

Certificate of Analysis for NR-46410

Staphylococcus aureus, Strain HIP11714

Catalog No. NR-46410

Product Description: Staphylococcus aureus (S. aureus), strain HIP11714 was isolated in 2002 in Michigan, USA from an infected catheter exit site of a 40-year-old adult who had a co-infection with vancomycin-resistant *Enterococcus faecalis* and had been treated with numerous antibiotics, including a six-week course of vancomycin therapy. S. aureus, strain HIP11714 is a vancomycin-resistant S. aureus strain and is reported to be resistant to a number of other antimicrobial agents.

Lot¹: 62280989 Manufacturing Date: 29JAN2014

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology ²	Report results	Circular, low convex, entire, smooth
	·	and yellow (Figure 1)
Motility (wet mount)	Report results	Non-motile
Hemolysis ³	Report results	Non-hemolytic
Biochemical Characterization		
Catalase	Positive	Positive
Coagulase ⁴	Report results	Positive
VITEK [®] 2 Compact (GP card)	Consistent with S. aureus	Consistent with S. aureus
Antibiotic Susceptibility Profile		
VITEK [®] (AST-GP71 card) ⁵		
Beta-lactamase ⁶	Report results	Positive
Cefoxitin screen	Report results	Positive
Benzylpenicillin	Report results	Resistant (≥ 0.5 μg/mL)
Oxacillin	Resistant	Resistant (≥ 4 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 8 μg/mL)
Levofloxacin	Report results	Resistant (≥ 8 μg/mL)
Moxifloxacin	Report results	Resistant (= 4 µg/mL)
Clindamycin (inducible resistance)	Report results	Negative
Erythromycin	Resistant	Resistant (≥ 8 μg/mL)
Clindamycin	Resistant	Resistant (≥ 8 μg/mL)
Quinupristin/dalfopristin	Sensitive	Sensitive (≤ 0.25 μg/mL)
Linezolid	Sensitive	Sensitive (= 1 µg/mL)
Daptomycin	Report results	Sensitive (= 0.25 µg/mL)
Vancomycin	Resistant	Resistant (≥ 32 μg/mL)
Minocycline	Report results	Sensitive (≤ 0.5 μg/mL)
Tetracycline	Report results	Sensitive (= 2 µg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 μg/mL)
Nitrofurantoin	Report results	Sensitive (≤ 16 μg/mL)
_ Rifampicin	Report results	Resistant (≥ 32 µg/mL)
Etest [®] antibiotic test strips ⁷	_	
Chloramphenicol ⁸	Report results	Sensitive (= 3 µg/mL)
Teicoplanin ⁸	Resistant	Resistant (= 256 µg/mL)
Trimethoprim/sulfamethoxazole ⁸	Sensitive	Sensitive (= 0.5 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	Consistent with S. aureus	Consistent with S. aureus
(~ 1500 base pairs)		
Viability (post-freeze) ²	Growth	Growth
- 1.4.2 (p. 301 11 00 2 0)	5.01111	0.0741

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SUPPORTING INFECTIOUS DISEASE RESEARCH

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1S. aureus, strain HIP11714 was deposited to BEI Resources as part of the NARSA collection. NR-46410 was produced by inoculation of the deposited material into Brain Heart Infusion broth with 6 µg/mL vancomycin and grown 22 hours at 37°C in an aerobic atmosphere. Broth inoculum was added to Brain Heart Infusion agar with 6 µg/mL vancomycin kolles which were grown 24 hours at 37°C in an aerobic atmosphere to produce this lot. Purity of this lot was assessed for 7 days under propagation conditions.

²20 hours at 37°C in an aerobic atmosphere on Blood Heart Infusion agar with 6 µg/mL vancomycin

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

⁴4 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)

⁵Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

⁶The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

⁷24 hours at 37°C in an aerobic atmosphere on Mueller Hinton agar

⁸For both chloramphenicol (bioMérieux Etest[®] 412308) and teicoplanin (bioMérieux Etest[®] 412459), a MIC ≤ 8 μg/mL is sensitive, a MIC = 16 μg/mL is intermediate and a MIC ≥ 32 μg/mL is resistant. For trimethoprim/sulfamethoxazole (bioMérieux Etest[®] 412308), a MIC ≤ 2 μg/mL is sensitive and a MIC ≥ 4 μg/mL is resistant.

Figure 1



Date: 01 MAY 2014

Signature: (

Title: Technical Manager, BEI Authentication or designee

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