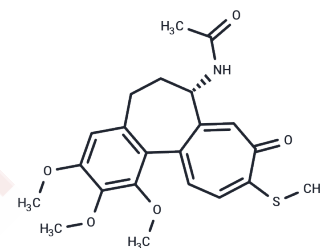


Thiocolchicine

Chemical Properties

CAS No. :	2730-71-4
Formula:	C ₂₂ H ₂₅ N ₁ O ₅ S
Molecular Weight:	415.5
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Thiocolchicine is an effective inhibitor of tubulin polymerization with an IC ₅₀ of 2.5 μM and a K _i of 0.7 μM. Thiocolchicine induces cell apoptosis. Thiocolchicine can be used as an ADC cytotoxin in ADC technology.
Targets(IC ₅₀)	Apoptosis, Microtubule Associated
In vitro	Thiocolchicine (1 nM-100 μM; 24-72 hours) shows a relationship between cell cycle blocking activity and growth inhibition in breast cancer cells. Thiocolchicine inhibits cell proliferation of MDA-MB-231 and multidrug-resistant (MDR) MCF-7 ADRr breast cancer cells with IC ₅₀ s of 0.6 nM and 400 nM, respectively, as well as MDR CEM-VBL leukemia cells with an IC ₅₀ of 50 nM[1]. Thiocolchicine is against MCF-7, LoVo, LoVo/DX, A-549 and BALB/3T3 cells with IC ₅₀ values of 0.01 μM, 0.021 μM, 0.398 μM, 0.011 μM and 0.114 μM, respectively[2].

Solubility Information

Solubility	DMSO: 95 mg/mL (228.64 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (7.94 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	2.4067 mL	12.0337 mL	24.0674 mL
5 mM	0.4813 mL	2.4067 mL	4.8135 mL
10 mM	0.2407 mL	1.2034 mL	2.4067 mL
50 mM	0.0481 mL	0.2407 mL	0.4813 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

R De Vincenzo, et al. Antiproliferative Activity of Colchicine Analogues on MDR-positive and MDR-negative Human Cancer Cell Lines. *Anticancer Drug Des.* 1998 Jan;13(1):19-33.

Klaus M.Hahn, et al. Structural requirements for the binding of colchicine analogs to tubulin: the role of the C-10 substituent. *Bioorganic & Medicinal Chemistry Letters.* Volume 1, Issue 9, 1991, Pages 471-476

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