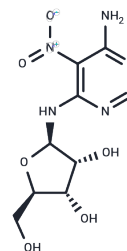


Clitocine

Chemical Properties

CAS No. :	105798-74-1
Formula:	C ₉ H ₁₃ N ₅ O ₆
Molecular Weight:	287.23
Storage:	Store at low temperature 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	Clitocine, an adenosine analogue derived from mushrooms, is a potent transcriptional readout agent, an inhibitor of nonsense mutations, and has anticancer activity, inducing the production of p53 protein in cells carrying the p53 nonsense mutation allele. Clitocine enhances TRAIL-mediated apoptosis in human colon cancer cells by promoting Mcl-1 degradation. NSC 81464 is an alkaloid of the yohimbine type extracted from the roots and leaves of Rauwolfia vomitoria.
Targets(IC50)	Apoptosis, Bcl-2 Family
In vitro	For premature stop codon readthrough activity, Clitocine incorporation into mRNA is required, and the presence of clitocine at the third position of a premature stop codon is sufficient to promote robust readthrough[2]. Clitocine enhances TRAIL lethality in LS411N and SW620 cells, with concentrations ranging from 0 to 0.8 μM over a 24-hour period. Additionally, at a concentration of 0.2 μM for 36 hours, Clitocine significantly potentiates TRAIL-mediated apoptosis[1].
In vivo	Induced by Clitocine (0.3-3 mg/kg; s.c.; five times per week), p53 inhibits CAOV-33p53-UAA136 tumor growth in a xenograft model[2].

Solubility Information

Solubility	DMSO: 80 mg/mL (278.52 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 (11.49 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	3.4815 mL	17.4077 mL	34.8153 mL
5 mM	0.6963 mL	3.4815 mL	6.9631 mL
10 mM	0.3482 mL	1.7408 mL	3.4815 mL
50 mM	0.0696 mL	0.3482 mL	0.6963 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

- Sun JG, et al. Clitocine potentiates TRAIL-mediated apoptosis in human colon cancer cells by promoting Mcl-1 degradation. *Apoptosis*. 2016;21(10):1144-1157.
- Friesen WJ, et al. The nucleoside analog clitocine is a potent and efficacious readthrough agent. *RNA*. 2017;23(4):567-577.
- Sun JG, Xiang J, Zeng XL, Li X, Wu P, Fung KP, Liu FY. Clitocine induces apoptosis and enhances the lethality of ABT-737 in human colon cancer cells by disrupting the interaction of Mcl-1 and Bak. *Cancer Lett*. 2014 Dec 28;355(2):253-63. doi: 10.1016/j.canlet.2014.09.024. Epub 2014 Oct 7. PubMed PMID: 25304383.
- Sun JG, Li H, Li X, Zeng X, Wu P, Fung KP, Liu FY. Clitocine targets Mcl-1 to induce drug-resistant human cancer cell apoptosis in vitro and tumor growth inhibition in vivo. *Apoptosis*. 2014 May;19(5):871-82. doi: 10.1007/s10495-014-0969-0. PubMed PMID: 24563182.

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