

Certificate of Analysis for NR-46407

Staphylococcus lugdunensis, Strain VCU148

Catalog No. NR-46407

Product Description: *Staphylococcus lugdunensis* (*S. lugdunensis*), strain VCU148 is of unknown origin.

Lot¹: 70024765 Manufacturing Date: 26APR2019

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology ²	Report results	Circular, convex, entire, smooth and white (Figure 1)
Motility (wet mount)	Report results	Non-motile
Hemolysis ³	Report results	β-hemolytic
Biochemical characterization		1 2 2 7 2 2
Catalase	Positive	Positive
Coagulase ⁴	Report results	Negative
VITEK® MS (MALDI-TOF)	S. lugdunensis	S. lugdunensis (99.9%)
Antibiotic Susceptibility Profile ⁵ VITEK® (AST-GP78 card)		
Beta-lactamase ⁶	Report results	Negative
Cefoxitin screen	Report results	Negative
Benzylpenicillin	Report results	Sensitive (0.12 µg/mL)
Oxacillin	Report results	Sensitive (0.12 µg/mL)
Ceftaroline	Report results	Sensitive (2 µg/mL)
Gentamicin	Report results	Sensitive (0.23 μg/mL) Sensitive (≤ 0.5 μg/mL)
Ciprofloxacin	Report results	Sensitive (≤ 0.5 μg/mL)
Levofloxacin	Report results	Sensitive (3.0.5 µg/mL)
Moxifloxacin	Report results	Sensitive (0.25 µg/mL)
Clindamycin (inducible resistance)	Report results	Positive ⁷
Erythromycin	Report results	Resistant (≥ 8 μg/mL)
Linezolid	Report results	Sensitive (2 µg/mL)
Daptomycin	Report results	Sensitive (2 µg/mL)
Vancomycin	Report results	Sensitive (1 µg/mL)
Minocycline	Report results	Sensitive (1 µg/mL)
Tetracycline	Report results	Sensitive (≤ 1 μg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 µg/mL) ⁸
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Rifampicin	Report results	Sensitive (≤ 0.5 μg/mL)
Trimethoprim/sulfamethoxazole	Report results	Sensitive (≤ 10 µg/mL)
Genotypic Analysis		-
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.8% sequence identity to
(~ 1450 base pairs)	S. lugdunensis, strain VCU148	S. lugdunensis, strain VCU148
, , ,	(GenBank: JIBR01000028.1)	(GenBank: JIBR01000028.1)
Purity (post-freeze) ⁹	Consistent with expected colony morphology	Consistent with expected colony morphology
Viability (post-freeze) ²	Growth	Growth
		1

¹S. *lugdunensis*, strain VCU148 was deposited to BEI Resources as part of the NARSA collection. NR-46407 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown 1 day at 37°C in an aerobic atmosphere to produce this lot.

BEI Resources

www.beiresources.org

E-mail: contact@beiresources.org

Tel: 800-359-7370 Fax: 703-365-2898

²1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar

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

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



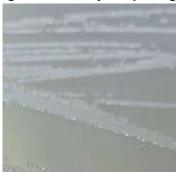
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⁵Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

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

⁷Antibiotic susceptibility testing of S. *lugdunensis*, strainVCU148 performed in duplicate determined clindamycin MIC for S. *lugdunensis*, strain VCU148 as 0.25 µg/ml, which is considered susceptible; however, this strain tested positive for inducible clindamycin resistance (ICR). A positive ICR test is indicative of inducible MLS_b resistance, which confers resistance to macrolides, lincosamides, and type B streptogramin, suggesting that this strain is resistant to clindamycin. Confirmatory antibiotic susceptibility testing is recommended. For additional information, please refer to Mahesh, C. B., B. K. Ramakant and V. S. Jagadeesh. "The Prevalence of Inducible and Constitutive Clindamycin Resistance Among the Nasal Isolates of Staphylococci." <u>J. Clin. Diagn. Res.</u> 7 (2013): 1620-1622. PubMed: 24086856. ⁸MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

Figure 1: Colony Morphology



/Heather Couch/ Heather Couch

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Program Manager or designee, ATCC Federal Solutions

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⁹Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere on Tryptic Soy agar.