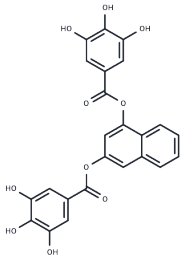
Data Sheet (Cat.No.T21831)

TargetMol

UCM05

Chemical Properties



CAS No. : 1094451-90-7

Formula: C24H16O10

Molecular Weight: 464.38

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	UCM05 (G28UCM) is a potent inhibitor of fatty acid synthase (FASN) with efficacy against HER2+ breast cancer xenografts, including cell lines resistant to anti-HER2 drugs [1]. Additionally, it functions as an inhibitor of the Filamentous temperature-sensitive protein Z (FtsZ), selectively inhibiting the growth of the Gram-positive bacterium B. subtilis with minimum inhibitory concentration (MIC) values of 100 μM, while showing no activity against the Gram-negative bacterium E. coli [2].
Targets(IC50)	Antibacterial,Antibiotic,Fatty Acid Synthase
In vitro	G28UCM shows cytotoxic activity in developed HER2 + and FASN + trastuzumab and lapatinib-resistant cells[1].
In vivo	G28UCM (40 mg/Kg; Daily i.p; for 45 days) inhibits the growth of BT474 xenografts and do not induce weight loss in vivo[1].

Solubility Information

Solubility	DMSO: 165 mg/mL (355.31 mM),Sonication is recommended. Ethanol: Soluble (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (21.53 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (21.53 mM),Solution. *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	2.1534 mL	10.767 mL	21.5341 mL
5 mM	0.4307 mL	2.1534 mL	4.3068 mL
10 mM	0.2153 mL	1.0767 mL	2.1534 mL
50 mM	0.0431 mL	0.2153 mL	0.4307 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

Teresa Puig, et al. A novel inhibitor of fatty acid synthase shows activity against HER2+ breast cancer xenografts and is active in anti-HER2 drug-resistant cell lines. Breast Cancer Res. 2011;13(6):R131.
Swayansiddha Tripathy, et al. FtsZ inhibitors as a new genera of antibacterial agents. Bioorg Chem. 2019 Oct;91: 103169.
Olga Nagło, et al.Functional characterization of B-cell receptor associated protein 31 in cancer cells