Product Information Sheet for NR-49356

Mycobacterium tuberculosis, Strain XTB13-128

Catalog No. NR-49356

For research use only. Not for human use.

Contributor:
Alena Skrahina, M.D., Ph.D., D.Sc., Deputy Director, Republican Research and Practical Centre for Pulmonology and Tuberculosis, Minsk, Belarus

Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Mycobacteriaceae, Mycobacterium*
Species: *Mycobacterium tuberculosis*
Strain: XTB13-128
Original Source: *Mycobacterium tuberculosis* (*M. tuberculosis*), strain XTB13-128 was isolated in 2011 from the sputum of a patient with tuberculosis in the Republic of Belarus.[1]
Comments: *M. tuberculosis*, strain XTB13-128 was deposited as a drug-susceptible strain and is part of the *Mycobacterium tuberculosis* TB Antibiotic Resistance Catalog (TB-ARC) Belarus Initiative at the Broad Institute.[1] The complete genome sequence of *M. tuberculosis*, strain XTB13-128 is available (GenBank: JLKW00000000).

M. tuberculosis is an acid-fast, Gram-positive, non-motile, rod-shaped aerobic bacterium. It is the causative agent of tuberculosis and is responsible for more morbidity in humans than any other bacterial disease. *M. tuberculosis* is a slow-growing pathogen with a thick, lipid-rich cell wall, lending the bacilli an unusual propensity to shut down their metabolism in the face of adverse conditions and enter a latent phase in which they display phenotypic resistance to antibiotic therapy. The primary focus of infection is the lungs, with tuberculosis being spread by infectious aerosols produced by coughing. The spread of multi-drug resistant (MDR) and extensively drug-resistant (XDR) tuberculosis is a major medical and public health concern.[2-6]

Material Provided:
Each vial contains approximately 0.7 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-49356 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 equivalent
Incubation:
Temperature: 37°C
Atmosphere: Aerobic (with or without 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 and plate at 37°C for 2 to 6 weeks.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Mycobacterium tuberculosis*, Strain XTB13-128, NR-49356."

Biosafety Level: 3
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.

Disclaimers:
You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their

BEI Resources
www.beiresources.org
E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898

suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:

1. Skrahina, A., Personal Communication.
2. Cole, S. T., et al. "Deciphering the Biology of *Mycobacterium tuberculosis* from the Complete Genome Sequence." Nature 393 (1998): 537-544. PubMed: 9634230.
3. Dye, C. "Doomsday Postponed? Preventing and Reversing Epidemics of Drug-Resistant Tuberculosis." Nat. Rev. Microbiol. 7 (2009): 81-87. PubMed: 19079354.
4. Chan, E. D. and M. D. Iseman. "Multidrug-Resistant and Extensively Drug-Resistant Tuberculosis: A Review." Curr. Opin. Infect. Dis. 21 (2008): 587-595. PubMed: 18978526.
5. Balganesh, T. S., P. M. Alzari and S. T. Cole. "Rising Standards for Tuberculosis Drug Development." Trends Pharmacol. Sci. 29 (2008): 576-581. PubMed: 18799223.
6. Murphy, D. J. and J. R. Brown. "Novel Drug Target Strategies against *Mycobacterium tuberculosis*." Curr. Opin. Microbiol. 11 (2008): 422-427. PubMed: 18801459.

Support Provided by NIAID