**Pseudomonas aeruginosa, Strain MRSN 20176**

**Catalog No. NR-51595**
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**Contributor:**
Multidrug-Resistant Organism Repository and Surveillance Network (MRSN), Bacterial Disease Branch, Walter Reed Army Institute of Research, Silver Spring, Maryland, USA

**Manufacturer:**
BEI Resources

**Product Description:**

**Bacteria Classification:** Pseudomonadaceae, Pseudomonas
**Species:** Pseudomonas aeruginosa

**Strain:** MRSN 20176

**Original Source:** Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 20176 was isolated in 2013 from a human groin in Afghanistan as part of a surveillance program in the United States.

**Comments:** P. aeruginosa, strain MRSN 20176 was deposited as part of the MRSN Pseudomonas aeruginosa Diversity Panel available from BEI Resources as NR-51829. NR-51595 was deposited as multi-locus sequence type (MLST) ST 316, sensitive to meropenem and resistant to aztreonam, cefepime, ceftazidime, ciprofloxacin, gentamicin, imipenem, levofloxacin, piperacillin/tazobactam and tobramycin with intermediate resistance to amikacin. Strain MRSN 20176 is reported to have an aminoglycoside acetyltransferase gene [aac(6’)-Ib; conferring resistance to aminoglycoside antibiotics], an aminoglycoside aminotransferase gene [ant(2”)-1a (aadB); conferring resistance to gentamicin, tobramycin, dibekacin, sisomicin and kanamycin], four aminoglycoside phosphotransferase genes [aph(3’)-Ib, conferring resistance to streptomycin; aph(3’)-Ia (aphA-1), conferring resistance to kanamycin, neomycin, paromomycin, ribostamycin and luidomycin; chromosomal aph(3’)-Ib; conferring resistance to kanamycin A and B, neomycin B and C, butirosin and sulfomycin F5; and aph(6)-Id, conferring resistance to streptomycin], four beta-lactamase genes (blaOXA, blaOXA-10, blaOXA-50, and blavIM11; conferring resistance to beta-lactams), a chloramphenicol acetyltransferase gene (catB7; conferring resistance to chloramphenicol), a chloramphenicol exporter gene (cmIA1; conferring nonenzymatic resistance to chloramphenicol), a florfenicol resistance gene (floR; conferring resistance to florfenicol and chloramphenicol), a fosfomycin-inactivating gene (fosA; conferring resistance to fosfomycin), a dihydropyrazone synthase gene (sul1; conferring resistance to sulfonamides) and a tetracycline efflux gene [tetG; conferring resistance to tetracycline]. The complete genome of P. aeruginosa, strain MRSN 20176 is available (GenBank: RXUW00000000).

**Note:** Environmental and clinical isolates of P. aeruginosa frequently contain viruses known as prophages. During growth some strains from the Pseudomonas aeruginosa Diversity Panel displayed plaques resulting from the activation of their inherent prophages. Please refer to the Certificate of Analysis to determine if phage plaques were observed for this strain.

**Material Provided:**
Each vial contains approximately 0.5 mL of bacterial culture in Tryptic Soy broth supplemented with 10% glycerol.

**Note:** If homogeneity is required for your intended use, please purify prior to initiating work.

**Packaging/Storage:**
NR-51595 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

**Growth Conditions:**

**Media:**
Tryptic Soy broth or Brain Heart Infusion broth or Nutrient broth or equivalent
Tryptic Soy agar with 5% defibrinated sheep blood or Brain Heart Infusion agar or Nutrient agar or equivalent

**Incubation:**
Temperature: 37°C
Atmosphere: Aerobic

**Propagation:**
1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 1 day.

**Citation:**
Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH:

BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
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**Pseudomonas aeruginosa**, Strain MRSN 20176, NR-51595. This strain is part of the *Pseudomonas aeruginosa* Diversity Panel provided by the Multidrug-Resistant Organism Repository and Surveillance Network (MRSN) at the Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD, USA.

**Biosafety Level: 2**

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**References:**

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