Product Information Sheet for NR-14846

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

Catalog No. NR-14846

This reagent is the tangible property of the U.S. Government.

For research use only. Not for use in humans.

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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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.

Support Provided by NIAID

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