# Product Information Sheet for NR-31040

## *Pseudomonas aeruginosa*, Strain Stone No. 130

## Catalog No. NR-31040

**For research use only. Not for use in humans.**

### Contributor:
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### Manufacturer:
BEI Resources

### Product Description:
Bacteria Classification: *Pseudomonadaceae*, *Pseudomonas*
Species: *Pseudomonas aeruginosa*
Strain: Stone no. 130
Original Source: *Pseudomonas aeruginosa* (*P. aeruginosa*), strain Stone no. 130 was isolated in or before 1971 from a burn patient at Grady Memorial Hospital in Atlanta, Georgia, USA.[1,2,3]
Comments: *P. aeruginosa*, strain Stone no. 130 (HMP ID 1223) was deposited as resistant to gentamicin, streptomycin and sulfonamides. Strain Stone no. 130 contains IncP-2 plasmid pMG2, which codes for gentamicin acetyltransferase involved in antibiotic resistance.[3,4] *P. aeruginosa*, strain Stone no. 130 is a reference genome for The Human Microbiome Project (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of *P. aeruginosa*, strain Stone no. 130 has been sequenced (GenBank: AQFN00000000).

*P. aeruginosa* is a Gram-negative, aerobic, rod-shaped bacterium with unipolar motility that thrives in many diverse environments including soil, water, and certain eukaryotic hosts. It is a key emerging opportunistic pathogen in animals, including humans, and plants. While it rarely infects healthy individuals, *P. aeruginosa* causes severe acute and chronic nosocomial infections in immunocompromised or catheterized patients, especially in patients with cystic fibrosis, burns, cancer or HIV.[5,6,7] Infections of this type are often highly antibiotic resistant, difficult to eradicate, and often lead to death. The ability of *P. aeruginosa* to survive on minimal nutritional requirements, tolerate a variety of physical conditions, and rapidly develop resistance during the course of therapy has allowed it to persist in both community and hospital settings.[7,8]

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

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

### Packaging/Storage:
NR-31040 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: *Pseudomonas aeruginosa*, Strain Stone No. 130, NR-31040."

### 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). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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## References:

1. Jacoby, G. A., Personal Communication.
2. HMP ID 1223 (*Pseudomonas aeruginosa*, Strain Stone No. 130)
3. Weinstein, M. J., et. al. "Microbiologic Studies Related to Bacterial Resistance to Gentamicin." J. Infect. Dis. 124 Suppl. (1971): S11-S17. PubMed: 5001619.
4. Jacoby, G. A. "Properties of R plasmids Determining Gentamicin Resistance by Acetylation in *Pseudomonas aeruginosa*." Antimicrob. Agents Chemother. 6 (1974): 239-252. PubMed: 15830469.
5. Silva Filho, L. V., et al. "*Pseudomonas aeruginosa* Infection in Patients with Cystic Fibrosis: Scientific Evidence Regarding Clinical Impact, Diagnosis, and Treatment." J. Bras. Pneumol. 39 (2013): 495-512. PubMed: 24068273.
6. Dettman, J. R., et al. "Evolutionary Genomics of Epidemic and Nonepidemic Strains of *Pseudomonas aeruginosa*." Proc. Natl. Acad. Sci. USA 110 (2013): 21065-21070. PubMed: 24324153.
7. Morita, Y., J. Tomida and Y. Kawamura. "Responses of *Pseudomonas aeruginosa* to Antimicrobials." Front. Microbiol. 4 (2014): 422. PubMed: 24409175.
8. Lister, P. D., D. J. Wolter and N. D. Hanson. "Antibacterial-Resistant *Pseudomonas aeruginosa*: Clinical Impact and Complex Regulation of Chromosomally Encoded Resistance Mechanisms." Clin. Microbiol. Rev. 22 (2009): 582-610. PubMed: 19822890.



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