19MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
Growth at 44° C + 2° C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic	Clowan	Clowan
Sov agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 μg/mL)
Cefepime	Sensitive	Sensitive (3 µg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 μg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 μg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 μg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (3 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 32875	A. baumannii, strain MRSN 32875
	(GenBank: VHFD01000050.1)	(GenBank: VHFD01000050.1)
Purity	Growth consistent with expected	Growth consistent with expected
and without 5% COs on Truntic Sources	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52237

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 32892

Catalog No. NR-52238

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32892 was isolated in 2008 from a human sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 32892 was deposited as sensitive to ceftazidime, ciprofloxacin, colistin, cefepime, imipenem, levofloxacin, meropenem, ampicillin/sulbactam and tetracycline and resistant to amikacin, ceftriaxone, gentamicin, tobramycin and trimethoprim/sulfamethoxazole. NR-52238 lot 70041141 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041141

Manufacturing Date: 13JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 µg/mL)
Cefepime	Sensitive	Sensitive (6 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Sensitive	Intermediate (16 µg/mL) ⁴
Ciprofloxacin	Sensitive	Sensitive (≤ 0.5 μg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 μg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 μg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Sensitive	Intermediate (12 µg/mL) ⁵
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 32892	A. baumannii, strain MRSN 32892
	(GenBank: VHFC01000091.1)	(GenBank: VHFC01000091.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Sov agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52238

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁵A. baumannii, strain MRSN 32892 was deposited as sensitive to tetracycline, but showed a MIC of 12 μg/mL (interpreted as intermediate) for tetracycline during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 32915

Catalog No. NR-52239

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 32915 was isolated in 2008 from a wound specimen in Europe as part of a global surveillance program. NR-52239 was deposited as sensitive to colistin, resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole, tobramycin and tetracycline, and intermediately resistant to ampicillin/sulbactam. NR-52239 lot 70039374 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039374

Manufacturing Date: 25SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
Remel [™] Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
	A 1	A ()
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Intermediate	Resistant (48 to 64 µg/mL)⁴
Cefepime	Resistant	Resistant (>256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Resistant	Resistant (24 µg/mL)
Imipenem	Resistant	Resistant (≥ 8 µg/mL)
Levofloxacin	Resistant	Intermediate (4 µg/mL) ⁵
Meropenem	Resistant	Resistant (≥ 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (> 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 32915	A. baumannii, strain MRSN 32915
	(GenBank: VHFB01000088.1)	(GenBank: VHFB01000088.1)
Purity	Growth consistent with expected	Growth consistent with expected colony
/ days at 37°C in an aerobic atmosphere with	colony morphology	morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52239

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 32915 was deposited as intermediately resistant to ampicillin/sulbactam but showed a MIC of > 48 µg/mL (interpreted as

resistant) for ampicillin/sulbactam during QC testing. Testing was performed in duplicate.

⁵The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/

Heather Couch

Program Manager or designee, ATCC Federal Solutions

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03 FEB 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 337038

Catalog No. NR-52240

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 337038 was isolated in 2015 from a human in Europe as part of a global surveillance program. NR-52240 was deposited as sensitive to colistin and tetracycline and resistant to amikacin, ceftazidime, ciprofloxacin, ceftriaxone, cefepime, gentamicin, imipenem, levofloxacin, meropenem, trimethoprim/sulfamethoxazole and ampicillin/sulbactam, and intermediately resistant to tobramycin. NR-52240 lot 70039376 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039376

Manufacturing Date: 25SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹ 1 day in an aerobic atmosphere on Tryptic Soy agar	Growth	Growth
Motility Remel™ Motility Test Medium w/TTC Indicator for 1 day at 37°C in an aerobic atmosphere	Report results	Motile
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (32 µg/mL)
Cefepime	Resistant	Resistant (96 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 μg/mL)
Levofloxacin	Resistant	Resistant (16 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (4 µg/mL)
Tobramycin	Intermediate	Sensitive (≤ 2 µg/mL) ⁴
Tetracycline	Sensitive	Resistant (> 128 µg/mL) ⁵
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>A. baumannii</i> , strain MRSN 337038 (GenBank: VHEY01000100.1)	100% sequence identity to <i>A. baumannii</i> , strain MRSN 337038 (GenBank: VHEY01000100.1)

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Certificate of Analysis for NR-52240

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 337038 was deposited as intermediate to tobramycin, but showed a MIC of ≤ 2 µg/mL (interpreted as sensitive) for tobramycin during QC testing. Testing was performed in duplicate.

⁵A. baumannii, strain MRSN 337038 was deposited as sensitive to tetracycline, but showed a MIC of > 128 µg/mL (interpreted as resistant) for tetracycline during QC testing. Testing was performed in duplicate.



Figure 1: Colony Morphology

/Heather Couch/

Heather Couch

Program Manager or designee, ATCC Federal Solutions

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27 MAY 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 351162

Catalog No. NR-52241

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 351162 was isolated 2011 from a human in Europe as part of a global surveillance program. A. baumannii, strain MRSN 351162 was deposited as sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, imipenem, levofloxacin, meropenem, tetracycline tobramycin and trimethoprim/sulfamethoxazole and intermediately resistant to gentamicin. NR-52241 lot 70042862 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042862

Manufacturing Date: 19MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 37°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (≤ 2 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 2 μg/mL)
Ceftriaxone	Sensitive	Intermediate (12 to 16 µg/mL) ⁴
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Intermediate	Sensitive (≤ 2 μg/mL) ⁴
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 μg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (2 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 351162	A. baumannii, strain MRSN 351162
	(GenBank: VHEX01000060.1)	(GenBank: VHEX01000060.1)
Purity	Growth consistent with expected	Growth consistent with expected
/ days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO2 on Tryptic Soy agar		

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Certificate of Analysis for NR-52241

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

Program Manager or designee, ATCC Federal Solutions

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04 FEB 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 351524

Catalog No. NR-52242

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 351524 was isolated in 2011 from a human blood sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 351524 was deposited as multi-locus sequence type (MLST) ST 113, sensitive to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, imipenem, levofloxacin, meropenem, tetracycline, tobramycin and trimethoprim/sulfamethoxazole and resistant to gentamicin. NR-52242 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70042864

Manufacturing Date: 19MAR2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
Remel [™] Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (8 to 16 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (≤ 2 µg/mL)
Cefepime	Sensitive	Sensitive (8 µg/mL)
Ceftriaxone	Sensitive	Sensitive (8 µg/mL)
Ceftazidime	Sensitive	Sensitive (8 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (1 µg/mL)
Colistin	Sensitive	Sensitive (0.5 µg/mL)
Gentamicin	Resistant	Resistant (24 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 351524	A. baumannii, strain MRSN 351524
	(GenBank: VHEW01000044.1)	(GenBank: VHEW01000044.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and	colony morphology	colony morphology
without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52242

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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26 JAN 2022

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 423159

Catalog No. NR-52243

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 423159 was isolated in 2016 from a human respiratory sample in the United States as part of a global surveillance program. NR-52243 was deposited as multi-locus sequence type (MLST) ST 2, resistant to ampicillin/sulbactam, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin and trimethoprim/sulfamethoxazole, sensitive to colistin and tetracycline, and intermediately resistant to amikacin and cefepime. NR-52243 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039378

Manufacturing Date: 23SEP2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy agar		
Motility	Report results	Non-motile
BBL [™] Motility Test Medium w/TTC Indicator		
for 1 day at 35°C in an aerobic atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Intermediate	Intermediate (24 µg/mL)
Ampicillin/sulbactam	Resistant	Intermediate (16 µg/mL) ⁴
Cefepime	Intermediate	Resistant (32 µg/mL) ⁵
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (0.5 μg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (> 8 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Sensitive	Resistant (96 µg/mL) ⁶
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 423159	A. baumannii, strain MRSN 423159
	(GenBank: VHES01000114.1)	(GenBank: VHES01000114.1)
Purity	Growth consistent with expected	Growth consistent with expected
/ days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52243

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 423159 was deposited as being resistant to ampicillin/sulbactam. Repeated antibiotic susceptibility testing determined that for strain MRSN 423159, the ampicillin/sulbactam MIC is 16 µg per mL, which is interpreted as intermediately resistant. Testing was performed in duplicate.

⁵A. baumannii, strain MRSN 423159 was deposited as being intermediately resistant to cefepime. Repeated antibiotic susceptibility testing determined that for strain MRSN 423159, the cefepime MIC is 32 μg per mL, which is interpreted as resistant. Testing was performed in duplicate.

⁶A. baumannii, strain MRSN 423159 was deposited as being sensitive to tetracycline. Repeated antibiotic susceptibility testing determined that for strain MRSN 423159, the tetracycline MIC is 96 μg per mL, which is interpreted as resistant. Testing was performed in duplicate.

Figure 1: Colony Morphology

/Heather Couch/

Heather Couch

Program Manager or designee, ATCC Federal Solutions

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11 OCT 2021

SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 480561

Catalog No. NR-52244

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 480561 was isolated in 2017 from a human respiratory sample in Asia as part of a global surveillance program. A. baumannii, strain MRSN 480561 was deposited as sensitive to colistin and tetracycline and resistant to amikacin, ampicillin/sulbactam, ceftazidime, ceftriaxone, cefepime, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tobramycin and trimethoprim/sulfamethoxazole. NR-52244 lot 70039380 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039380

Manufacturing Date: 23SEP2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (32 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1490 base pairs)	A. baumannii, strain MRSN 480561	A. baumannii, strain MRSN 480561
	(GenBank: VHEQ01000106.1)	(GenBank: VHEQ01000106.1)
Purity	Growth consistent with expected	Growth consistent with expected
/ days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52244

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX3F AST and E-test strips.

Figure 1: Colony Morphology



/Heather Couch/

Heather Couch

04 FEB 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 480622

Catalog No. NR-52245

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 480622 was isolated in 2017 from a human urine sample in Asia as part of a global surveillance program. A. baumannii, strain MRSN 480622 was deposited as sensitive to colistin and trimethoprim/sulfamethoxazole and resistant to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, tetracycline and tobramycin. NR-52245 70039382 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70039382

Manufacturing Date: 13NOV2020

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream (Figure 1)
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic Soy		
agar		
Motility	Report results	Motile
Remel [™] Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
VITEK® MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (256 µg/mL)
Ampicillin/sulbactam	Resistant	Intermediate (24 µg/mL)⁴
Cefepime	Resistant	Resistant (64 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (≥ 8 µg/mL)
Levofloxacin	Resistant	Resistant (12 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Tetracycline	Resistant	Resistant (256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	100% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 480622	A. baumannii, strain MRSN 480622
	(GenBank: VHEP01000072.1)	(GenBank: VHEP01000072.1)
Purity	Growth consistent with expected	Growth consistent with expected
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Sov agar	colony morphology	colony morphology

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Certificate of Analysis for NR-52245

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

04 FEB 2022

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 489669

Catalog No. NR-52246

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 489669 was isolated in 2014 from a human respiratory sample in Europe as part of a global surveillance program. NR-52246 was deposited as multi-locus sequence type (MLST) ST 2, resistant to amikacin, ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, ciprofloxacin, colistin, gentamicin, imipenem, levofloxacin and meropenem, intermediately resistant to tobramycin and sensitive to colistin, trimethoprim/sulfamethoxazole, and tetracycline. NR-52246 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041143

Manufacturing Date: 13JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and
		cream
Growth at 44°C ± 2°C ¹	Growth	Growth
1 day in an aerobic atmosphere on Tryptic		
Soy agar		
Motility	Report results	Non-motile
BBL™ Motility Test Medium w/TTC Indicator		
for 1 day at 35°C in an aerobic atmosphere		
VITEK® MS (MALDI-TOF)	A. baumannıı	A. baumannıı (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Resistant	Resistant (> 256 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (> 32 µg/mL)
Cefepime	Resistant	Resistant (> 256 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Resistant	Resistant (> 8 µg/mL)
Levofloxacin	Resistant	Resistant (> 32 µg/mL)
Meropenem	Resistant	Resistant (> 8 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tobramycin	Intermediate	Sensitive (2 to 3 µg/mL) ⁴
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1480 base pairs)	A. baumannii, strain MRSN 489669	A. baumannii, strain MRSN 489669
	(GenBank: VHEO01000071.1)	(GenBank: VHEO01000071.1)
Purity	Growth consistent with expected	Growth consistent with expected
/ days at 37°C in an aerobic atmosphere with	colony morphology	colony morphology
and without 5% CO ₂ on Tryptic Soy agar		

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Certificate of Analysis for NR-52246

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴*A. baumannii*, strain MRSN 489669 was deposited as being intermediately resistant to tobramycin. Repeated antibiotic susceptibility testing determined that for strain MRSN 489669, the tobramycin MIC is 2 to 3 μg per mL, which is interpreted as sensitive. Testing was performed in duplicate.

/Heather Couch/ Heather Couch

04 FEB 2022

Program Manager or designee, ATCC Federal Solutions

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SUPPORTING INFECTIOUS DISEASE RESEARCH

Acinetobacter baumannii, Strain MRSN 489678

Catalog No. NR-52247

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

Product Description:

Acinetobacter baumannii (A. baumannii), strain MRSN 489678 was isolated in 2014 from a human wound sample in Europe as part of a global surveillance program. A. baumannii, strain MRSN 489678 was deposited as multi-locus sequence type (MLST) ST 19, sensitive to amikacin, colistin, cefepime, imipenem, meropenem, ampicillin/sulbactam and tetracycline, intermediately resistant to tobramycin and resistant to ceftazidime, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin and trimethoprim/sulfamethoxazole. NR-52247 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70041187

Manufacturing Date: 13JAN2021

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream
Growth at 44° C ± 2° C ¹ 1 day in an aerobic atmosphere on Tryptic Soy	Growth	Growth
agar		
Motility	Report results	Non-motile
Remel™ Motility Test Medium w/TTC		
Indicator for 1 day at 37°C in an aerobic		
atmosphere		
VITEK [®] MS (MALDI-TOF)	A. baumannii	A. baumannii (99.9%)
Antibiotic Susceptibility Profile ^{2,3}		
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (1.5 μg/mL)
Cefepime	Sensitive	Sensitive (≤ 2 µg/mL)
Ceftriaxone	Resistant	Resistant (> 32 µg/mL)
Ceftazidime	Resistant	Resistant (48 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 2 µg/mL)
Colistin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Resistant	Resistant (24 µg/mL)
Imipenem	Sensitive	Sensitive (≤ 1 µg/mL)
Levofloxacin	Resistant	Resistant (8 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (> 4 µg/mL)
Tobramycin	Intermediate	Intermediate (6 to 8 µg/mL)
Tetracycline	Sensitive	Resistant (≥ 256 µg/mL) ⁴
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1470 base pairs)	A. baumannii, strain MRSN 489678	A. baumannii, strain MRSN 489678
	(GenBank: VHEN01000084.1)	(GenBank: VHEN01000084.1)

Certificate of Analysis for NR-52247

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Growth at 44°C differentiates A. baumannii from A. calcoaceticus and A. pittii, which do not grow at 44°C.

²Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

³Antibiotic susceptibility was tested using a combination of VITEK[®]2 GN82, Sensititre GNX2F AST and E-test strips.

⁴A. baumannii, strain MRSN 489678 was deposited as being sensitive to tetracycline. Repeated antibiotic susceptibility testing determined that for strain MRSN 489678, the tetracycline MIC is ≥ 256 μg per mL, which is interpreted as resistant. Testing was performed in duplicate.

/Heather Couch/

Heather Couch

Program Manager or designee, ATCC Federal Solutions

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