Paenibacillus barengoltzii, Strain G22

Catalog No. NR-36439

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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Paenibacillaceae*, *Paenibacillus*
Species: *Paenibacillus barengoltzii*
Strain: G22
Original Source: *Paenibacillus barengoltzii (P. barengoltzii)*, strain G22 was isolated from mouse intestine in the United States.[1]
Comments: The complete genome of *P. barengoltzii*, strain G22 has been sequenced (GenBank: ASSZ00000000).

P. barengoltzii is a Gram-positive, strictly aerobic, spore-forming, rod-shaped bacterium that is motile by means of peritrichous flagella.[2] Strains of *P. barengoltzii* have been isolated from geothermal regions, spacecraft assembly equipment and human clinical samples.[2,3] *P. barengoltzii* enzymes may have relevance as insecticides and for food production.[4-7]

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-36439 was packaged aseptically in screw-capped plastic 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 equivalent
Nutrient agar or equivalent
Incubation:
Temperature: 30°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 tubes and plate at 30°C for 2 to 3 days.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Paenibacillus barengoltzii*, Strain G22, NR-36439."

Biosafety Level: 1
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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:
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2. Osman, S., M. Satomi and K. Venkateswaran. "*Paenibacillus pasadenensis* sp. nov. and *Paenibacillus*

barengoltzii sp. nov., Isolated from a Spacecraft Assembly Facility." Int. J. Syst. Evol. Microbiol. 56 (2006): 1509-1514. PubMed: 16825621.

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4. Fu, X., et al. "An Acidic, Thermostable Exochitinase with β-N-acetylglucosaminidase Activity from *Paenibacillus barengoltzii* Converting Chitin to N-acetyl Glucosamine." Biotechnol. Biofuels 7 (2014): 174. PubMed: 25550712.
5. Liu, J., et al. "Gene Cloning, Functional Expression and Characterisation of a Novel Type I Pullulanase from *Paenibacillus barengoltzii* and its Application in Resistant Starch Production." Protein Expr. Purif. 121 (2016): 22-30. PubMed: 26763762.
6. Yang, S., et al. "Cloning, Expression, Purification and Application of a Novel Chitinase from a Thermophilic Marine Bacterium *Paenibacillus barengoltzii*." Food Chem. 192 (2016): 1041-1048. PubMed: 26304445.
7. Shi, R., et al. "Biochemical Characterization of a Novel L-Asparaginase from *Paenibacillus barengoltzii* being Suitable for Acrylamide Reduction in Potato Chips and Mooncakes." Int. J. Biol. Macromol. 96 (2017): 93-99. PubMed: 27919811.

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