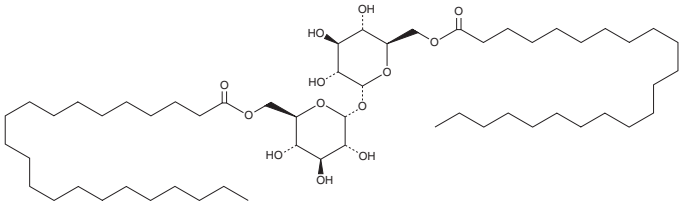
PRODUCT INFORMATION

Trehalose 6,6'-Dibehenate

Item No. 37911

CAS Registry No.: 66758-35-8
Formal Name: 6-docosanoate 6-O-(1-oxodocosyl)-α-D-glucopyranosyl α-D-glucopyranoside
Synonyms: TDB, Trehalose Dibehenate, 22:0 Trehalose
MF: $C_{56}H_{106}O_{13}$
FW: 987.4
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Trehalose 6,6'-dibehenate (TDB) is supplied as a solid. A stock solution may be made by dissolving the TDB in the solvent of choice, which should be purged with an inert gas. TDB is slightly soluble in DMSO and dimethyl formamide.

Description

TDB is a synthetic glycolipid and derivative of trehalose 6,6′-dimycolate (TDM), also known as mycobacterial cord factor.[1] It binds to a fusion protein of mouse macrophage-inducible C-type lectin (Mincle) and human IgG1 Fc in a cell-free assay when used at a concentration of 10 µg/ml. TDB (5 µg/ml) induces nitric oxide (NO) and G-CSF production in mouse bone marrow macrophages in a Mincle-dependent manner. Liposomes containing TDB and dimethyldioctadecylammonium (DDA; Item No. 26120) as adjuvants and the mycobacterial lipid antigens diacylated sulfoglycolipid (Ac_2SGL) and phosphatidyl-*myo*-inositol dimannoside (PIM_2) decrease spleen bacterial load and the number of lung and spleen lesions in a guinea pig model of *M. tuberculosis* infection.[2]

References

1. Huber, A., Kallerup, R.S., Korsholm, K.S., *et al.* Trehalose diester glycolipids are superior to the monoesters in binding to Mincle, activation of macrophages *in vitro* and adjuvant activity *in vivo*. *Innate Immun.* **22(6)**, 405-418 (2016).
2. Larrouy-Maumus, G., Layre, F., Clark, S., *et al.* Protective efficacy of a lipid antigen vaccine in a guinea pig model of tuberculosis. *Vaccine* **35(10)**, 1395-1402 (2017).

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