Plasmid pMRLB.15 Containing Gene Rv2031c (Protein HspX) from *Mycobacterium tuberculosis*

Catalog No. NR-13274

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Contributor and Manufacturer:

NIH - TB Vaccine Testing and Research Materials Contract

Product Description:

NR-13274 is a recombinant expression vector containing *Mycobacterium tuberculosis* gene Rv2031c, which encodes HspX, a heat shock protein (small heat shock protein, HSP20, family member) localized in the inner membrane.[1,2] Gene Rv2031c was amplified by PCR and cloned into pET15b for expression in *Escherichia coli.* The gene was cloned without a signal sequence. The expressed protein is histidine-tagged and has an observed molecular weight of 16 kDa. The expected purified protein yield from a one liter culture is approximately 5 mg.

A plasmid map of NR-13274 is attached.

Note: Plasmid pMRLB.15 contains the gene required for ampicillin (Ap) resistance. The recommended concentration of Ap in culture is 100 µg/mL.

Material Provided:

Each vial contains 1 µg of plasmid DNA in 10 mM Tris-HCl, pH 7.5. The concentration is shown on the Certificate of Analysis.

Packaging/Storage:

NR-13274 was packaged aseptically in cryovials. The product is provided frozen on dry ice and should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be minimized.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Plasmid pMRLB.15 Containing Gene Rv2031c (Protein HspX) from *Mycobacterium tuberculosis*, NR-13274."

Biosafety Level: 1

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. Cole, S. T., et al. "Deciphering the Biology of *Mycobacterium tuberculosis* from the Complete Genome Sequence." Nature 393 (1998): 537-544. PubMed: 9634230. Erratum in: Nature 396 (1998): 190-198.
2. MycoBrowser: Gene Rv2031c

Support Provided by NIAID

BEI Resources
www.beiresources.org

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

pMRLB15 – Rv2031c– hspX, 16 kDA, alpha crystallin in pET15b