Mycobacterium tuberculosis, Strain H37Rv, Purified Phosphatidylinositol Mannosides 1 & 2 ($PIM_{1,2}$)

Catalog No. NR-14846

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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-14846 is a preparation of the purified phosphatidylinositol mannosides 1 & 2 ($PIM_{1,2}$) cell wall glycolipids of *Mycobacterium tuberculosis*, strain H37Rv. The soluble organic fraction was extracted from irradiated cells, dried and titrated with cold acetone. The acetone-insoluble fraction was then applied to preparative thin-layer chromatography plates in a solvent system of chloroform/methanol/water (60:30:6). PIMs were purified from the dried matrix using 40% methanol in chloroform.

Material Provided:

Each vial contains approximately 500 µg of dried, purified $PIM_{1,2}$ from *Mycobacterium tuberculosis*, strain H37Rv.

Note: $PIM_{1,2}$ is soluble in chloroform/methanol (2:1). DMSO can also be used depending on the downstream application.

Packaging/Storage:

NR-14846 was packaged aseptically in glass vials. 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 H37Rv, Purified Phosphatidylinositol Mannosides 1 & 2 ($PIM_{1,2}$), NR-14846."

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 (BMBL). Current Edition. Washington, DC: U.S. Government Printing Office.

Disclaimers:

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References:

1. Brennan, P. and C. E. Ballou. "Biosynthesis of Mannophosphoinositides by *Mycobacterium phlei*. Enzymatic Acylation of Dimannophosphoinositides." J. Biol. Chem. 243 (1968): 2975-2984. PubMed: 4297467.
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. PubMed: 9634230.
3. Khoo, K. H., et al. "Structural Definition of Acylated Phosphatidylinositol Mannosides from *Mycobacterium tuberculosis*: Definition of a Common Anchor for Lipomannan and Lipoarabinomannan." Glycobiology 5 (1995): 117-127. PubMed: 7772860.

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