6,6‘ – Trehalose Dimycolate

(Cord Factor, source: *Mycobacterium bovis*, „Bacillus Calmette Guérin„)

6,6'-dimycoloyl-α-D-trehalose

(Mycobacterium bovis, BCG)

Cat. No.	Size
ROB-3096-01	1 mg
ROB-3096-02	10 mg

Quality Control:
Purity: LC, Single Spot
Quality Control: MALDI-TOF
Endotoxin Content:
LAL Test, <10^{-4} EU /µg
Nonpyrogenic

Storage Conditions:
Store at + 4 °C in the dark.

Recommended Usage:
For application as immunoadjuvant, use 100 µg to 1 mg TDM / ml.

FOR RESEARCH USE ONLY.
NOT FOR USE IN MEDICATION

Used as an immunoadjuvant for the induction and non-specific stimulation of antibody production against unrelated antigens. This results in an increased host resistance against infections and cancer, in the potentiation of vaccine immunogeneticity and in an increase of DNA vaccination efficacy.

Description:

- 6'6-Trehalose dimycolate (TDM) exhibits strong immunomodulatory effects.
- Greatly enhances the efficacy of DNA vaccination, shown to facilitate single-shot prime-boost DNA vaccines (3).
- TDM from *M. bovis* has a lower granulomatogenic activity as compared to TDM from M. tuberculosis (5).
- Preinjection of TDM followed by antigen injection triggers elevated antibody production (2).
- Stimulates macrophages, enhances non-specific immune responses and stimulates the antigen-presenting ability (7, 10).
- Exhibits anti-tumor activity (2).
- Induces the production of both Th1-type and Th2-type cytokines (IFN-alpha, IFN-beta, IFN-gamma, IL-4, IL-6, IL-10, IL-12,TNF-alpha) as well as chemokines (MCP-1, MIP-1alpha, IL-8) (4, 6, 8, 9,11).
- Upregulates MHC class II expression on macrophages and causes expansion of Th1 cells (9).
- TDM is non-toxic on organisms and serves as protection against killing from macrophages. TDM becomes antigenic and highly toxic, when exposed to lipid surfaces.

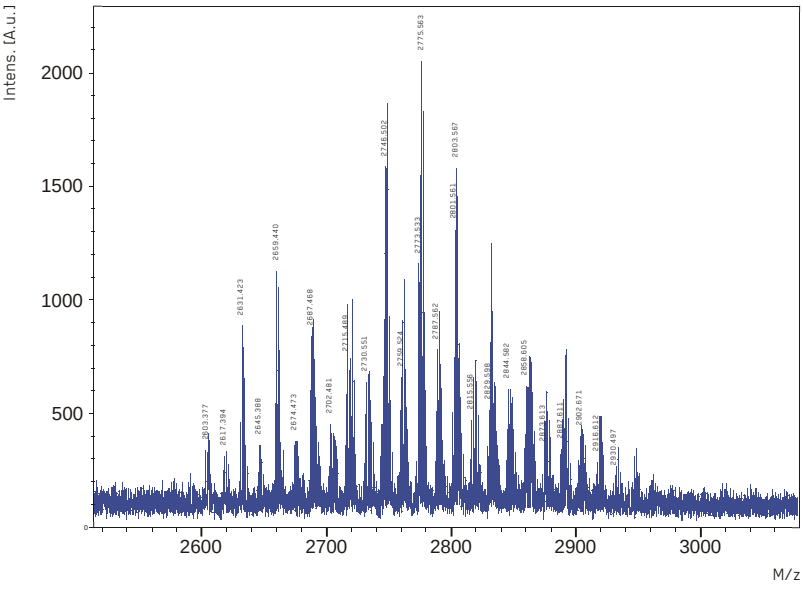

Figure 1: 6,6' Trehalose Dimycolate (BCG), detailed view of the MALDI-TOF spectrum with all relevant peaks for TDM (BCG) quality control. Shown is the range of peaks within an MW range of 2600 to 3000. Maldi-TOF analysis was performed as described in Fujita et al., Microbiology. 2005 Oct;151(Pt 10):3403-16.

References:

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