Product Information Sheet for NR-49086

Mycobacterium iranicum, Strain M05T

Catalog No. NR-49086

For research use only. Not for use in humans.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Mycobacteriaceae*, *Mycobacterium*
Species: *Mycobacterium iranicum*
Strain: M05T (also referred to as DSM 45541^T, JCM 17461^T and CCUG 62053^T)[1]
Original Source: *Mycobacterium iranicum (M. iranicum)*, strain M05T was isolated in 2008 from the bronchoalveolar lavage of a 60-year-old female patient with chronic pulmonary disease in Iran.[1]
Comments: *M. iranicum,* strain M05T was deposited to BEI Resources as the type strain for the species.[1] The complete genome of *M. iranicum*, strain M05T is available (GenBank: LQPC00000000).

M. iranicum is an acid-fast, Gram-positive, non-motile, scotochromogenic species of rapidly growing nontuberculous mycobacteria.[1] *M. iranicum* is characterized by unique 16S ribosomal RNA (rRNA), heat-shock protein 65 kDa *(hsp65)* and RNA polymerase beta subunit (*rpoB*) genes and a distinct mycolic acid pattern by high pressure liquid chromatography (HPLC) and a polymerase chain reaction restriction analysis (PRA) pattern of the *hsp65*.[1] *M. iranicum* is an opportunistic pathogen isolated from various clinical specimens including sputum, soft-tissue, blood and cerebrospinal fluid from both immunocompromised and immunocompetent patients from Iran, Greece, Italy, Netherlands, Sweden, France and the United States.[1,2,3,4] Genomic analysis of *M. iranicum* shows close relatedness to environmental mycobacteria, both of which contain virulence factors associated with mobile genetic elements, suggesting *M. iranicum* is an environmental bacteria that has evolved into a human pathogen as a result of horizontal gene transfer.[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-49086 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:
Middlebrook 7H9 broth with Middlebrook ADC enrichment or equivalent
Middlebrook 7H10 agar with Middlebrook 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 tubes, slant and/or plate at 37°C for 4 to 7 days.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Mycobacterium iranicum*, Strain M05T, NR-49086."

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.

Disclaimers:
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References:

1. Shojaei, H., et al. "*Mycobacterium iranicum* sp. nov., a Rapidly Growing Scotochromogenic Species Isolated from Clinical Specimens on Three Different Continents." Int. J. Syst. Evol. Microbiol. 63 (2013): 1383-1389. PubMed: 22843713.
2. Balakrishnan, N., et al. "Isolation of a Novel Strain of *Mycobacterium iranicum* from a Woman in the United States." J. Clin. Microbiol. 51 (2013): 705-707. PubMed: 23224096.
3. Hashemi-Shahraki, A., et al. "*Mycobacterium iranicum* Infection in HIV-Infected Patient, Iran." Emerg. Infect. Dis. 19 (2013): 1696-1697. PubMed: 24050557.
4. Grandjean Lapierre, S., A. Toro and M. Drancourt. "*Mycobacterium iranicum* Bacteremia and Hemaphagocytic Lymphohistiocytosis: A Case Report." BMC Res. Notes 10 (2017): 372. PubMed: 28789664.
5. Tan, J. L., et al. "Comparative Genomic Analysis of *Mycobacterium iranicum* UM_TJL Against Representative Mycobacterial Species Suggests its Environmental Origin." Sci. Rep. 4 (2014): 7169. PubMed: 25417557.

Support Provided by NIAID