

***Mycobacterium tuberculosis*, Strain HN878, Cell Membrane Fraction**

**Catalog No. NR-14833**

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**Contributor:**

BEI Resources or NIH - TB Vaccine Testing and Research Materials Contract

**Manufacturer:**

Karen Dobos, Ph.D., Colorado State University, Fort Collins, Colorado, USA and NIH - TB Vaccine Testing and Research Materials Contract

**Product Description:**

NR-14833 is a preparation of the cell membrane fraction of *Mycobacterium tuberculosis* (*M. tuberculosis*), strain HN878, and contains the cytoplasmic membrane and components of the outer lipid layer.

The culture was grown to late-log phase in glycerol-alanine-salts medium, washed with PBS and inactivated by gamma irradiation. The bacilli were suspended at a concentration of 2 g/mL in PBS containing 8 mM EDTA, DNase, RNase, and a proteinase inhibitor tablet, and broken in a French Press pressure cell at 4°C. Unbroken cells were removed by low speed (3,000 x g) centrifugation. The cell wall was isolated by centrifugation at 27,000 x g. The supernatant was subjected to a 100,000 x g centrifugation for four hours. The resulting membrane pellet was washed with PBS, then suspended and dialyzed in 10 mM ammonium bicarbonate. Protein content was determined using the BCA protein assay.

**Material Provided:**

Each vial of NR-14833 contains approximately 1 mg of cell membrane fraction from *M. tuberculosis*, strain HN878 provided in 10 mM ammonium bicarbonate.

**Packaging/Storage:**

NR-14833 was packaged aseptically in cryovials. The product is provided frozen on dry ice and should be stored at -80°C or colder immediately upon arrival. Freeze-thaw cycles should be avoided.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Mycobacterium tuberculosis*, Strain HN878, Cell Membrane Fraction, NR-14833."

**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/bmbli5/index.htm](http://www.cdc.gov/biosafety/publications/bmbli5/index.htm).

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**References:**

1. Lee, B.-Y., S. A. Hefta and P. J. Brennan. "Characterization of the Major Membrane Protein of Virulent *Mycobacterium tuberculosis*." Infect. Immun. 60 (1992): 2066-2074. PubMed: 1563797.
2. 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.

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