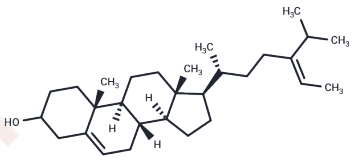
Data Sheet (Cat.No.T8184)

TargetMol

Fucosterol

Chemical Properties



CAS No. : 17605-67-3

Formula: C29H48O

Molecular Weight: 412.69

Storage: Store at low temperature,Keep away from moisture
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	Fucosterol is isolated from E. stolonifera with anti-diabetic, anti-adipogenic and anti-cancer activities. It regulates adipogenesis via modulation of PPARα and C/EBPα expression.
Targets(IC50)	Endogenous Metabolite,PARP,PPAR
In vitro	Fucosterol (0-50 μM; 7 days) suppresses the expression of PPARα and C/EBPα in fully differentiated control adipocytes [1], shows cytotoxicity against T47D and HT29 cell lines (IC50s: 27.94 and 70.41 μg/ml) [3], and decreases the proliferation of HEK293, MCF-7, and SiHa cells (IC50s: 185.4, 43.3, and 34.0 μg/ml) [4].
In vivo	Fucosterol (p.o.; 30mg/kg) causes a significant decrease in serum glucose concentrations and exhibits inhibition of sorbitol accumulations in the lenses [2].
Cell Research	Cell Line: 3T3-L1 adipocytes. Concentration: 0 μM; 25 μM; 50 μM. Incubation Time: 7 days [1]

Solubility Information

Solubility	Ethanol: 17.76 mg/mL (43.03 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% EtOH+90% Corn Oil: 1.5 mg/mL (3.63 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4231 mL	12.1156 mL	24.2313 mL
5 mM	0.4846 mL	2.4231 mL	4.8463 mL
10 mM	0.2423 mL	1.2116 mL	2.4231 mL
50 mM	0.0485 mL	0.2423 mL	0.4846 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

Jung HA, et al. Anti-adipogenic activity of the edible brown alga Ecklonia stolonifera and its constituent fucosterol in 3T3-L1 adipocytes. Arch Pharm Res. 2014 Jun;37(6):713-20.
Lee YS, et al. Anti-diabetic activities of fucosterol from Pelvetia siliquosa. Arch Pharm Res. 2004 Nov;27(11):1120-2.
Khanavi M, et al. Cytotoxicity of fucosterol containing fraction of marine algae against breast and colon carcinoma cell line. Pharmacogn Mag. 2012 Jan;8(29):60-4.
Caamal-Fuentes E, et al. Cytotoxic and antiproliferative constituents from Dictyota ciliolata, Padina sanctae-crucis and Turbinaria tricostata. Pharm Biol. 2014 Oct;52(10):1244-8.