Data Sheet (Cat.No.T36954)

TargetMol

Nemorosone

Chemical Properties

CAS No. :	351416-47-2
Formula:	C33H42O4
Molecular Weight:	502.695
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	Nemorosone is a polycyclic polyprenylated acylphloroglucinol (PPAP) originally isolated from C. rosea that has antiproliferative properties.1 Nemorosone inhibits growth of NB69, Kelly, SK-N-AS, and LAN-1 neuroblastoma cells (IC50s = 3.1-6.3 μM), including several drug-resistant clones, but not MRC-5 human embryonic fibroblasts (IC50 = >40 μM).2 It increases DNA fragmentation in LAN-1 cells in a dose-dependent manner, and decreases N-Myc protein levels and phosphorylation of ERK1/2 by MEK1/2. Nemorosone also inhibits growth of Capan-1, AsPC-1, and MIA-PaCa-2 pancreatic cancer cells (IC50s = 4.5-5.0 μM following a 72-hour treatment) but not human dermal and foreskin fibroblasts (IC50s = >35 μM).1 It induces apoptosis, abolishes the mitochondrial membrane potential, and increases cytosolic calcium concentration in pancreatic cancer cells in a dose-dependent manner. Nemorosone activates the caspase cascade in a dose-dependent manner and inhibits cell cycle progression, increasing the proportion of cells in the G0/G1 phase, in both neuroblastoma and pancreatic cancer cells.1,2 Nemorosone (50 mg/kg, i.p., per day) also reduces tumor growth in an MIA-PaCa-2 mouse xenograft model.3
Targets(IC50)	Apoptosis,Others

Solubility Information

Solubility	Ethanol: 30 mg/mL (59.68 mM),Sonication is recommended. DMSO: 30 mg/mL (59.68 mM),Sonication is recommended. Ethanol:PBS (pH7.2) (1:7): 0.13 mg/mL (0.26 mM),Sonication is recommended. DMF: 30 mg/mL (59.68 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9893 mL	9.9463 mL	19.8926 mL
5 mM	0.3979 mL	1.9893 mL	3.9785 mL
10 mM	0.1989 mL	0.9946 mL	1.9893 mL
50 mM	0.0398 mL	0.1989 mL	0.3979 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

Holtrup, F., Bauer, A., Fellenberg, K., et al. Microarray analysis of nemorosone-induced cytotoxic effects on pancreatic cancer cells reveals activation of the unfolded protein response (UPR). Br. J. Pharmacol. 162(5), 1045-1059 (2011).

Díaz-Carballo, D., Malak, S., Bardenheuer, W., et al. Cytotoxic activity of nemorosone in neuroblastoma cells. J. Cell. Mol. Med. 12(6B), 2598-2608 (2008).

Wold, R.J., Hilger, R.A., Hoheisel, J.D., et al. In vivo activity and pharmacokinetics of nemorosone on pancreatic cancer xenografts. PLoS One 8(9), e74555 (2013).