Product Information Sheet for NR-56584

Citrobacter braakii, Strain 896955

Catalog No. NR-56584

For research use only. Not for use in humans.

Contributor and Manufacturer:
ATCC®

Product Description:
Bacteria Classification: *Enterobacteriaceae, Citrobacter*
Species: *Citrobacter braakii*
Strain: 896955
Original Source: *Citrobacter braakii (C. braakii)*, strain 896955 was isolated in 2012 from a urine sample of an 82-year-old human in China.
Comments: *C. braakii*, strain 896955 was deposited as part of the Global Priority Superbugs Collection. NR-56584 was deposited as resistant to aztreonam, cefepime, ceftazidime, ceftazidime/avibactam, ceftriaxone, ciprofloxacin, doripenem, levofloxacin, meropenem and piperacillin/tazobactam.

C. braakii is a facultatively anaerobic, Gram-negative bacillus that frequently inhabits human intestines, urine, and wounds as well as animals, water, soil and food.[1,2] In rare cases, it can cause opportunistic infections particularly in neonates and debilitated or immunocompromised individuals.[2,3] *Citrobacter* species are considered of clinical significance due to their innate cephalosporin resistance and ability to become multidrug resistant.[2,3]

Material Provided:
Each vial contains approximately 0.3 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-56584 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:
Nutrient broth or Tryptic Soy broth or equivalent
Nutrient agar or Tryptic Soy agar or Tryptic Soy agar with 5% defibrinated sheep blood 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: *Citrobacter braakii*, Strain 896955, NR-56584."

Biosafety Level: 2
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories (BMBL). Current Edition. Washington, DC: U.S. Government Printing Office.

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References:
1. Brenner, D.J., et al. "Classification of Citrobacteria by DNA Hybridization: Designation of *Citrobacter farmer* sp. nov., *Citrobacter youngae* sp. nov., *Citrobacter braakii* sp.

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www.beiresources.org
E-mail: contact@beiresources.org
Tel: 800-359-7370
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nov., *Citrobacter werkmanii* sp. nov., *Citrobacter sedlakii* sp. nov., and Three Unnamed Citrobacter genomospecies." Int. J. Syst. Bacteriol. 43 (1993): 645-658. PubMed: 8240948.
2. Yao, Y., et al. "Carbapenem- Resistant Citrobacter spp. As an Emerging Concern in the Hospital- Setting: Results from a Genome-Based Regional Surveillance Study." Front. Cell Infect. Microbiol. 11 (2021): e744431. PubMed: 34858870.
3. Pepperell, C. "Low-virulence Citrobacter Species Encode Resistance to Multiple Antimicrobials." Antimicrob. Agents Chemother. 46 (2002): 3555-3560. PubMed: 12384364.

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E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898