

TH1338

Chemical Properties

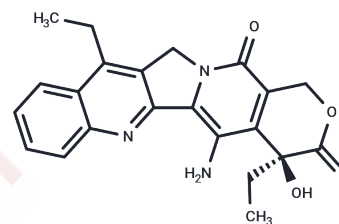
CAS No. : 1258494-60-8

Formula: C₂₂H₂₁N₃O₄

Molecular Weight: 391.42

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	TH1338 is an orally active derivative of camptothecin with potential anti-cancer activity. TH1338 exhibits significant blood-brain barrier penetration and cytotoxicity, useful for cancer research.
Targets(IC50)	ADC Cytotoxin, Topoisomerase
In vitro	The IC ₅₀ values of TH1338 against H460, PC-3 HT29, SK-MEL-2 and A375 were 7 nM, 24 nM, 300 nM, 130 nM and 7 nM, respectively. [1]
In vivo	TH1338 (50 mg/kg orally) showed significant brain permeability. TH1338 (40 mg/kg, orally) showed 84% tumor growth inhibition in H460 xenograft models. [1]

Solubility Information

Solubility	DMSO: 8 mg/mL (20.44 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 0.5 mg/mL (1.28 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5548 mL	12.774 mL	25.548 mL
5 mM	0.511 mL	2.5548 mL	5.1096 mL
10 mM	0.2555 mL	1.2774 mL	2.5548 mL
50 mM	0.0511 mL	0.2555 mL	0.511 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

Duan JX, et al. 14-Aminocamptothecins: their synthesis, preclinical activity, and potential use for cancer treatment. *J Med Chem.* 2011 Mar 24;54(6):1715-23.

Cheng X, et al. Preparation, Characterization, and In Vivo Study of 7-Ethyl-14-Aminocamptothecin-Loaded Poly (Ethylene Glycol)2000 -Poly(Lactic Acid)2000 Polymeric Micelles Against H460 Human Nonsmall Cell Lung Carcinoma. *J Pharm Sci.* 2015 Nov;104(11):3934-3942.

LU Zhaoqiang, et al. Advances in Research on Antitumor Drugs Based on Aldo-keto Reductase 1C3[J]. *Progress in Pharmaceutical Sciences*, 2023, 47(3): 164-178.

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