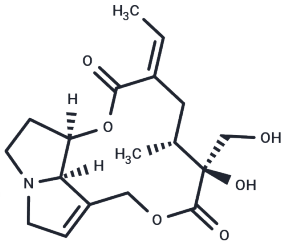
Data Sheet (Cat.No.TN2147)

TargetMol

Retrorsine

Chemical Properties



CAS No. : 480-54-6

Formula: C18H25NO6

Molecular Weight: 351.39

Storage: Keep away from direct sunlight,Keep away from moisture,Store at low temperature
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	Retrorsine selectively inhibits hepatocyte proliferation and following liver injury evokes small hepatocyte-like progenitor cells. Retrorsine can be used for the research of hepatocellular injury.
Targets(IC50)	OCT,Cytochromes P450
In vitro	Retrorsine inhibited the OCT1-mediated 1-methyl-4-phenylpyridinium (MPP(+)) uptake in MDCK-hOCT1 cells with the IC50 of 2.25±0.30μM[1]. Retrorsine (60 μM, 120 μM , 240 μM; 24 h) significantly reduced HSEC-CYP3A4 cell viability and GSH levels and increases the formation of pyrrole-protein adducts[2].
In vivo	In male Wistar rats, Retrorsine (30 mg/kg; i.p.; twice) impaired liver regeneration in the PBL model not only by an S or G2/M phase block but also by a block located before the G1/S transition of the cell cycle[3].

Solubility Information

Solubility	DMSO: 95 mg/mL (270.35 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 (9.39 mM),Sonication is recommended. *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	2.8458 mL	14.2292 mL	28.4584 mL
5 mM	0.5692 mL	2.8458 mL	5.6917 mL
10 mM	0.2846 mL	1.4229 mL	2.8458 mL
50 mM	0.0569 mL	0.2846 mL	0.5692 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

Tu M, et al. Involvement of organic cation transporter 1 and CYP3A4 in retrorsine-induced toxicity. Toxicology. 2014 Aug 1;322:34-42.

Yao Lu, et al. Establishment of a novel CYP3A4-transduced human hepatic sinusoidal endothelial cell model and its application in screening hepatotoxicity of pyrrolizidine alkaloids. J Environ Sci Health C Toxicol Carcinog. 2020; 38(2):169-185.

Christian Picard, et al. Retrorsine: a kinetic study of its influence on rat liver regeneration in the portal branch ligation model. J Hepatol. 2003 Jul;39(1):99-105.

F J Cubero, et al. Hepatic proliferation in Gunn rats transplanted with hepatocytes: effect of retrorsine and tri-iodothyronine. Cell Prolif. 2005 Jun;38(3):137-46.

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