Product Information Sheet for NR-44269

Mycobacterium kansasii, Strain 824

Catalog No. NR-44269

For research use only. Not for human use.

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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Mycobacteriaceae*, *Mycobacterium*
Species: *Mycobacterium kansasii*
Strain: 824
Original Source: *Mycobacterium kansasii* (*M. kansasii*), strain 824 was isolated in 2012 from human sputum at the University of Texas Health Science Center at Tyler, Tyler, Texas, USA.[1]
Comments: *M. kansasii*, strain 824 is part of the Top Priority Nontuberculosis Mycobacteria Whole Genome Sequencing Project at the Genomic Sequencing Center for Infectious Diseases (GSCID) at University of Maryland School of Medicine. The complete genome sequence of *M. kansasii*, strain 824 is available (GenBank: CP009483).

M. kansasii is an acid-fast, Gram-positive, non-motile, photochromogenic (yellow), rod-shaped and slow-growing nontuberculous mycobacterium frequently found in aquatic environments.[2] It has traditionally been considered the most virulent nontuberculous mycobacteria and the one that most closely resembles *Mycobacterium tuberculosis*; however, *M. kansasii* rarely causes disease in humans, is generally considered noncontagious, and has a definite geographic distribution most common to the southern U.S.[3,4] Tap water is likely a major reservoir for *M. kansasii* causing human infection.[3,5] Immunosuppression or immunodeficiency, abnormal skin or skin injury, and exposure to contaminated water are commonly associated with *M. kansasii* infection.[3] It is usually susceptible to several antibiotics and can be treated effectively with a multidrug regimen.[3-5]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Middlebrook 7H9 broth with ADC enrichment supplemented with 10% glycerol.

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

Packaging/Storage:
NR-44269 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:
Middlebrook 7H9 broth with ADC enrichment or equivalent
Middlebrook 7H10 agar with OADC enrichment or Lowenstein-Jensen agar or equivalent
Incubation:
Temperature: 37°C
Atmosphere: Aerobic with 5% CO_2
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 to 6 weeks.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Mycobacterium kansasii*, Strain 824, NR-44269."

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.

This publication recommends that practices with this agent include the use of respiratory protection and the implementation of specific procedures and use of specialized equipment to prevent and contain aerosols.

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References:

1. Ordway, D., Personal Communication.
2. Wang, J., et al. "Insights on the Emergence of *Mycobacterium tuberculosis* from the Analysis of *Mycobacterium kansasii*." Genome Biol. Evol. 7 (2015): 856-870. PubMed: 25716827.
3. Breathnach, A., et al. "Cutaneous *Mycobacterium kansasii* Infection: Case Report and Review." Clin. Infect. Dis. 20 (1995): 812-817. PubMed: 7795078.
4. Johnson, M. M. and J. A. Odell. "Nontuberculous Mycobacterial Pulmonary Infections." J. Thorac. Dis. 6 (2014): 210-220. PubMed: 24624285.
5. Evans, S. A., et al. "Pulmonary *Mycobacterium kansasii* Infection: Comparison of the Clinical Features, Treatment and Outcome with Pulmonary Tuberculosis." Thorax 51 (1996): 1248-1252. PubMed: 8994524.
6. DeGroote, M. A. "Whole Genome Sequencing of Top Priority Nontuberculous Mycobacteria Used in Preclinical Compound Testing at Colorado State University." (2012) <http://gscid.igs.umaryland.edu/doc/whitepapers/whole_genome_sequencing_of_top_priority_nontuberculous_mycobacteria_used_in_preclinical_compound_testing_at_colorado_state_university.pdf>

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