Product Information Sheet for NR-704

Burkholderia thailandensis, Strain E264

Catalog No. NR-704
(Derived from ATCC® 700388™)

For research only. Not for human use.

Contributor:
ATCC®

Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Burkholderiaceae*, *Burkholderia*
Species: *Burkholderia thailandensis* (formerly *Burkholderia pseudomallei*-like or *Burkholderia pseudomallei*, Ara+ Biotype)[1,2]
Type Strain: E264
Original Source: *Burkholderia thailandensis* (*B. thailandensis*), strain E264 is an environmental isolate obtained from a rice field soil sample in central Thailand in 1994 by N. J. White.[3,4]
Comments: NR-704 was produced from ATCC® 700388™, which was deposited to the ATCC® in 1997 by Dr. D. DeShazer and Dr. D. E. Woods from the University of Calgary, Department of Microbiology and Infectious Disease, Alberta, Canada. A preparation of *B. thailandensis*, strain E264 produced from material deposited with BEI Resources in 2008 is available as BEI Resources NR-9907.

B. thailandensis are saprophytic motile, aerobic, Gram-negative coccobacilli. *B. thailandensis* is genetically similar to both *B. mallei* and *B. pseudomallei* but lacks at least one pathogenicity island and is an avirulent species. In addition to its avirulence it can be differentiated from *B. pseudomallei* by some or all of the following: biochemical differences (assimilation of L-arabinose, 5-keto-gluconate, and adonitol, and no utilization of erythritol and dulcitol); differences in the 16S sequence (15 nucleotide dissimilarities); differences in lipopolysaccharide composition; and colony morphology on Ashdown's selective media.[1,2] *B. thailandensis* is commonly found in Southeast Asia (central Thailand in particular) and some isolates have been obtained from northern Australia.[5] Typical *B. thailandensis* are resistant to aminoglycosides but sensitive to tetracycline, ceftazidine and trimethoprim.[1]

The entire genome of *B. thailandensis*, strain E264 has been sequenced[6] and is available at *Burkholderia thailandensis*, strain E264 genome project.

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

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

Packaging/Storage:
NR-704 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 or 37°C
Atmosphere: Aerobic
Propagation:
1. Keep vial frozen until ready for use; thaw slowly.
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 30°C or 37°C for 48 hours.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Burkholderia thailandensis*, Strain E264, NR-704."

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

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References:

1. Brett, P. J., D. Deshazer and D. E. Woods. "*Burkholderia thailandensis* Sp. Nov., a *Burkholderia pseudomallei*-Like Species." Int. J. Syst. Bacteriol. 48 Pt 1 (1998): 317-320. PubMed: 9542103.
2. Woods, D. E. "Species versus Biotype Status." J. Clin. Microbiol. 37 (1999): 3786-3787. PubMed: 10610379.
3. Brett, P. J., D. Deshazer and D. E. Woods. "Characterization of *Burkholderia pseudomallei* and *Burkholderia pseudomallei*-Like Strains." Epidemiol. Infect. 118 (1997): 137-148. PubMed: 9129590.
4. Wuthiekanun, V., et al. "Biochemical Characteristics of Clinical and Environmental Isolates of *Burkholderia pseudomallei*." J. Med. Microbiol. 45 (1996): 408-412. PubMed: 8958243.
5. Gee, J. E., et al. "Recovery of a *Burkholderia thailandensis*-Like Isolate from an Australian Water Source." BMC Microbiol. 8 (2008): 54. PubMed: 18384685.
6. Kim, H. S., et al. "Bacterial Genome Adaptation to Niches: Divergence of the Potential Virulence Genes in Three *Burkholderia* Species of Different Survival Strategies." BMC Genomics. 6 (2005): 174. PubMed: 16336651.

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