

Product Data Sheet

Product Name: Phytantriol

Cat. No.: GC91939

Chemical Properties

Cas. No. 74563-64-7

Chemical Name 3,7,11,15-tetramethyl-1,2,3-hexadecanetriol

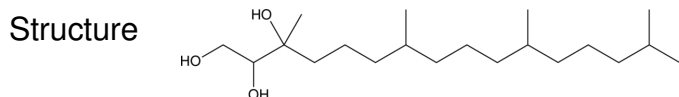
SMILES OCC(C(C)(CCCC(CCCC(CCCC(C)C)C)C)O)O

Formula $C_{20}H_{42}O_3$ M.Wt 330.6

Solubility DMSO: Soluble: ≥ 10 mg/ml, Ethanol: Soluble: ≥ 10 mg/ml Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.



Background

Phytantriol is an aliphatic alcohol that has been used in the formation of liquid crystalline nanoparticles (LCNPs) and cubosomes.^{1,2} Cubosomes containing phytantriol are bactericidal against LPS-deficient and polymyxin-resistant *A. baumannii* strains.¹ LCNPs containing phytantriol and encapsulating the isoquinoline alkaloid berberine reduce TNF- α and inducible nitric oxide synthase (iNOS) levels and the production of reactive oxygen species (ROS) in LPS-activated RAW 264.7 macrophages.²

References:

[1]. Lai, X., Ding, Y., Wu, C.M., et al. Phytantriol-based cubosome formulation as an antimicrobial against lipopolysaccharide-deficient Gram-negative bacteria ACS Appl. Mater. Interfaces 12(40)44485-44498(2020).

Caution: Product has not been fully validated for medical applications. For research use only.

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[2]. Alnuqaydan, A.M., Almutary, A.G., Azam, M., et al. Phytantriol-based berberine-loaded liquid crystalline nanoparticles attenuate inflammation and oxidative stress in lipopolysaccharide-induced RAW26.

[4]. 7 macrophages Nanomaterials (Basel) 12(23)4312(2022).

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