

Burkholderia thailandensis, Strain DW503

Catalog No. NR-4075

Product Description: *Burkholderia thailandensis* (*B. thailandensis*) are saprophytic motile, aerobic, Gram-negative coccobacilli. Strain DW503 is an allelic exchange strain of an environmental isolate, strain E264 (type strain for *Burkholderia thailandensis*), which was isolated from a rice field soil sample in central Thailand.

Lot¹: 57961682

Manufacturing Date: 27FEB2008

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Analytical profile index (API 20 NE) ³ L-Arabinose ⁴ 5-Keto-gluconate ⁵ Adonitol ⁵ Erythritol ⁴ Dulcitol ⁴ Antibiotic resistance ⁶ Amikacin Gentamicin Kanamycin Streptomycin Tetracycline Trimethoprim	Gram-negative rod Report results Consistent with <i>Burkholderia</i> Positive Positive Positive Negative Negative Report results Susceptible Susceptible Resistant Susceptible Susceptible	Gram-negative rod Circular, convex, entire, opaque Consistent with <i>Burkholderia</i> Positive Negative Negative Negative Susceptible Susceptible Susceptible Resistant Susceptible Resistant
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1400 bp) Microbial genotyping (DiversiLab™ Bacterial Barcodes) ⁷	Identical to GenBank: EF535235.1 Consistent with <i>B. thailandensis</i> Report results	Identical to GenBank: EF535235.1 Consistent with <i>B. thailandensis</i> Similar to <i>B. thailandensis</i> (90%) Similar to <i>B. mallei</i> (80%) Similar to <i>B. pseudomallei</i> (63%) Similar to <i>B. cepacia</i> (58%)
PCR Assay of Extracted DNA 16S ribosomal RNA gene	~ 1500 bp amplicon	~ 1500 bp amplicon
Viability (post-freeze)⁸	Growth	Growth

¹NR-4075 was produced by inoculation of the deposited material into LB Broth and grown 48 hours at 30°C and aerobic atmosphere. Broth inoculum was added to Kolles and incubated 48 hours at 30°C and aerobic atmosphere to produce this lot.

²48 hours at 30°C on LB Agar

³*B. thailandensis* is not in the API database, but the API profile is consistent with other *Burkholderia* species.

⁴*B. thailandensis* utilizes L-arabinose and does not utilize erythritol and dulcitol as carbon sources. This distinguishes it from *B. pseudomallei* which does not utilize L-arabinose but does utilize erythritol and Dulcitol as carbon sources.

⁵The parent strain, E264 is reported to be positive for utilization of 5-keto-gluconate and adonitol (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). However, BEI Resources found NR-4075 to be negative for utilization of 5-keto-gluconate and adonitol.

⁶The parent strain, E264 is reported to be resistant to aminoglycosides (amikacin, gentamicin, kanamycin, streptomycin) and susceptible to tetracycline and trimethoprim. Due to allelic exchange this strain is susceptible to amikacin, gentamicin, kanamycin. Burtnick, M., et al. "Identification of the Acid Phosphatase (*acpA*) Gene Homologues in Pathogenic and Non-Pathogenic *Burkholderia* Spp. Facilitates *TnphoA* Mutagenesis." *Microbiology*. 147 (2001): 111-120. PubMed: 11160805. BEI Resources found NR-4075 to be resistant to trimethoprim.

⁷Versalovic, J., et al. "Genomic Fingerprinting of Bacteria using Repetitive Sequence-Based Polymerase Chain Reaction." *Meth. Mol. Cell Biol.* 5 (1994): 25-40. PubMed: 1762913.

⁸48 hours at 30°C in LB Broth

Date: 24 FEB 2009

Signature: Signature on File

Title: Technical Manager, BEI Authentication or designee

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