

***Klebsiella pneumoniae*, Strain MRSN 15882**

**Catalog No. NR-55521**

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### Product Description:

*Klebsiella pneumoniae* (*K. pneumoniae*), strain MRSN 15882 was isolated in 2012 from a human perianal sample in Europe as part of a global surveillance program. NR-55521 was deposited as a multidrug-resistant strain, sensitive to amikacin, aztreonam, cefepime, ceftazidime, ceftazidime/avibactam, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, ertapenem, gentamicin, imipenem, levofloxacin, meropenem, piperacillin/tazobactam, tigecycline, tobramycin and trimethoprim/sulfamethoxazole and resistant to ampicillin/sulbactam and tetracycline. NR-55521 was produced by inoculation of BEI Resource seed lot 70049641 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: 70077084**

**Manufacturing Date: 09JUL2025**

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| TEST                                                     | SPECIFICATIONS                                                                                         | RESULTS                                                                                          |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Phenotypic Analysis</b>                               |                                                                                                        |                                                                                                  |
| Cellular morphology                                      | Gram-negative rods                                                                                     | Gram-negative rods                                                                               |
| Colony morphology                                        | Report results                                                                                         | Circular, convex, entire, mucoid and cream (Figure 1)                                            |
| Motility (wet mount)                                     | Report results                                                                                         | Non-motile                                                                                       |
| VITEK® MS (MALDI-TOF)                                    | <i>K. pneumoniae</i>                                                                                   | <i>K. pneumoniae</i> (99.9%)                                                                     |
| <b>Antibiotic Susceptibility Profile<sup>1,2</sup></b>   |                                                                                                        |                                                                                                  |
| Amikacin                                                 | Sensitive                                                                                              | Sensitive ( $\leq 2$ µg/mL)                                                                      |
| Ampicillin/sulbactam                                     | Sensitive                                                                                              | Intermediate (16 µg/mL) <sup>3</sup>                                                             |
| Aztreonam                                                | Sensitive                                                                                              | Sensitive ( $\leq 1$ µg/mL)                                                                      |
| Cefepime                                                 | Sensitive                                                                                              | Sensitive ( $\leq 1$ µg/mL)                                                                      |
| Ceftazidime                                              | Sensitive                                                                                              | Sensitive ( $\leq 1$ µg/mL)                                                                      |
| Ceftazidime/avibactam                                    | Sensitive                                                                                              | Sensitive (0.75 µg/mL)                                                                           |
| Ceftolozane/tazobactam                                   | Sensitive                                                                                              | Sensitive (0.75 µg/mL)                                                                           |
| Ceftriaxone                                              | Sensitive                                                                                              | Sensitive ( $\leq 1$ µg/mL)                                                                      |
| Ciprofloxacin                                            | Sensitive                                                                                              | Sensitive (0.125 µg/mL)                                                                          |
| Ertapenem                                                | Sensitive                                                                                              | Sensitive ( $\leq 0.5$ µg/mL)                                                                    |
| Gentamicin                                               | Sensitive                                                                                              | Sensitive ( $\leq 1$ µg/mL)                                                                      |
| Imipenem                                                 | Sensitive                                                                                              | Sensitive (0.125 µg/mL)                                                                          |
| Levofloxacin                                             | Sensitive                                                                                              | Sensitive (1 µg/mL)                                                                              |
| Meropenem                                                | Sensitive                                                                                              | Sensitive ( $\leq 0.25$ µg/mL)                                                                   |
| Piperacillin/tazobactam                                  | Sensitive                                                                                              | Sensitive (16 µg/mL)                                                                             |
| Tetracycline                                             | Resistant                                                                                              | Resistant ( $\geq 16$ µg/mL)                                                                     |
| Tigecycline                                              | Resistant                                                                                              | Resistant ( $\geq 8$ µg/mL) <sup>4</sup>                                                         |
| Tobramycin                                               | Sensitive                                                                                              | Sensitive ( $\leq 1$ µg/mL)                                                                      |
| Trimethoprim/sulfamethoxazole                            | Sensitive                                                                                              | Sensitive ( $\leq 20$ µg/mL)                                                                     |
| <b>Genotypic Analysis</b>                                |                                                                                                        |                                                                                                  |
| Sequencing of 16S ribosomal RNA gene (~ 1430 base pairs) | $\geq 99\%$ sequence identity to <i>K. pneumoniae</i> , strain MRSN 15882 (GenBank: JAGYEL010000098.1) | 99.9% sequence identity to <i>K. pneumoniae</i> , strain MRSN 15882 (GenBank: JAGYEL010000098.1) |

| TEST                                                                                                             | SPECIFICATIONS                                    | RESULTS                                           |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|---------------------------------------------------|
| <b>Purity</b><br>7 days at 37°C in an aerobic atmosphere with and without 5% CO <sub>2</sub> on Tryptic Soy agar | Growth consistent with expected colony morphology | Growth consistent with expected colony morphology |
| <b>Viability</b>                                                                                                 | Growth                                            | Growth                                            |

<sup>1</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

<sup>2</sup>Antibiotic susceptibility was tested using a combination of bioMérieux VITEK®2 GN74 and ETEST®.

<sup>3</sup>*K. pneumoniae*, strain MRSN 15882 was deposited as resistant to ampicillin/sulbactam, but showed a MIC of 8 µg/mL (interpreted as sensitive) for lot 70049640 during QC testing. The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

<sup>4</sup>*K. pneumoniae*, strain MRSN 15882 was deposited as sensitive to tigecycline, but showed a MIC of 4 µg/mL (interpreted as resistant) for lot 70049640 during QC testing during QC testing. MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

**Figure 1: Colony Morphology**



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