

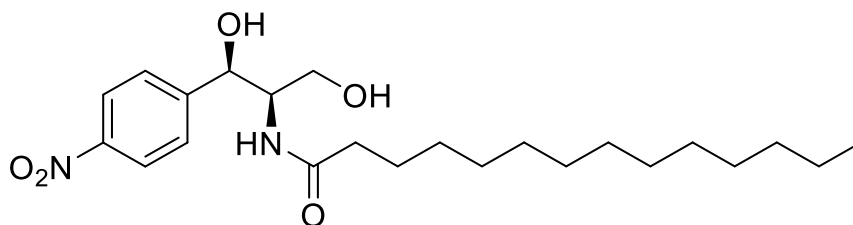
## 1R,2R-B13 (Ceramide Inhibitor)

Catalog number: B-0042

Molecular Formula:  $C_{23}H_{38}N_2O_5$

MW: 422.56

CAS: 35922-06-6



Alternate Name: (N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl]-tetradecanamide)

Solubility:  $CHCl_3$ , DMSO, acetonitrile, >1 mg/mL

Storage and Handling: Store dry at  $-20\text{ }^{\circ}\text{C}$ . Stock solutions should be stored frozen ( $-20\text{ }^{\circ}\text{C}$  or below)

Background: Ceramides are bioactive sphingolipids which induce apoptosis in cells. Ceramidases, which hydrolyze the fatty acid chain, keep ceramide levels in check and have been proposed as a target for small-molecule inhibitors for anti-cancer therapy. B13 (or D-NMAPPD) is a potent ceramidase inhibitor which causes apoptosis in several cell lines including colorectal, HL60, melanoma, and keratinocytes.

References: 1) A. Bielawska, C.M. Linardic, Y. Hannun "Ceramide-mediated biology. Determination of structural and stereospecific requirements through the use of N-acyl-phenylaminoalcohol analogs" *J. Biol. Chem.*, 1992, *267*, 18493-7. 2) M. Raisova, G. Goltz, *et al.* "Bcl-2 overexpression prevents apoptosis induced by ceramidase inhibitors in malignant melanoma and HaCaT keratinocytes" *FEBS Letters* 2002, *516*, 47-52. 3) Bhabak, Krishna P.; Kleuser, Burkhard "Effective inhibition of acid and neutral ceramidases by novel B-13 and LCL-464 analogues" *Bioorganic & Medicinal Chemistry* 2013, *21*, 874-882.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

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Technical Data Sheet, Rev 2,10-12-18 – For research use only. Not intended for diagnostic or therapeutic use.

