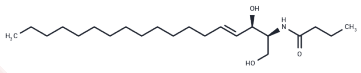
Data Sheet (Cat.No.T37564)

TargetMol

C4 Ceramide (d18:1/4:0)

Chemical Properties



CAS No. : 74713-58-9

Formula: C22H43NO3

Molecular Weight: 369.58

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	C4 Ceramide is a bioactive sphingolipid and cell-permeable analog of naturally occurring ceramides. [1] [2] [3] It inhibits IL-4 production by 16% in EL4 T cells stimulated with phorbol 12-myristate 13-acetate when used at a concentration of 10 μM. [1] C4 Ceramide is cytotoxic to SK-BR-3 and MCF-7/Adr breast cancer cells (IC50s = 15.9 and 19.9 μM, respectively). [2] C4 Ceramide also increases maturation and stability of cystic fibrosis transmembrane conductance regulator (CFTR) proteins bearing the F508 deletion (F508del) mutation, enhances cAMP-activated chloride secretion, and suppresses secretion of IL-8 in primary epithelial cells isolated from patients with cystic fibrosis.[3]
Targets(IC50)	Others

Solubility Information

Solubility	DMSO: 20 mg/mL (54.12 mM),Sonication is recommended. Ethanol: 30 mg/mL (81.17 mM),Sonication is recommended. DMF: 20 mg/mL (54.12 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7058 mL	13.5289 mL	27.0577 mL
5 mM	0.5412 mL	2.7058 mL	5.4115 mL
10 mM	0.2706 mL	1.3529 mL	2.7058 mL
50 mM	0.0541 mL	0.2706 mL	0.5412 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Park, J., Li, Q., Chang, Y.T., et al. Inhibitory activity of a ceramide library in interleukin-4 production from activated T cells. Bioorg. Med. Chem. 13(7), 2589-2595 (2005).

Crawford, K.W., Bittman, R., Chun, J., et al. Novel ceramide analogues display selective cytotoxicity in drug-resistant breast tumor cell lines compared to normal breast epithelial cells. Cell Mol. Biol. (Noisy-le-grand) 49(7), 1017-1023 (2003).

Caohuy, H., Yang, Q., Eudy, Y., et al. Activation of 3-phosphoinositide-dependent kinase 1 (PDK1) and serum- and glucocorticoid-induced protein kinase 1 (SGK1) by short-chain sphingolipid C4-ceramide rescues the trafficking defect of ΔF508-cystic fibrosis transmembrane conductance regulator (ΔF508-CFTR). J. Biol. Chem. 289(52), 35953-35968 (2014).